#### THE EFFECTS OF INTERDISCIPLINARY RELATIONS ON ARCHITECTURE: A CASE STUDY FRANK GEHRY

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Approval of the Graduate School of Natural and Applied Sciences

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#### ABSTRACT

# THE EFFECTS OF INTERDISCIPLINARY RELATIONS ON ARCHITECTURE: A CASE STUDY FRANK GEHRY

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This thesis is an inquiry into the debates about the relationships between architecture, painting, and sculpture. The survey focused on the twentieth century, during which the disciplines of art and architecture resumed a close relationship, taking into consideration the historical context.

The interaction emerged with *Beaux-Arts Schools, Arts and Crafts, Art Nouveau* movements until 1900s, and continued with *Deutscher Werkbund, Bauhaus* and *De Stijl* during the early twentieth century; and, focused on *Minimalist Art*, which emerged in the 1960s in America with the concept of "architectural sculpture". One of the architects who was influenced by the Minimalist artworks was Frank Gehry. His method of combining art with architecture was taken as the motive to choose Gehry's work as the case study. His striking forms contribute to the development of a final product as a large-scale urban sculpture and a style that is collectively referred to as "sculptural architecture".

How does Frank Gehry's architecture approach to the condition of art? This question underwent examination in order to shed light on the dialogue between art and architecture, as well as the professional relationships between creators in these fields. At this point, the discussion turned to the issue of collaboration through which artists and architects find the opportunity to design together. Examining the influence of artists on Frank Gehry, it is observed that, interactions with art affected him when he was developing his characteristic style and such collaboration enriched the final product and increased the potentials of independent disciplines.

Key Words: Architecture, Painting, Sculpture, Minimalist Art, Architecture of Frank Gehry, Interaction, Collaboration.

# DİSİPLİNLERARASI İLİŞKİLERİN MİMARLIK ÜZERİNDEKİ ETKİLERİ: FRANK GEHRY ÖRNEĞİ ÜZERİNDEN BİR

#### ÇALIŞMA

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Bu tez, mimarlık, resim, ve heykel sanatları arasındaki ilişkiyi, birbirleri ile bağlantıları doğrultusunda ele alan görüşler üzerine bir çalışmadır. Araştırma, konunun tarihi bağlamı da göz önünde bulundurularak, yirminci yüzyılda yeniden birbirleri ile yakın bir ilişki kuran, sanat ve mimarlık disiplinleri konusundaki tartışmalar üzerinde yoğunlaşmıştır.

1900lere kadar *Beaux-Arts Okulları, Arts and Crafts, Art Nouveau* gibi hareketlerle ortaya çıkan etkileşim, yirminci yüzyılın başında *Deutscher Werkbund, Bauhaus* ve *De Stijl* grupları ile devam etmiş ve

ÖZ

bu konu üzerine temel tartışmalar, 1960'larda Amerika'da doğmuş olan ve "mimari heykel" kavramını ortaya çıkartan Minimal Sanat akımı üzerine yoğunlaşmıştır.

Bahsedilen sanat eserlerinden etkilenen mimarlar arasında Frank Gehry de yer almaktadır. Frank Gehry'nin çalışmalarının, bu tezin üzerinde çalıştığı örnekler olması, mimarın, sanatı ve mimarlığı bütünleştiren bir yaratma metodunu keşfetmiş ve uyguluyor olmasından kaynaklanmaktadır. Gehry'nin etkileyici formları, ürünlerinin, büyük ölçekli birer kentsel heykele dönüşmelerinde katkıda bulunmakta ve mimarın stili, "heykelsi mimarlık" olarak nitelendirilmektedir.

Frank Gehry'nin mimarlığı, sanat eseri olma durumuna nasıl yaklaşmaktadır? Bu soruya, sanat ve mimarlık arasındaki diyaloğa ışık tutulması ve bu iki dalın yaratıcıları arasındaki profesyonel ilişkinin açığa çıkartılması ile cevap verilmek hedeflenmektedir. Bu aşamada konu, sanatçıların ve mimarların birlikte tasarım yapma imkanı bulabildikleri işbirliklerine gelmektedir. Frank Gehry'nin sanatçılardan etkilenmesinin incelenmesinden sonra görülmüştür ki, karakteristik mimarisinin oluşumunda, mimarinin sanatla olan etkileşiminin payı büyüktür ve takım çalışmaları, ortaya çıkan ürünü zenginleştirmekte ve disiplinlerin ayrı sahip oldukları potansiyelleri yükseltmektedir.

Anahtar Kelimeler: Mimarlık, Resim, Heykel, Minimal Sanat, Frank Gehry'nin Mimarlığı, Etkileşim, İşbirliği. To Hayat, Erol, and İpek Yücesan

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Source: Bechtler, Cristina, ed. Kurt W. Forster Frank O Gehry. Art and Architecture in Discussion. Verlag: Cantz, 1999, p 114......131

3. 54. Frank Gehry, Claes Oldenburg and Coosje van Bruggen, Camp Good Times, Santa Monica Mountains, Malibu, California, 1984-1985.

Source: Bechtler, Cristina, ed. *Kurt W. Forster Frank O Gehry. Art and ArchitectureinDiscussion*.Verlag:Cantz,1999,p99......134

3. 55. Claes Oldenburg and Coosje van Bruggen, Torn notebook, 1993. Source: http://www.oldenburgvanbruggen.com/lsp.htm (December 12, 2003)

#### 3. 56. Chiat/Day Building, plan.

Source:	Friedman,	Mildred.	Architecture	and	Process.	Gehry	Talks.	New	York:
Universe	e Publishing	g, 2002, p	59	•••••		•••••		•••••	137

3. 57. Claes Oldenburg designing the interior of the binocular.

3. 58. Chiat/Day Building, exterior.

Source: http://www.arcspace.com/calif/build/chiat.htm (December 12,	
2003)	7

#### **CHAPTER 1**

#### **INTRODUCTION**

Today, architecture, painting and sculpture are the three independent branches of art. However, throughout history it is possible to observe the different periods during which the bond between them gained strength or loosened. The relationship that resumed in the twentieth century is the main concern of this thesis.

Departing from my cognition of architecture as the art of creating space<sup>1</sup>; the objective of this work was stated as discovering the relationship of this discipline with other branches of art, and questioning the consequences of the interactions between them in the contemporary era.

The modern period, which is accepted as having commenced with the social and technological revolutions of the late eighteenth century, has witnessed radical changes in lifestyles. Changes took place in science

<sup>&</sup>lt;sup>1</sup> Even though it is not possible to define architecture in a single way, this description presents the author's standpoint in this survey. Here, architecture was taken as a discipline, which deals with the aesthetics of space, and due to the fact that it was accepted as a branch of art, the link between architecture and related arts gained importance.

and technology, in the methods of production, consumption, reproduction, and in the status of art and architecture.

During the enlightenment, the disciplines started to grow apart according to the emergent needs of the new society. Therefore, art and architecture, which were collected under the common definition of "art" in Romanesque, Gothic, Renaissance, and Baroque periods, separated from each other in the nineteenth century.

The spaces of everyday life were transformed due to the contemporary needs of modern man. Architecture was in search of adapting itself to the new materials, techniques and modes of production. For instance, it is possible to witness the changes in the words of William Morris, from his publication News From Nowhere in 1891, when he mentions that he was dreaming about a new life, which accepts and adapts itself to technological and industrial developments as well as surviving without being so dependent on machine technology.<sup>2</sup> Meanwhile, the condition of art has changed in the bourgeois society, which gained power after the industrial revolution. In the nineteenth century, painting, sculpture and architecture were not accepted only as media for recording and demonstrating religious and ritualistic occasions but were further seen as objects of art made for art's sake that could also be experienced aesthetically.<sup>3</sup> This condition led to the rejection of art by the avantgarde. Sublating art into the praxis of life was the main concern, which later caused the birth of Dada, Bauhaus, pop art and minimal art

<sup>&</sup>lt;sup>2</sup> Frampton, Kenneth. "News From Nowhere: England 1836-1924", in *Modern Architecture a Critical History*, New York: Oxford University Press, 1980, p 45.

<sup>&</sup>lt;sup>3</sup> Burger, Peter, "The Negation of the Autonomy of Art by the Avant-Garde", in *Theory of the Avant-Garde*, Minneapolis: University of Minnesota Press, 1986, p 40-54.

movements, which completely changed the conception of art in modern society. In the beginning of the twentieth century, architecture, like art, was in search of a new structure with which it could re-build itself due to the recent needs of the age. It had to be built according to an infrastructural system, on a large scale, had to be critical of traditional works and, had to establish its own model. By criticizing their existing formations, art and architecture came together on the issue of creating a liberated social life, free from conventional systems. The rebellion caused the establishment of the concept of the "new" in the two disciplines. As a result, architecture and art resumed a close, but this time an interdisciplinary, relationship.

Thus, the aim of this thesis could be defined as searching for a common ground on which art and architecture can be discussed with reference to, and in exchange with, each other. In order to study the interaction of these two separate disciplines in modern times and to examine the new language in architecture in relation to art, Frank Gehry's architecture was selected as the case study. However, with the aim of examining architecture, painting and sculpture in direct relation to the contemporary era, it will be suitable to start from the background of this relationship.

The second chapter will incorporate a limited historical perspective. The historical context will begin with the branches of knowledge in which art and architecture were located in relation with each other. In the latter part of this chapter these three arts will be studied within the environmental context with the aim of demonstrating the practical relationship between them through the examples belonging to the historical Italian model.

The concerns of the contemporary era about the intersecting spheres of the fields of art and architecture will be elaborated in the continuation of the second chapter beginning with related arguments. Later Bauhaus in Germany and De Stijl in Holland will be studied in order to bring under discussion these two avant-garde movements, emphasizing the unification of all branches of art. Meanwhile, another movement of the twentieth century art world will bring another point of view to the subject. Minimalist Art will be the following and the most relevant example to study the dialogue between the arts.

Even if the Minimalist work did not carry the aim of being discussed in architectural debates and did not aim to unite itself with architecture like The Bauhaus and De Stijl movements, it caused numerous discussions about sculpture and architecture with its formal and spatial qualities. The aim will not be carrying the concepts of Minimalism and discussing them with their formal counterparts in architecture but rather, considering the works of Minimalist artists in relation to their architectural character. By this method, it will be possible to reveal the main facts that constitute the relationship between this movement and architectural practice.

Discussing the contemporary era with its recent debates on the relationship among architecture, painting and sculpture, the subject will relate to the professional relationship among the practitioners of these disciplines. The issue will be studied in the third chapter through a case

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study, viz., the architecture of Frank Gehry. The reason behind selecting Gehry's projects and his conceptions about architecture for this chapter is his known interest in art, his declarations about the influences of the contemporary artists on his works, and his collaboration with painters and sculptors in several commissions. In my opinion, Gehry's work has vast importance as an example of personal expression. Other than trying to satisfy the practical needs of society, he creates architectural artifacts like an artist whose work can be seen as a personal challenge. That is why this chapter contains many references to Gehry as an artist in architecture whose end products have the opportunity to become large-scale urban sculptures. Especially when these are museums, or small-scale exhibition halls, the spectacle becomes the building as well as the artworks that are exhibited inside of it.

The subjects under discussion in this chapter are Gehry's working methods, his expressive forms, the materials he uses, the influences of painting and sculpture on his work, and his collaboration with artist friends such as Ron Davis, Lucinda Childs-John Adams, Richard Serra and Claes Oldenburg in numerous projects of art and architecture.

The main issues that this study will deal with are:

• The historical and contemporary discussions about the relation between architecture, painting and sculpture,

- Assuming that the end products of the two disciplines are different from each other, the elements of interaction that affect the development of the two diverse arts,
- The projects that Frank Gehry worked on together with other artists,
- When artists and Frank Gehry were in collaboration, what were the fundamental issues of discussion? The diverse approaches to material, the relation of form and content, spatial experience in the works of these artists,
- Based on the team works, what can be assessed about the reasons behind Gehry's departure from traditional architectural forms?

In the conclusion, the consequences of this interaction will be elucidated and summarized.

#### **CHAPTER 2**

# IN SEARCH OF A DIALOGUE BETWEEN ARCHITECTURE AND THE VISUAL ARTS

Some disciplines are collaborative by their nature. Architecture is one of them with its functional, aesthetical, formal, and technical aspects. The art of architecture converts volume into space by adding meaning into the three dimensional structure. The diverse qualifications stated above should be contained by the end product in order for architecture to be used, and, in order for it to be remembered as a work of art for a long period of time. But can such a complicated mission be accomplished only by the efforts of the architect?

The answer of this question can either be "yes" or "no" according to the conditions under which the architectural production is being made. For instance, with respect to ancient times the answer could be given as "yes". That is due to the fact that there was not a separation between art and architecture. These were the two branches of art, which created works of painting, sculpture, or architecture. A church or a monument was accepted as an architectural artifact with a painting in it, or a pieta that was a part of its wall was regarded as a construction element besides being a sculptural entity. Under such circumstances, in which there were no disciplinary boundaries between painting, sculpture and architecture, a building was being designed, developed, realized, organized and presented by one man who was called the architect. Surely there was also some teamwork involved, but in the end the architect was solely responsible for the final accomplishment. Even in such a case though, the only person in the process is not the architect. There would be various roles involved such as the architect as an artist, the architect as a technician, the architect as a manager and numerous others. At this point, the intra-disciplinary relations are activated.

Today, however, the answer to this question would be "no". This is due to the fact that one person cannot be qualified to perform all of these functions, as in the ancient times. Specialized institutions share the responsibility of the realization of an architectural project. However, the architect is both the person who designs from scratch and who decides where to go and from whom to get advice and support in the realization of his commission. At this point the inter-disciplinary relations begin to be activated.

Currently, it would be proper to clarify the nuance between the terms intra-disciplinary and inter-disciplinary. In the pre-modern world of intra-disciplinary relationships, the mission was not given to different people with diverse professions. To rise up a building was an act of art. If one man were good at masonry, he would construct and, if one were good at painting he would paint the sketches of the architect. But the architect was the one who decided the strength of the wall that was to be built and who made sketches for the wall paintings. In sum, architecture was a roof, under which all the necessary branches were intertwined. However, in the modern world, architecture is a profession that is apart from the other disciplines related with the construction process such as civil engineering and mechanical engineering. Thus the disciplines that are necessary for raising an architectural project are interactively related to each other. Because of the fact that the idea of profession was born after the industrial revolution, the interdisciplinary work of an architect, an artist and an engineer results in the complete project.

Even if it is possible to observe different conditions of architecture throughout history, one thing stays constant: the nature of architecture as a collaborative discipline. Either through intra-disciplinary relationships or through inter-disciplinary practices due to the changing lifestyles of societies, architecture is in exchange with other branches of art and science in order to realize its mission of providing a shelter of quality.

In this study, as stated before, the relationship of architecture with art was selected as the main topic to be discussed. This is not because the relationship of architecture with other disciplines is less important. It is a selection in order to define the borders in which the dialogue between the two disciplines could be exemplified, studied and elaborated throughout the historical and contemporary debates about this subject matter.

#### 2.1. The Historical Context of the Relationship Between The Arts

This section will present a historical perspective on the issue. The relationships of art and architecture as branches of knowledge and the practical associations among them in the environment with a case study of the historical Italian model will be the subtopics corresponding to the two different approaches towards the link between them.

## 2.1.1. Architecture, Painting and Sculpture in Relation as to Each Other as Branches of Knowledge

In her article "Architecture in Trees and Fields", Emel Aközer makes a survey about the location of architecture in historical trees of knowledge.<sup>4</sup> According to Aközer, in the early seventeenth century Francis Bacon took architecture as a branch of "mixed mathematics" related to perspective, music, astronomy, cosmography, engineering and the mechanical arts.

In the same period, Blondel made a distinction between three kinds of architecture such as, civil architecture, military architecture and naval architecture, defining architecture basically as "the art of building".

<sup>&</sup>lt;sup>4</sup> Aközer, Emel. "Architecture In Trees and Fields", published in the catalogue of *Four-Faces-The Dynamics of Architectural Knowledge. The 20<sup>th</sup> EAAE Conference Stockholm-Helsinki/May 8-11,2003*, available on www.fourfaces.info, October 26, 2003.



Figure 2 1Francis Bacon's Diagram, early 17<sup>th</sup> Century.

In the eighteenth century, Denis Diderot and Jean le Rond d'Alembert, purged architecture of its mechanical relations and placed it under the category of *Beaux-Arts* with painting, sculpture, music and poetry.



Figure 2 2Denis Diderot and Jean le Rond d'Alembert's Diagram, 18<sup>th</sup> Century.

In the twentieth century, Paul Oskar Kristeller was writing on the concept of fine arts under which architecture was then located. Kristeller made a review of the situation, giving references to Benedeto Croce, M. Menendez y Pelayo and L. Venturi:

"Some scholars have rightly noticed that only the eighteenth century produced a type of literature in which the various arts were compared with each other and discussed on the basis of common principles, whereas up to that period treatises on poetics and rhetoric, on painting and architecture, and on music had represented quite distinct branches of writing and were primarily concerned with technical precepts rather than with general ideas. Finally, at least a few scholars have noticed that the term "Art," with a capital A and in its modern sense, and the related term "Fine Arts" (Beaux Arts) originated in all probability in the eighteenth century... In this broader meaning, the term "Art" comprises above all the five major arts of painting, sculpture, architecture, music and poetry. "<sup>5</sup>

Kristeller's article is important because it indicates the place of architecture in the trees of knowledge until the industrial revolution in relation to painting and sculpture. Furthermore, it depicts that in the course of history, diverse arts do not change independently, but they modify themselves consistently in accordance with the relationships between them. He states that:

"The branches of the arts all have their rise and decline, and even their birth and death, and the distinction between "major" arts and their subdivisions is arbitrary and subject to change...As a result of such changes, both in modern artistic production and in the study of other phases of cultural history, the traditional system of the fine arts begins to show signs of disintegration. Since the latter part of the nineteenth century, painting has moved further away from literature than at any previous time, whereas music has at times moved closer to it, and the crafts have taken great strides to recover their earlier standing as decorative arts." <sup>6</sup>

As mentioned by Kristeller, fine arts changed their location in the end of the nineteenth century, leaving behind signs of their existence within different groups of practice. When one of them is replaced by the other or loses its significance due to the variations of the age, its content spreads to the emerging "major arts" transforming their development. Thus, it would be possible to say that, not only do they appear or

<sup>&</sup>lt;sup>5</sup> Kristeller, Paul Oskar, "The Modern System of the Arts: A Study in the History of Aesthetics", in *Journal of the History of Ideas*, Volume 12, Issue 4, Oct., 1951, p 496-98.

<sup>&</sup>lt;sup>6</sup> Kristeller. "Conclusions", in *Journal of the History of Ideas*, Volume 12, Issue 4, Oct., 1951, p 46.
disappear but also that they leave traces on the historical path, causing the formation of intersecting spheres.

Even though the places of art and architecture were not constant in the historical trees of knowledge, the bond between them was always perceptible. Yet, in order to clarify this link, the demonstration of the practical outcomes should be investigated through a case study. Although there have been many examples of interaction between arts and architecture throughout history and in many diverse cultures, the classical Italian model would be an outstanding example to discuss the position of architecture in dialogue with other branches of art.

# 2.1.2. Architecture, Painting and Sculpture in the Environment: The Classical Italian Model

Italian art history is composed of works that were produced in the intersection of three fields of art: architecture, painting and sculpture. Without the close relationship among them, Italian art could not have had such an important position in the course of history. With the unification of these practices, outstanding examples were produced which are still engaging art historians' interest.

In this section, different examples of Italian art will be studied. The works of art will be chronologically surveyed. The intra-disciplinary relationships of art in the pre-modern world will be the main concern of this section. The interaction of painting and sculpture with architecture will undergo close examination.

## **Italian Art History**

In this part other than making a detailed survey of European art and architecture history, examples will illustrate the interaction of diverse arts in consecutive periods<sup>7</sup>. The Italian model merits selection because it presents one of the most striking examples of artistic variety under one roof. The period from the early Gothic to the High Baroque era best illustrates the relationship between art and architecture.

## Early Gothic Style Architecture (c.1250-c.1300)



## Santa Maria Novella Cathedral, Florence

Figure 2 3. Santa Maria Novella Cathedral, Florence, c.1279-c.1470, exterior.

 $<sup>^{7}</sup>$  The styles that are going to be under examination are belonging to the consecutive periods of European art history which can be classified as, The Romanesque Style (c.1000-c.1200), The Gothic Style (c.1150-c.1500), The Renaissance Style (c.1450-c.1600), The Baroque Style (c.1600-c.1760) and The Modern Style (c.1760-).

The construction of the Santa Maria Novella Cathedral began in c.1276 and finished in the late fifteenth century. The façade was completed by Leon Batista Alberti, c.1470. The importance of this cathedral is the use of light, combined with lightness and free movement inside the building.<sup>8</sup> According to John White, the two-dimensional wall and panel paintings were converted into three-dimensional architectural space for the first time in this cathedral. Natural light illuminates the interior in a sober manner. Light furnishes an element of direction from the entrance to the altar.





Figure 2 4. Santa Maria Novella Cathedral, interior. Figure 2 5. Santa Maria Novella Cathedral, interior.

Stained glass, letting the sunshine in, serves as an element of both construction and orientation. By this method, illumination gives meaning to this volume. Unlike the exterior, the interior has plain

<sup>&</sup>lt;sup>8</sup> Unless otherwise is mentioned, all historical information was gathered from the book: White, John. *Art and Architecture in Italy*.1250-1400, Baltimore, Maryland, USA: Penguin Books Ltd., 1966. Others are the author's remarks of the visits to these sites in summer 2002 and summer 2003.

walls without decoration. That is because Alberti later completed the opaque façade. In fact, the back elevation facing the train station has more transparent surfaces, lighting the altar. Huge glass surfaces are perceptible. The construction technology of the day was used in an effective manner in order to achieve the aim of controlling the natural light in the inside of the cathedral. Thus, the light in the wall-paintings was transformed into an architectural element combining the vision of the painter with the ability of the architect.

#### Duomo, Siena



Figure 2 6. Duomo, Siena, c.1250-c.1400, exterior.

In Siena another cathedral was being built in the same period. The Duomo at Siena was constructed in the period from c.1250 to c.1400. Started in the early Gothic and completed in the late Gothic period,

Duomo presents an exceptional combination of architecture and sculpture. The outside and the inside of the cathedral have sculptures embedded onto the surfaces, narrating stories and generating an outstanding spatial experience. Even the façade could be accepted as a sculptural entity itself. This is one of the common features of Gothic buildings. The sculptural characteristics of the structural elements interfere with the supplementary ornamentations.

Before entering the church, the dominant vertical axis causes the gaze to move from the bottom to the top. In the interior, the thriving spatial effect is caused by sculptures of heads fixed on the upper parts of the walls. In the path directed to the altar, one continuously feels like one is being watched.



Figure 27. Duomo, Siena, interior.



Figure 2 8. Duomo, Siena, ceiling. Figure 2 9. Duomo, Siena, detail from the head sculptures, interior.

With the semi-transparent stained glass used in the windows, the interior has a dark atmosphere. Every corner is painted or sculpted generating a complex visual and spatial experience. Only the altar is illuminated with natural light symbolizing the intensity of the light of salvation in the most sacred part of the cathedral.



Figure 2 10. Duomo, Siena, stained glass windows, interior. Figure 2 11. Duomo, Siena, detail from the façade.

Merging with painting and sculpture for increasing the dramatic effect of the cathedral, the architectural design interacts with and unifies the other two disciplines. Space gains meaning through the effects of the paintings and statues that complete the three-dimensional spatial formation.

## **Gothic Style Architecture (c.1300-c.1350)**

Palazzo Vecchio, Florence



Figure 2 12. Palazzo Vecchio, Florence, c.1299-1500s, exterior.

Palazzo Vecchio's construction was started in c.1299 and completed in the late fifteenth century. As a civic building, Palazzo Vecchio demonstrates another function. It is one of the highest buildings in the historical city center of Florence. Constructed as a palace, it is opaque to the public square that was used for political demonstrations in various times in the course of history. It has a huge court inside, which is ornamented with wall paintings and carvings. In this building, unlike the Duomo in Siena, sculpture does not have an enormous effect on the spectator; rather, this effect belongs to the paintings in the interior spaces. Both in the courtyard and the interior, it is possible to observe the large-scale paintings that surround the spaces. Their existence continues in the secret passage that begins in Palazzo Vecchio and continues until Palazzo Pitti passing over Ponte Vecchio, over the river Arno.



Figure 2 13. Palazzo Vecchio, interior, courtyard. Figure 2 14. Palazzo Vecchio, interior, room.



Figure 2 15. Palazzo Vecchio, interior, room.



Figure 2 16. Palazzo Vecchio, interior, hall.

In the Doumo in Siena, the interaction of architecture, painting and sculpture was designed for the aim of creating a holy feeling and inspiring fear in the spectator. Meanwhile in Palazzo Vecchio, this interaction carries the aim of increasing the visual and spatial quality of the environment. In my opinion, different aims and consequences of the interaction between disciplines become apparent in this comparison.

## Late Gothic Style Architecture (c.1350-c.1400)

Loggia Della Signoria, Florence



Figure 2 17. Loggia Della Signoria, Florence, c.1376-c.1381, exterior.

Loggia Della Signoria in Florence was constructed by Benci di Cione and Simone Talenti between c.1376-c.1381. It is right across Palazzo Vecchio, facing the square and finishing the second part of the Uffizi Museum. It is an open area with statues. Besides the artworks that are settled inside of it, it is decorated with sculptures on the roofline.

Even though it functions as an exhibition platform, it is used in everyday life as an urban structure. In my opinion, it is a fundamental example of the spatial quality of a public open space constituted by sculptures exhibited and protected in the architectural domain. As stated by John White, the spatial meaning of the whole piazza is given by the volumetric character of Loggia Della Signoria.<sup>9</sup>



Figure 2 18. Loggia Della Signoria, exterior. Figure 2 19. Loggia Della Signoria, interior.

Affirming his reading, it is possible to add the fact that this volume accomplishes the task of constructing a space of exhibition and protection for the sculptures. Furthermore, Loggia Della Signoria makes the utilization of the space of art possible in public realms. It is a place for tourists to rest for a while, for artists to paint pictures of the

<sup>&</sup>lt;sup>9</sup> White, John. "The Loggia del Bigallo and Loggia della Signoria in Florence" in *Art and Architecture in Italy*. *1250-1400*, Baltimore, Maryland, USA: Penguin Books Ltd., 1966, p 327.

statues and it functions as a stage for the musicians to perform their concerts. Therefore, in this case, it is possible to follow the characteristics of the mutual relationship between separate disciplines that are also important today. With the interaction of sculpture and architecture, the sculptural exhibition area and the architectural construction develop a spatial integrity.

## **Renaissance Style Architecture (c.1420-c.1600)**

## Medici Chapel, Florence



Figure 2 20. Medici Chapel, Florence, c.1520-c. 1534, exterior.

Medici Chapel was constructed between c.1520 and c.1534 by Michelangelo.<sup>10</sup> It is a chapel housing the monuments of the Medici

<sup>&</sup>lt;sup>10</sup> Unless otherwise is mentioned, all historical information was gathered from the book: Wittkower, Rudolf. *Art and Architecture in Italy.1600-1750*, Baltimore, Maryland, USA: Penguin Books Ltd., 1958.

family. On the ground floor rest miniature statues of the family members. On the second floor, one finds monumental tombs and the entrance of the chapel. The impressive part, which demonstrates Michelangelo's genius of combining sculptural figures with architectural structure, is the tomb room.



Figure 2 21. Medici Chapel, interior.

The space gains its significance with the statues that were located in the niches of the wall construction. Thus, the spatial experience is generated by the integrity of the architectural forms with the sculptures that become inseparable parts of the tombs. The niches, as voids, house the statues in such a unique manner that the space narrates its story through an architectural gaze completed by the effects of the sculptures. On this issue James Ackerman states that:

"Already in his architectural work of the late 1470s, Michelangelo's interest in spatial volume, three-dimensional massing and perspective illusions distinguishes him from his contemporaries, though the effect of his innovations was minimized by a conservative and decorative treatment of the wall surfaces...Nothing remains of the fifteenth-century concept of the wall as a plane, because the goal of the architect is no longer to produce an abstract harmony but rather a sequence of purely visual (as opposed to intellectual) experiences of spatial volumes."<sup>11</sup>





Figure 2 22. Medici Chapel, interior, detail. Figure 2 23. Medici Chapel, sketches of the statues.



Figure 2 24. Medici Chapel, interior, detail.

<sup>&</sup>lt;sup>11</sup> S. Ackerman, James. "Introduction" in *The Architecture of Michelangelo*. London: Penguin Books, 1970, p 26-28.

High Baroque Style Architecture (c.1600-c.1675)

The Piazza of St Peter's, Rome



Figure 2 25. Piazza St Peter's, Vatikan, Roma, c 1546-1590.

The Piazza of St Peter's appears as another type of urban structure. It was constructed as an addition to Giacomo della Porta's St Peter's Church, between c.1546-c. 1590 by Gianlorenzo Bernini (c.1596-c.1680). It is an important example both for illustrating Bernini's work and for examplifying the relationships of architectural elements of construction with architectural elements of ornamentation in an urban open space.





Figure 2 26. Piazza St Peter's.

Figure 2 27. Piazza St Peter's, detail from the collonade.

Bernini's piazza is settled on an axis which ends up with the cathedral. The most dominant architectural element that gives meaning to the piazza is the colonnade. Surrounding the center on both sides, it causes a sensation of power. Approaching the cathedral, the piazza widens up opening its arms, without losing the potency to direct the observer to the entrance of the church. When the spectator walks inside the colonnade, it presents various points of view for the whole piazza. The roofline of the colonnade is ornamented with statues of different kinds.

The consistency of the statues with the individual column develops another work of art: the colonnade itself. Besides being an architectural construction, it appears as an artwork that surrounds the spectator. That large scale surprisingly does not overwhelm the observer reveals the genius of Bernini. The relationship between the figures of sculpture and the figures of architecture proves the existence of the interaction between these two arts. Rudolf Wittkower states that:

"Even the borderline between painting, sculpture and architecture becomes fluid in his work. Whenever given the opportunity, Bernini lets his imagery flow from a unified concept which makes any dissection impossible. His own time was fully aware of this. In the words of Bernini's biographer, Filippo Baldinucci, it was "common knowledge that he was the first who undertook to unite architecture, sculpture and painting in such a way that they together make a beautiful whole"...The creation of new species and fusion of all the arts enhance the beholder's emotional participation: when all the barriers are down, stepping across traditional boundaries, life and art, real existence and apparition, melt into one."<sup>12</sup>

<sup>&</sup>lt;sup>12</sup> Op.cit. Wittkower, R., 1958, p 105-106.

### St. Agnese Church, Rome



Figure 2 28. S Agnese Church, Piazza Navona, Rome c. 1653-c.1655, exterior.

St. Agnese Church is an exceptional church with its central plan. Completed by Francesco Borromini (c.1599-c.1677) between c.1653 and c.1655, it appears as one of the important examples of High Baroque architecture. Borromini was a student of Bernini's atelier. Unlike Bernini, he was not a sculptor. He was trained as a mason and was not known until his early thirties. Other than sculpting the façade of St. Agnese, he preferred to use the construction elements in a pure manner. In contrast with Bernini's sculpture "The Four Rivers Fountain" located in the middle of Piazza Navona, this example presents a dominant but plain exterior. The aim of presenting the church in relation with the building is that, both of them were constructed by the architects of their time. Although the projects are different from each other by means of function and scale, both of them are architectural projects. As discussed in the beginning of the first chapter, the blurring of the disciplinary boundaries in to each other is obvious in this pre-modern example.

In his article "Architectural Choreography" <sup>13</sup> Kurt Forster states that Borromini was the pioneer of his age, who combines the architectural



Figure 2 29. The façade of St Agnese with Bernini's sculpture "The Four Rivers Fountain".

elements in a creative manner, dissolving into each other. He claims:

"In Borromini's buildings, neither the mass of walls nor the weights of vaults lose any of their definition, but they assume the appearance of a different material state...In a frequent reversal of dominant and subsidiary forms, Borromini challenged the hierarchy of structure over ornament...Frames of doors and windows inside and out no longer define themselves in size and treatment relative to their positioning but instead glow voluminous volutes, open their pediments to embrace floating cartouches, and span over sculptural excrescences."<sup>14</sup>

 <sup>&</sup>lt;sup>13</sup> Forster, Kurt W. "Architectural Choreography" in, Francesco Dal Co, Kurt Forster. *Frank O Gehry. The Complete Works*. Milano, Electa: The Monacelli Press, 1998, p 32.
<sup>14</sup> Ibid. p 33.



Figure 2 30. St Agnese, interior.

# Late Baroque and Rococo Style (c.1675-c.1750)

# Fountain of Trevi, Rome



Figure 2 31. Fountain of Trevi, Rome, c 1730-1740.

The Fountain of Trevi was designed and realized by Niccola Salvi between c.1730-c.1740. It is one of the outstanding examples of architecture, which represents the interaction between architecture and sculpture. By the integration of the inhabitable space with the fountain as its façade, the intertwine of two arts becomes obvious. Neither can be called a building, nor a sculpture alone, The Fountain of Trevi shows the unification of both definitions.



Figure 2 32. The Fountain of Trevi, detail.

In this section, the main aim was surveying the interaction of architecture with painting and sculpture in pre-industrialized Italy. The goal of studying the issue in this domain was to display the unification of these three disciplines in different periods of time in Italian art history. Even though the nature of the integration of these fields in the modern world is different than that found in the ancient times, this session presents a comprehensive study of the background of the relationship among them. In my opinion, this research was required in order to examine the method of interaction among the disciplines, which is diversified in the contemporary era and replaced by the mutual give-and-take between architecture and the visual arts.

According to Christian Norberg-Schulz, the expansion of the disciplinary fields in the seventeenth century occurred because of exploring travels, colonization and scientific research.<sup>15</sup> He underlines the emerging characteristics of Baroque architecture in the changing world of the seventeenth and eighteenth centuries as such: in Baroque architecture a single building loses its plastic individuality and becomes a part of the superior system. The idea of the "modern world" might have begun to be developed in this plurality.

Like a building, which was becoming one of the units of a superior system, all branches of art started to become diverse fragments of a complex organism in the modern world. Therefore, architecture and the visual arts grew apart in the beginning of the nineteenth century due to this disciplinary dissociation. Nevertheless, this new formation did not prevent architecture from developing interrelations. The interaction among architecture and the visual arts continued under a different title: interdisciplinary exchange.

<sup>&</sup>lt;sup>15</sup> Norberg-Schulz, Christian. "Introduction" in *History f World Architecture. Baroque Architecture*, Milano: Electa 1971, Electa Architecture, 2003, p 7.

The following section will present a survey of the conditions of the arts in this world of specializations. In this part of the text, the meaning of the concept of unification of the arts will be re-evaluated in accordance with the conditions of the modern era.

# 2.2. 20<sup>th</sup> Century Debates on the Relationship Between the Arts

## Architecture and Art after the Industrial Revolution

The era including the late eighteenth and nineteenth centuries, during which social structure changed due to new techniques that hegemonized all kinds of production and communication, has taken its place in the course of history as the modernization period. In the 1800s, the industrial revolution gave rise to the mechanical age. Manual production was replaced by the mechanical, initiating a new epoch. Life gained velocity with developing means of organized production in different sectors. As a consequence, architecture and the visual arts became branches which started to adapt themselves to the mechanical production of the age. At this point, it would be appropriate to elaborate the condition of the arts in the modern society with the examples from the beginning of the twentieth century.

The changes had begun with the reformation of the educational system. The conception of the arts -including architecture and the visual arts- as a unified whole was the center of *Ecole des Beaux-Arts*'s discourse. In the ateliers in Paris, young artists were educated with a multidirectional attitude where architecture and art were discussed and mastered together. Students were coming to Paris especially from America and, upon their return, were taking with them what they had learned in the school of *Beaux-Arts*. It is possible to observe that young artists and architects all over the world in the late nineteenth century grew up with the doctrines of the *Beaux-Arts* school. Although modernist movement in the twentieth century was critical of the Beaux-Arts system which had become rigid by then, the training of architects as "fine artists" with exposure to multiple arts could be considered as one of the sources of the artistic approach to architecture in many nineteenth century examples.



Figure 2 33. 14" x 21-1/2" Beaux-Arts print, 1869. Figure 2 34. 14" x 21-1/2" Beaux-Arts print, 1870.

Aiming at the synthesis of the arts on the final product was the thought of the late nineteenth century that appeared in the discourse John Ruskin and Robert Morris in England. As stated by Walter Gropius, the first attempt to fulfill the lack in the aesthetical value of the product was made by Ruskin and Morris with their "Arts and Crafts Movement".<sup>16</sup>



Figure 2 35. John Ruskin (1819-1900) and William Morris (1834-1896).

Started in the 1860s, this movement was standing for the idea that, the machine was dehumanizing the worker and removing him from the artistic process. The reason why Walter Gropius (1883-1969), gave references to the "Arts and Crafts Movement" in his book *The New Architecture and The Bauhaus* is, the resemblance of its discourse with the Bauhaus School that was going to be established by him in the beginning of the twentieth century.

However, this was not the only movement that carried the aim of integrating industrial production with art. Art Nouveau, an active

<sup>&</sup>lt;sup>16</sup> Gropius, Walter. *The New Architecture and The Bauhaus*. Cambridge, Massachusetts: The MIT Press, 1965, p 61-62.

movement between 1890 and 1914 in Europe, attempted to establish a new understanding, intending to transform mass-produced elements into individual works of art. Victor Horta (1861-1947) in Belgium was one of the pioneers of this movement.



Figure 2 36. Victor Horta, interior.

In the late eighteenth century, the invention of new materials and techniques of fabrication caused radical changes to happen in the architectural world. Steel, glass and concrete became accepted as new elements of construction. With their application in the construction industry, the architecture of the period began to develop a different character. At the beginning the attitude of Horta was satisfying the needs of the society both in a technical and in an aesthetical manner. However, in time, due to the emerging need of quick and qualified production, the constructions started to have standardized elements. Higher structures with modular systems were constructed in European cities, re-building the whole environment. Adler and Sullivan in Chicago (late eighteenth century), August Perret in France (1904), Marinetti and Sant'Elia in Italy (1909) and Ludwig Mies van der Rohe and Bruno Taut in Germany (1920s) were trying to establish the new architecture consistent with the spirit of the age. However, a common judgment had appeared; the mechanization in organized production was causing decline in the aesthetical value of the final product. At this moment, Henry van de Velde's argument of "the artist as a creative individualist" gained importance.<sup>17</sup> In his text that clarifies the theses of Deutscher Werkbund (1914) movement, van de Velde (1863-1957) explained that the spirit of the age is visible only through the works of the artist. With the free will and imaginative power of the creator, the design process could be freed from mechanized, prototyped formations. He stated:

"Certainly the artist who practices a "beneficial concentration" has always recognized that currents which are stronger than his own will and thought demand of him that he should acknowledge what is in essential correspondence to the spirit of his age. These currents may be very manifold; he observes them unconsciously and consciously as general influences; there is something materially and morally compelling about them for him. He willingly subordinates himself to them and is full of enthusiasm for the idea of a new style *per se*."<sup>18</sup>

According to van de Velde, the artist has the power to capture and transform the existing conditions with his individual creativity. Thus like in the ancient times, an architect could also be a painter, a sculptor or a furniture designer at the same time. As seen in his projects, van de Velde worked on objects of industrial design as well as buildings.

 <sup>&</sup>lt;sup>17</sup> Conrad, Ulrich ed. "Muthesius /Van de Velde: Werkbund Theses and Antitheses" in *Programs and Manifestoes on 20<sup>th</sup> Century Architecture*, Cambridge, Massachusetts: MIT Press, 1970.
<sup>18</sup> Ibid. p 29.

Like the aim of the Russian Avant-garde movement (1910-1934), Henry van de Velde was supporting the idea that architecture should interact with painting, sculpture, photography, poster and book design, ceramics, textiles, and theatre.<sup>19</sup> It is possible to observe the material outcome of his ideas in his work in the beginning of the twentieth century.



Figure 2 37. The Art School Building in Weimar, 1904-11. Figure 2 38. Henry van de Velde interior design.



Figure 2 39. Henry van de Velde furniture design. Figure 2 40. Henry van de Velde ceramic design.

<sup>&</sup>lt;sup>19</sup> "Introduction" in *Russian Avant-Garde* available on <u>http://www.mkg-hamburg.de/english/ausstell/01\_russen/intro.htm</u> December 14, 2003.

As in historical times, van de Velde was an architect whose work was enriched with the artworks and designs that he produced. On the one hand his arguments were in direct relation with the pre-industrialized world of architecture and art; and on the other hand he was using the new construction materials and techniques that combined his art with technology.

In addition to these movements and groups that formed the base of the contemporary debates about the relationship between architecture and art in the beginning of the 1900s, there were two avant-garde groups that were concentrated on increasing the spatial quality of their architecture in accordance with the relation with other arts. These foundations were the Bauhaus School and De Stijl group. They present an alternative method to apply architecture as the great art in the age of mechanical reproduction<sup>20</sup>. They will be surveyed to understand the concept of "unification of the arts" in their products towards the architectural spaces of quality.

# **2.2.1.** Bauhaus and De Stijl: Avant-Garde Movements Uniting Art and Architecture

## 2.2.1.1. The Bauhaus School, 1919-1928

Artists, let us at last break down the walls erected by our deforming academic training between the "arts" and all of us become builders again!...Painters and sculptors, break through the barriers to architecture and become fellow builders, fellow strugglers for the final goal of art: the

<sup>&</sup>lt;sup>20</sup> The expression was taken from Walter Benjamin's well known text "The Work of Art In The Age of Mechanical Reproduction" in *Illuminations*, Fontana, Great Britain: The Chaucer Press, 1973, p 219-255.

creative conception of the cathedral of the future, which will once again be all in one shape, architecture and sculpture and painting.<sup>21</sup>

#### Walter Gropius, 1919

The Bauhaus School was founded by Walter Gropius in 1919, with the unification of two faculties: Weimar School of Arts and Crafts and Weimar Academy of Fine Arts under the name Das Staatliche Bauhaus Weimar. <sup>22</sup> Gropius's dream was to unite all branches of art under the great art of architecture. He was negating the concept of "art for art's sake" and he was trying to sublate art into the praxis of life and reintegrate artists into daily realities.<sup>23</sup> He was explaining the aims of the Bauhaus in his manifesto as:

"The ultimate aim of all visual arts is the complete building!...Architects, painters, and sculptors must recognize anew and learn to grasp the composite character of a building both as an entity and in its separate parts... Together let us desire, conceive, and create the new structure of the future, which will embrace architecture and sculpture and painting in one unity..."

"The Bauhaus strives to bring together all creative effort into one whole, to reunify all the disciplines of practical art – sculpture, painting, handcrafts, and the crafts - as inseparable components of a new architecture. The ultimate, if distant, aim of the Bauhaus is the unified work of art - the great structure - in which there is no distinction between monumental and decorative art."<sup>24</sup>

Gropius was claiming that, the architect was responsible for the mastery of space. He has to combine his imaginative power with his

<sup>&</sup>lt;sup>21</sup> Conrad, Ulrich ed. "1919. Gropius/Taut/Behne: New Ideas on Architecture" in Programs and Manifestoes on 20th Century Architecture, Cambridge, Massachusetts: MIT Press, 1970, p 46. <sup>22</sup> Ibid. p 51-52.

<sup>&</sup>lt;sup>23</sup> Op.cit. Gropius, W., 1965, p 90.

<sup>&</sup>lt;sup>24</sup> Conrad, Ulrich ed. "1919. Walter Gropius: Programme of the Staatliches Bauhaus in Weimar" in Programs and Manifestoes on 20<sup>th</sup> Century Architecture, Cambridge, Massachusetts: MIT Press, 1970, p 49-50.

technical proficiency not merely for constructing buildings but also for performing the art of architecture. <sup>25</sup>

Although Walter Gropius's teaching was departing from the traditional concepts in the new architecture that he was trying to establish, it is possible to observe a resembling attitude towards the relation of architecture and visual arts similar to the ancient times.



Figure 2 41. Poster for Bauhaus Exhibition, 1925.

He suggests that the perfect collaboration in the practice of architecture cannot be accomplished with the contribution of different professions. It can only work out with the common comprehension of a team, which is made up of equally educated people, capable of both designing artistically and solving the problems of the design technically.<sup>26</sup> Consequently he was proposing a new type of architect who would be able to have the skills of a painter, a sculptor and an architect like in the

<sup>&</sup>lt;sup>25</sup> Op.cit. Gropius, W., 1965, p 24-52.

<sup>&</sup>lt;sup>26</sup> Op.cit. Gropius, W., 1965, p 66-80.

ancient times. However, his proposal does not mean that there has to be a physical interaction between the disciplines like it is observed in the Italian model.

From his suggestions, it is possible to capture the idea that the only method of interaction among diverse disciplines should not necessarily be sculpting a façade in a conventional manner. Furthermore, it can be done with the coordination of arts for the common aim of making the distinction between monumental and decorative elements disappear.<sup>27</sup> The necessities of the new age lie certainly beyond this judgment. Without loosing the will of creating an environment that gives aesthetic satisfaction, getting benefit from the mechanized production system was his teaching's basic objective. In the case of the Bauhaus School, the interaction between architecture and the arts was carrying the aim of combining the developing technology's opportunities with the new aesthetic understanding.





Figure 2 42. Bauhaus Building at Weimar. Figure 2 43. Bauhaus School interior design.

<sup>&</sup>lt;sup>27</sup> Op.cit. Gropius, W., 1965, p 66.

#### 2.2.1.2. De Stijl, 1917-1930

We have to realize that art and life are no longer separate domains. Therefore the idea of "art" as illusion unconnected with real life has to disappear. The word "art" no longer means anything to us.<sup>28</sup>

#### Theo van Doesburg and Cor van Eesteren, 1923

De Stijl (The Style) -like the Bauhaus school- is a group of artists whose aim was uniting architecture with other arts. The Dutch group came together under the leadership of Theo van Doesburg (1883-1931) in 1918 and declared a manifesto. The Dutch painter Piet Mondrian and designers Theo van Doesburg and Gerrit Rietveld were the leaders of the De Stijl movement. Manfredo Tafuri states that this group tried to bring architecture into the avant-garde.<sup>29</sup> Like the Bauhaus School, their aim was negating the distinction between art and architecture starting with the unification of art and life. Kenneth Frampton claims that "[i]n 1923 Van Doesburg and Van Eastern managed to crystallize the architectural style of Neo-Plasticism in an exhibition of their work."<sup>30</sup> In this exhibition, they were explaining their attitude towards form in architecture, which was coming into existence due to the necessities of the Modern World. As Frampton underlines, Van Doesburg was explaining:

"The new architecture is anti-cubic, that is to say, it does not try to freeze the different functional space cells in one closed cube. Rather, it throws the functional space cells (as well as the overhanging planes, balcony volumes, etc.) centrifugally from the core of the cube. And through this means, height, width, depth, and time (i.e. an imaginary four-dimensional entity) approaches a totally new plastic expression in open spaces. In this way

<sup>&</sup>lt;sup>28</sup> Conrad, Ulrich ed. "1923. "De Stijl": Manifesto V: -  $\Box$  + = R<sub>4</sub>" in *Programs and Manifestoes on* 20<sup>th</sup> Century Architecture, Cambridge, Massachusetts: MIT Press, 1970, p 67.

<sup>&</sup>lt;sup>29</sup> Tafuri Manfredo, Francesco Dal Co, *Modern Architecture*, Vol 1, New York: Electra /Rizzioli, 1986, p 110.

<sup>&</sup>lt;sup>30</sup> Frampton, Kenneth, in *Modern Architecture a Critical History*, Oxford University Press, 1980, p 145.

architecture acquires a more or less floating aspect that, so to speak, works against the gravitational forces of nature."<sup>31</sup>



Figure 2 44. Shroeder House by Geerit Rietvelt, 1924. Figure 2 45. Sketch of the interior of Shroeder House.

Here, Bauhaus School and De Stijl group symbolize two avant-garde movements whose basic purpose was to find humanistic solutions for the emerging needs of mechanized society. Architects came together with artists in both of the teams for declaring the new rules of architecture. Theo van Doesburg summarized the principles of De Stijl as:

"16. Architecture as a synthesis of Neo-Plasticism... Building is a part of the new architecture, which, by combining together all the arts in their elemental manifestation, discloses their true nature...Since the new architecture permits no images (such as painting or sculptures as separate elements) its purpose of creating a harmonious whole with all essential means is evident from the *outset*. In this way, every architectural element contributes to the attainment on a practical and logical basis of a maximum of plastic expression, without any disregard of the practical demands."<sup>32</sup>

<sup>31</sup> Ibid.

<sup>&</sup>lt;sup>32</sup> Conrad, Ulrich ed. "1924. Theo van Doesburg: Towards a Plastic Architecture" in *Programs and Manifestoes on 20<sup>th</sup> Century Architecture*, Cambridge, Massachusetts: MIT Press, 1970, p 80.





Figure 2 46. Furniture design by De Stijl. Figure 2 47. Furniture design by De Stijl.

Their idea of bringing art into life and using it as a material for the new production system were important reasons for their selection in this study.

# 2.2.2. Minimal Art: The Changing Definition of Sculpture and the Emerging Architectonic Qualities.

After studying the interaction of art and architecture as branches of knowledge in the historical Italian model and in the beginning of the twentieth century with Bauhaus and De Stijl, it is necessary to explore the contemporary condition of interaction, in the mid and late twentieth century as well.

The underlying concept of the unification of the arts that was proposed by Bauhaus and De Stijl was trying to bring a new aesthetic understanding to the architecture of the age. If, according to their discourse, different disciplines such as painting, sculpture and architecture were proposed to be melting into each other, first of all, the line between their definitions had to be blurred. In the following years, in the 1960s in America, the distinction between the traditional definitions of sculpture and architecture was being eliminated by Minimalist Art, the pioneers of which were Richard Serra, Carl Andre, Donald Judd, Dan Flavin, and Robert Morris. At this point Rosalind Krauss's text "Sculpture In The Expanded Field"<sup>33</sup> gains importance with its innovative approach to this issue. According to the ideas that were underlined by Krauss, Minimalist Art was selected as the case study to examine the interaction of sculpture and architecture in the second half of the twentieth century. The reason for focusing on the characteristics of their work in this part of the thesis is their leadership in bringing new definitions to the art of sculpture, which is in direct relation to the architectural space.

Rosalind Krauss's article reveals the progress of sculpture due to changing definitions, conceptions and styles of the modern era. She underlines how the world has changed in the new century and how the emerging conditions have affected the development of sculpture. She argues that the new sculpture in the urban fabric is sharing the space of architecture with its material and its scale. Even if the aim of Minimalist artists is not uniting their work with architecture, because of the common concept that they share with the architects, the interaction between their art and architectural production was inevitable: the concept of space.

Imagined space was constructed by Minimalist artists with the use of structural materials such as brick, steel, glass, wood, and metal sheets.

<sup>&</sup>lt;sup>33</sup> Krauss, Rosalind E. "Sculpture In the Expanded Field." *The Originality of The Avant-Garde and Other Modernist Myths.* Cambridge, Massachusetts: The MIT Press, 1985.

Through these spaces, Minimalist sculptures were not only challenging architectural space but were also proposing an inventive method to design and re-read it. Their first attempt was to enlarge in scale in order to be explored outside the gallery space. Richard Serra states:

"When sculpture leaves the gallery, to occupy the same space and place in terms of sculptural necessities, architects become annoyed. Not only is their concept of space being changed, but also for the most part it is being criticized. The criticism can come into effect only when architectural scale, methods, materials, and procedures are being used. That's how comparisons are provoked."<sup>34</sup>



Figure 2 48. Richard Serra, Clara-Clara, 1983, Paris.

Instead of being an artwork in relation with the spectator in an exhibition area, Minimalist artworks started to take their places in the public spaces. When they began to generate spatial experience outside the gallery, they started to become a part of the urban fabric, in relation with architecture. Therefore, architects started to be interested in them as spatial experiments. Marga Bijvoet states that, "The idea of sculpture is changed in favor of a process of collaboration with architects,

<sup>&</sup>lt;sup>34</sup> Blanchebarbe, Ursula ed., *Richard Serra, Axis.Documentation*, Kunshalle Bielefeld, 1990,p38.
designers, engineers, environmentalists, and local community groups, with a view to making the public space itself a work of art."<sup>35</sup> At this point James Wines's comments on the relationship between public art, private art and architecture gains importance. He states:

"Sculptures tend to use phrases like "the provision of space directionals", "a dialogue with architecture", and "environmental orientation" to defend their efforts. Architects, similarly, will speak of "formal accents", "community interaction", and "the formation of places of identity" to support their decisions to use art in relation to buildings. Public art is not private art transplanted into a new setting."<sup>36</sup>

Stan Allen agrees with this idea stating, "With Minimalism, the sculptural object was inflated to an architectural scale and propelled into architectural space."<sup>37</sup> However, Minimalist art was being criticized due to its spatial quality in the world of art, by which it came to be adored in the world of architecture. Michael Fried, made this critique in his famous essay "Art and Objecthood"<sup>38</sup> in 1967.

Fried introduced a new terminology to the literature about the condition of the Minimalist artworks: the literalist art. He suggested that the works of the Minimalists could not be called art because these objects could no longer be contemplated but instead, must be experienced synchronized with their perception. In this case, the artists of the 1960s proposed a three dimensional stage in order to add the experience,

<sup>&</sup>lt;sup>35</sup> Bijvoet, Marga. "Toward an Art In Public Places." In Art As Inquiry. Toward A New Collaboration Between Art, Science and Technology. New York: Peter Lang Publishing Inc., 1997, p 150-151. <sup>36</sup> Wines, James, "Public Art / Private Art" in *De-Architecture*, New York, NY: Rizzoli, 1987, p 60.

<sup>&</sup>lt;sup>37</sup> Stan, Allen. "Minimalism: Sculpture and Architecture." Art & Design Magazine, 1999, p 26.

<sup>&</sup>lt;sup>38</sup> Fried, Michael. Art and Objecthood: Essays and Reviews. Chicago: University of Chicago Press, 1998.

space-enclosure factors into the relationship that is posed between the observer and the created set. According to Fried, this fact could not be predicted as a quality of art. By this method, the work presents a stage in which the artwork gains objecthood - "the condition of non-art" in his words- and due to the spatial context, it becomes theatrical.<sup>39</sup> Nevertheless, the condition of the Minimalist artworks that was criticized by Fried forms the basis of their relationship with architecture on the common issue of space. Stan Allen clarifies this relationship and assigns the significance of the term Minimalism as:

"Minimalist work of 60s and 70s sought to empty the work of art of its figurative or decorative character in order to foreground its architectural condition. The construction of meaning was displaced from the object itself to the spatial field between the viewer and the object. A fluid zone of perceptual interference populated by moving bodies. Such artists as Carl Andre, David Flavin, Robert Morris or Donald Judd sought to go beyond form or compositional variation, to engage the space of the gallery and the body of the viewer."

From Allen's point of view, it is possible to follow the relationship posed between the works of the Minimalist artists and architects. It is not based only on the resembling formal and tectonic characteristics but also on the fact that Minimalist artists evoked architectural space. He was trying to establish the dialogue between Minimalist art and architecture and, meanwhile, he was disagreeing with Fried's opinions. In his essay "Minimalism: Sculpture and Architecture", he was quoting from Michael Fried's "Art and Objecthood" focusing on the scale of the artworks and Fried's criticisms on the distance between the artworks and the beholder in the Minimalist Art. According to Allen,

<sup>&</sup>lt;sup>39</sup> Ibid. p 120-127.

<sup>&</sup>lt;sup>40</sup> Allen, Sten. "From Object to Field." A+U 335, 98:08, p 25.

Fried believed that the largeness of the object tears the beholder apart from the object and puts a physical and psychical distance in between. Fried summarized his ideas on this issue saying, "The larger the object, the more we are forced to keep our distance from it." Due to this statement Allen underlines the fact that Fried's criticisms on distance, scale, and space articulated in three-dimensions (which are shared with architecture), mean that he criticized Minimalist art as being too close to architecture.



Figure 2 49. Robert Morris, Labyrinth, 1999.

Consequently Allen suggests an alternative argument to Fried's "what lies between the arts is theater" as, "what lies between the arts is architecture". However, after suggesting such a connection between two disciplines, and stating that Minimalism's artifacts are more like architecture and less like sculpture, he declares that, these artworks are not architecture. He states that, Minimalist works are sculptures in architectural scale but because they are useless and contextless, they are not architecture.

In this thesis, the main aim is not comparing one field with another; rather this study is based on the interactive relationship between them. Being conscious about the fact that sculpture and architecture are dissimilar due to the issues of function, use, expressive quality, aesthetic value, and technical features, the basic intention is to discover the common characteristics. How a sculpture can resemble an architectural artifact is apparent in the comparison of Dan Graham's Pavillion/Sculpture for Argonne and Ludwig Mies van der Rohe's German Pavillion.



Figure 2 50. Dan Graham, Pavillion/Sculpture for Argonne. Figure 2 51. Ludwig Mies van der Rohe, German Pavillion.

The pure geometrical forms, ratios, construction materials and surfaces are comparable to each other. Although Graham's pavilion is a sculpture and Mies van der Rohe's pavilion is a building, the effects that they generate on the spectator and user seem resembling with each other.

## 2.2.2.1. Spatial and Formal Practices of Minimalist Art

Over the last ten years rather surprising things have come to be called sculpture; narrow corridors with TV monitors at the ends, large photographs documenting country hikes, mirrors placed at strange angles in ordinary rooms; temporary lines cut into the floor of the desert. Nothing, it would seem, could possibly give to such a motley of effort the right to lay claim to whatever one might mean by the category of sculpture. Unless, that is, the category can be made to become almost infinitely malleable.<sup>41</sup>

#### **Rosalind Krauss**, 1985

Starting with the issue of the transformation of the definition of sculpture, Krauss underlines the emerging architectonic qualities that form the new sculpture's characteristics in her essay, "Sculpture in the Expanded Field". These qualities appear sometimes with mirrored surfaces that change the perception of the architectural space in which they are located and, sometimes with the large-scale works that are settled in a natural environment. But the common quality of these artworks appears in their description: Minimalist Art. In this section, the examples of these artworks will be examined due to their spatial and formal qualifications.

### Rosalind Krauss defines Minimalist Art as:

"I have been treating the sculptural movement that begins roughly in the 1964 and continues to the present as the manifestation of a single sensibility, which for simplicity's sake I am calling minimalism...If I have been presenting the minimalist-based work of the last ten years as a radical development in the history of sculpture, that is because of the break it declares from the dominant styles that immediately precede it, and because of the profound abstractness of its conception." <sup>42</sup>

<sup>&</sup>lt;sup>41</sup> Krauss, Rosalind E. "Sculpture In the Expanded Field." *The Originality of The Avant-Garde and Other Modernist Myths.* Cambridge, Massachusetts: The MIT Press, 1985, p 277.

<sup>&</sup>lt;sup>42</sup> Krauss, Rosalind E., "The Double Negative: A New Syntax For Sculpture", *Passages In Modern Sculpture*, Cambridge, Massachusetts: MIT Press, 1983, p 245.

As seen in the sculptures of Donald Judd, Richard Serra and Michael Heizer, the Minimalist art object brings a new definition to sculpture.



Figure 2 52. Donald Judd, Aluminum, 8x8x8 1975. Figure 2 53. Richard Serra, Running Arcs, 1970.

According to Krauss, the new sculpture has emerged due to a disciplinary self-criticism and the merging of the traditional definitions of sculpture and architecture. In her article the main concerns related with these issues are:

- Modernity, Postmodernity Plurality- and Historicism,
- Minimalist artworks which introduce a new aesthetic to sculpture,
- Autonomy and self-referentiality of sculpture,
- The expanded field housing a set of oppositions among which, the category of modern sculpture is suspended, (architecture/notarchitecture and landscape/not-landscape)

• Minimalist sculpture in relation with space and the architectural experience that it produces.





Figure 2 54, Figure 2 55. Michael Heizer, Double Negative, 1969-1970, 240,000-ton displacement in rhyolite and sandstone in Mormon Mesa, Nevada, 1,500 x 50 x 30 ft., The Museum of Contemporary Art, Los Angeles.

The basic fact that relates Minimalist sculpture and architecture can be stated as the common spatial experience that they produce. If the main concept of the debates about their relationship is space, it would be proper to elaborate in this part the nature of the Minimalist work, followed by its architectonic qualities.

Krauss expresses the common characteristics of the works of The Minimalist artists as:

- The usage of the objects that are mass-produced,
- Lack of hierarchy within the system that they construct,
- Repetition,

• Inertness.<sup>43</sup>

When Minimalist artists rejected the personality cult and subjectivity of Abstract Expressionism, what they were after was the accessible experience that is formed within the compositions of their artworks.<sup>44</sup> At this point, the experience turns out to be the bridge that connects the works of Minimalist artists and architects through form. Thus it is possible to state that these works gain meaning by the spatial experience that they produce while one is observing them. By constructing the expression through spatial and formal composition, Minimalist sculpture starts to display architectonic qualities.

Rosalind Krauss explains the progress of sculpture and the network of definitions in which it is placed in relation with architecture with the diagram called the *Klein Diagram*. Krauss starts to form her diagram through a mathematical one known as the Klein group by locating sculpture between "not-landscape" and "not-architecture". Forming the opposite poles, she constructs her schema in stages. "Landscape" and "architecture" take their places as counterparts. While giving names to the areas in between, she uses the terms axiomatic structures, site constructions, marked sites and sculpture. In my opinion, this creative diagram that includes "architecture", explains in detail why her observations are relevant to our study.

<sup>&</sup>lt;sup>44</sup> Ibid. p 258.



Figure 2 56. Rosalind Krauss, "Klein Diagram".

Krauss walks out of the traditional realms and defines a modern sculpture, which is against the monumental one, and discovers new categories that are due to the emergence of the new qualities in sculpture. With this diagram she dissolves the definitions into each other. Thus it is possible to observe an interaction among disciplines bearing in mind the interaction of their definitions in Rosalind Krauss's system.

The interval in which the examples of architecture and not-architecture are located was called "axiomatic structures". Krauss explains this interval as: "The first artists to explore the possibilities of *architecture* plus *not-architecture* were Robert Irwin, Sol Le Witt, Bruce Nauman, Richard Serra, and Christo. In every case of the axiomatic structures, there is some kind of intervention into the real space of architecture, sometimes through partial reconstruction, sometimes through drawing, or as in the recent works of Morris, through the use of mirrors...But whatever the medium employed, the possibility explored in this category is a process of mapping axiomatic features of the architectural experience-the abstract conditions of openness and closure-onto the reality of a given space." <sup>45</sup>



Figure 2 57. Robert Morris, Mirrored Cubes. Figure 2 58. Robert Morris, Mirror Installations.

This section will familiarize the reader with Richard Serra's work which will later be useful in understanding the professional relationship between Richard Serra and Frank Gehry.

In order to examine the spatial and formal qualities carried by the axiomatic structures in relation with architecture, the examples that Rosalind Krauss gives, Richard Serra's works "Delineator", "Twins",

<sup>&</sup>lt;sup>45</sup> Ibid. p 287.

"Circuit" and "Torqued Ellipses" will be our case studies in relation with each other.

The common properties of these artworks are basically their material steel sheets- and their scale. From "Delineator" to "Torqued Ellipses", it is possible to follow the rise in the three-dimensionality of the artwork.



Figure 2 59. Richard Serra, Delineator.



Figure 2 60. Richard Serra, Twins.



Figure 2 61. Richard Serra, Circuit.



Figure 2 62. Richard Serra, Torqued Ellipses.

**Rosalind Kraus states:** 

"Delineator is to Twins as Twins is to Circuit. In all three, what is experienced is a powerful imbrication of the visual with the physical, as the space that one sees is shown to be interdependent with the space corporealized within oneself, and that space in turn relies for its meaning upon space at large."<sup>46</sup>

"For Minimalists, the interest of phenomenology was located precisely in its assumption of a "preobjective experience" underlying all perception and guaranteeing that even in its abstractness it is always and already meaningful; otherwise, without an expectation of meaning located precisely in it, we would have no reason to go on to commit acts of seeing, hearing, moving."<sup>47</sup>

According to Krauss, the large-scale structures enable the artist to generate space within his artwork. Due to the spatial quality that pulls the viewer inside, the artwork gains meaning with hearing, touching, moving in and around it as well as perceiving its volumetric character.

In Serra's diverse examples, it is possible to examine different formal characteristics. For instance, in *Delineator* the steel planes are covering the surfaces of the floor and the ceiling through which one could move freely without being aware of their existence. In *Twins* this condition changes and the steel planes start to divide the space that they are located in. Therefore one could only move around them in order to be able to go from one place to another in the exhibition area.

<sup>&</sup>lt;sup>46</sup> Krauss, Rosalind E., "Richard Serra Sculpture", *in Richard Serra Sculpture*, The Museum of Modern Art, New York, 1986, p 28.

<sup>&</sup>lt;sup>47</sup> Ibid. p 29.

When a spectator enters the space of *Circuit*, he could probably perceive the constructed space due to the feeling that he is surrounded by the artwork. Finally, in the case of *Torqued Ellipses* one could enter the artwork, exit from the artwork, move around it and hear the echo of one's voice while walking inside the curved metal sheet.

If it is possible to refer to a volume as space in architecture with the event that takes place inside of it and, with the meaning that it carries, it would be possible to refer to a volume created by an artist as "space" with the conscious perception of the viewer that generates meaning from the beginning each time the artwork is being observed. Thus the issue of space is taken in architecture and in Minimalist art in such a related manner. At this point, with the existence of a common ground such as space, it would be useful to elaborate on the debates about the conceptions of "architectural" and "sculptural" those have melted into each other in the contemporary era.

# 2.2.2. Discussions on the Concepts of "Sculptural" and "Architectural" as they relate to Spatial Experience

Before studying the contemporary debates about the meanings of the terms sculpture, architecture, sculptural and architectural, it would be beneficial to explain this study's attitude towards the significations and characteristics of these expressions.

Figure 2 63. Table of comparison of architecture and sculpture.

ARCHITECTURE	SCULPTURE

CARRYING FUNCTIONAL	CARRYING AESTHETICAL
VALUE	VALUE
CREATING INHABITABLE SPACE	CREATING IMAGINED SPACE
PERMANENT	PERMANENT/IMPERMANENT
FUNCTIONING IN LARGE-SCALE	ENABLING SCALE VARIATIONS
GAINS MEANING THROUGH	GAINS MEANING THROUGH
PERCEPTION AND USE	PERCEPTION

These explanations may not be enough to underline the common and diverse facts that relate architecture to sculpture however, in today's world of plurality, where inquiries are being made about the meanings of the terms architecture and sculpture, they are under examination with their intersecting spheres. In his book, "What is Art? An Introduction to Painting, Sculpture, and Architecture", John Canaday elaborates the significances of these terms. He states:

"...[p]icture is an expression of its time and also the personality of the artist who painted it. Sculpture, while, emphatically an expression of its time, has been less permissive in its allowance for personal expression. We say, "has been" because the twentieth century has liberated sculpture from an old alliance so strong that "sculpture, the handmaiden of architecture" was a popular cliché with nineteenth century art historians."<sup>48</sup>

"Finally and perhaps most rewarding for us, architecture is not only an expression of the age that produced it, but is probably the most dependable of those expressions. Because it is the least personal and the most sociological of the arts, architecture is the likeliest to give us the most unbiased and most complete reflection of the age it served." <sup>49</sup>

<sup>&</sup>lt;sup>48</sup> Canaday, John. "Sculpture" in *What is Art? An Introduction to Painting, Sculpture, and Architecture.* New York: Alfred A. Knopf Inc., 1980, p 37.

<sup>&</sup>lt;sup>49</sup> Ibid. p 54.

In the recent times, the dependence of architecture on the other arts is not the same way as before. Besides, the interaction among them is valid due to the reciprocal needs of the different disciplines.

Architecture may become the social roof under which personal expressions –artworks- can be collected but also it is one of the media of expression that reflect the realities and needs of its age. Canaday continues with describing the existing condition of sculpture in the modern world pointing to the characteristics of Minimalist Art as:

"It was so extreme that we mean one thing when we say "sculpture" in the context of thirty thousand years when stretching between the Venus of Willendorf and Rodin, another when we say "sculpture" in the context of twentieth century. Objects now classified as sculpture are frequently neither modeled nor carved, but are glued or nailed or welded into a sculptural unit for odds and ends of material picked up here and there, with junked machine parts among the most popular."<sup>50</sup>

He states that, the term "sculpture" does not necessarily signify the same matter in everyone's mind. From time to time, under different conditions the counterpart of this term can change. This idea was supported also by Rosalind Krauss in her texts, which moulded the contemporary meanings into each other.

<sup>&</sup>lt;sup>50</sup> Ibid. p 46.





Figure 2 64. Blolo Bla African sculpture.

Figure 2 65. Donald Judd, Untitled.

Highlighting the complexity of making strict distinctions between categories, Stan Allen states: "Today the situation is more complicated. It is precisely the mobility of the category of sculpture that makes for a difficulty in constructing a useful relationship between architecture and sculpture."<sup>51</sup>

Referring to Rosalind Krauss, he expresses that the elasticity of the categories brings heterogeneity, which appears as a danger of collapse for the category system. He defines the sculptural building and the architectural sculpture as:

"When we call a building sculptural it signals a figurative aspect, and conversely, when we call a piece of sculpture architectural it suggests the presence of tectonic forms."<sup>52</sup>

<sup>&</sup>lt;sup>51</sup> Allen, Stan, "Minimalism: Sculpture and Architecture", Art & Design Magazine, 1997, p 23.

<sup>&</sup>lt;sup>52</sup> Ibid.

He later points to Rosalind Krauss's Klein diagram, insisting on the idea that it is not a sufficient source for understanding the categorization of architecture. This stems from his belief that architecture is not a historically bounded discipline like sculpture and therefore the same classification system could not function for the two disciplines at the same time.

However, the examples of these interactive categories can be given with the Minimalist works and the contemporary works of Frank Gehry and Santiago Calatrava, according to Krauss's Klien Diagram as such:

- Sculpture: Not Landscape/ Not Architecture
  - o Richard Serra, Delineator
  - Richard Serra, Torqued Ellipses
- Axiomatic Structures: Not Architecture/Architecture
  - o Richard Serra, Marilyn Monroe-Greta Garbo
  - o Frank Gehry, Barcelona Fish
- Site Construction: Architecture/Landscape
  - o Santiago Calatrava, Bilbao Airport Garage
  - Dan Graham, *Pavillion for Argonne*
- Marked Sites: Landscape/Not Landscape
  - Donald Judd, L.A. Country Museum of Art Sculpture Garden
  - o Christo, Valley Curtain

This classification is beneficial for demonstrating the richness and suitability of this diagram with the issue of interdisciplinary relationships. Here, different examples of "art" and "architecture" were placed one after another in the same schema.



Figure 2 66. "Klein Group" Diagram with examples.

This means that Minimalist artworks, environmental artworks and architectural artifacts could act as sources of inspiration for each other in bringing innovation to the traditional disciplinary fixations. Stan Allen defines the Minimalist Art and its relationship with architecture as:

"In the case of Minimalism, a strange circular route has been traced, whereby artists in the 1960s, in an effort to rethink some of the limits of their discipline turned towards architecture, only to have the favor returned some 20 years later, when with Minimalism firmly recognized in its art historical context, architects begin to look to minimalism as support for contemporary production."<sup>53</sup>

<sup>&</sup>lt;sup>53</sup> Ibid.

His theory was confirmed by Richard Serra. He expressed that his sculpture was in search of the new. He claims in an interview with Douglas Crimp that:

"I build structures that were 30-40 feet high and weighed between 60-70 tons. I saw a potential for my work in another scale, a scale that was more interesting to me than the limited possibilities offered by the museum or gallery rooms."<sup>54</sup>

As sculpture was in search for the new for itself, architecture was making the same inquiry. Contemporary architects - one of whom is Frank Gehry- began to see the Minimalist artists as collaborators and the Minimalist projects as entities sharing their profession. Due to the intra-disciplinary changes, architecture and sculpture started to diffuse into each other.

Starting from the early twentieth century, form and space have been concerns of the artists as well as of the architects. They started to give form to space for different aims, in different ways of expression. Walter Gropius was explaining the features of space creation in 1920s in his essay "The Theory and Organization of the Bauhaus" as:

"The objective of all creative effort in the visual arts is to give form to space...But what is space, how can it be understood and given a form?...Although we may achieve an awareness of the infinite, we can give form to space only with finite means....This conception of space demands realization in the material world, a realization which is accomplished by the brain and the hands."<sup>55</sup>

<sup>&</sup>lt;sup>54</sup> Crimp, Douglas. "Richard Serra's Urban Sculpture An Interview." *Richard Serra Sculpture*. Ed. Rosalind Krauss, New York: MOMA N.Y., 1986, p 119.

<sup>&</sup>lt;sup>55</sup> Walter Gropius "The Theory and Organization of the Bauhaus", in *Art In Theory1900-1990 An Anthology of Changing Ideas*, Edited by Charles Harrison and Paul Wood, Cambridge, Massachusetts: Blackwell Publishers, 1993, p 340.

As stated in the quotation, also the conception of space changes from one standpoint to the other. So how will it be possible to define space in relation with painting, sculpture and architecture? Nicolaus Pevsner gives the answer of this question as:

"A bicycle shed is a building; Lincoln Cathedral is a piece of architecture. Nearly everything that encloses space on a scale sufficient for human being to move in is a building; the term architecture applies only to buildings designed with a view to aesthetic appeal."<sup>56</sup>

"In every building, besides enclosing space, the architect models volumes and plans surface, i.e. designs and exterior and sets out individual walls. That means that good architect requires the sculptor's and painter's modes of vision in addition to his own spatial imagination."<sup>57</sup>

Although it is difficult to capture the meaning of space that connects the artworks with architectural production, it is possible to propose that it is the result of adding a meaning to the existing volume. This act is common to all branches of art.

In his text "Architecture as Expression: Can It Approach The Condition of Art?"<sup>58</sup> Robert Maxwell brings into light diverse examples of expressionist art and architecture from the beginning of the twentieth century such as the projects of Duchamp, Bruno Taut, Hans Scharoun, Zaha Hadid, Konstantin Melnikov, El Lissitzky, Rem Koolhas, Daniel Libeskind, Lebbus Woods and Frank Gehry. Mentioning Frank Gehry's architecture as one of the examples of the computer aided design and realization, he underlines the tools of the artists of the twentieth century that liberated their work and the formal aspects in

<sup>&</sup>lt;sup>56</sup> Pevsner, Nikolaus. "Introduction" An Outline of European Architecture, Harmondsworth, England: Penguin Books Ltd., 1943, p 15.

<sup>&</sup>lt;sup>57</sup> Ibid. p 16.

<sup>&</sup>lt;sup>58</sup> Maxwell, Robert, *Transgressions: Crossing The Lines At The Royal Academy*, in Architectural Design, London: Academy Editions, 1997, p 10-16.

contemporary architecture, which is transformed due to such liberation. This release was not only from the traditional formal characteristics but also from the historical bonds that the architect aims to tear himself from. Thus, a new classification was needed for the works of architects like Frank Gehry in order to express the ideas on space, art and architecture in a free manner. The term was found. After the architectural sculpture that was discussed with the Minimalists, its counterpart in architecture could be formed as the sculptural architecture.

Sculptural architecture appeared by the end of twentieth century, which without doubt approached the condition of art. Architecture as an artwork was carrying the aesthetic value as well as functional qualities. The new architecture was about to be born out of:

- The relationship between painting, sculpture and architecture in the pre-modern world,
- The unification of the arts under the roof of architecture in the beginning of the twentieth century,
- The blurring definitions and the intersecting disciplinary spheres,
- The interaction of painting, sculpture and architecture resulting in the inter-disciplinary relations,
- The emergence of architectural sculpture,
- The emergence of sculptural architecture.

One of the pioneers trying to construct a new aesthetical understanding for architecture according to the spirit of the age is Frank Gehry. Combining these three disciplines with each other in order to bring an artistic quality to his buildings, Frank Gehry is one of the most important architects of today. With the examination of his projects and with a detailed study about his professional collaboration with artist friends, the interaction of painting, sculpture and architecture in his work will be surveyed in the following chapter.

# **CHAPTER 3**

# IN SEARCH OF A DIALOGUE BETWEEN ARCHITECTS AND ARTISTS

Interdisciplinary exchange between architecture and the visual arts could only be achieved in conjunction with the professional dialogue between the practitioners of these fields. In order to make a profound survey on how an architectural artifact can be accepted as art, Frank Gehry's work and collaboration with painters and sculptors will be elaborated upon in this chapter. The exchanges affecting the productions of separate domains and the professional relationships changing the potential of disciplines will here be investigated.

# **3.1. Frank Gehry and the Art of Architecture**

If you try to understand my work on the basis of fugal order, structural integrity and formalized definitions of beauty, you are apt to be totally confused. I approach each building as a sculptural object, a spatial container...The manipulation of the inside of the container is for me an independent, sculptural problem and no less interesting than the design of the container itself.<sup>59</sup>

#### Frank Gehry, 1985

<sup>&</sup>lt;sup>59</sup> "Buildings and projects" in Arnell, Peter and Ted Bickford eds. *Frank Gehry Buildings and Projects*. New York: Rizzioli, 1985, p 112.



Figure 3 1. Sketch for Guggenheim Bilbao Museum, by Frank Gehry, 1991.

The distinction between architecture, painting and sculpture as separate arts was dissolved in Frank Gehry's work and a new kind of architecture was developed. Unifying art and technology, Gehry extends the limits of architectural production. In order to design inhabitable spaces with an aesthetic apprehension, he states that he needs art. It would be beneficial to try to understand how Gehry's professional life has started:

"I started out studying fine arts at USC, I studied ceramics with Glenn Lukens...My teacher, having seen me lit up at the experience of seeing a house under construction, suggested that I take an architecture class. So I took a night class at USC.... [b]ut having came from the fine arts, I was always trying to put architects together with artists at school. And I used to go to Goodall, who was the dean, and concoct projects between architecture and art departments. But I always failed. They would never cooperate. The artists and architects were in the same building, but never talked."<sup>60</sup>

<sup>&</sup>lt;sup>60</sup> Bechtler, Cristina, ed. Kurt W. Forster Frank O Gehry. Art and Architecture in Discussion. Verlag: Cantz, 1999, p 53-54.

Francesco Dal Co starts his article in the book Frank O. Gehry The Complete Works, with a title "The World Turned Upside Down: The Tortoise Flies and the Hare Threatens The Lion<sup>"61</sup>. This may seem an irrelevant beginning but it is a title which introduces the extraordinary architecture of Frank Gehry. This belief, finds its support in the article when Dal Co starts with the project of "Il Corso Del Coltello". In the installation "Il Corso Del Coltello" (The Mission of the Knife), which was an outcome of the collaboration of Frank Gehry, Claes Oldenburg and Coosje Van Bruggen, the aim was to demonstrate the urgency of cutting the umbilical cord with the past. Being open to progress, the necessity of turning our faces towards the present, and being a part of our own time, living and believing in the truth, against the structures and the forms of the past were illustrated by this manifesto. In order to take part in the contemporary world, it was necessary to obey the new rules and furthermore to create original systems to be used according to today's requirements.

Gehry's attitude signified a new approach in which technology was related with art in an unexpected manner. The complex forms that are brought to life with the proper computer program, widened his perspective in the act of design. Frank Gehry was involved in the computerized process –the CATIA computer program- in order to reach the fluid, complex and interrelated forms that he wanted to create. His aesthetic is functional and technological in relation with the nature of architecture.

<sup>&</sup>lt;sup>61</sup> Dal Co, Francesco. "The World Turned Upside Down: The Tortoise Flies and the Hare Threatens The Lion" in Francesco Dal Co, Kurt Forster. *Frank O Gehry. The Complete Works*. Milano, Electa: The Monacelli Press, 1998, p 39.

Maximizing the computer's abilities was not his aim; rather, the computer was a tool for arriving at the sculptural forms that he had imagined.

In order to prepare a project of both of a functional quality and of an artistic expression, as stated by Kirsten Degel and Kjeld Kjeldsen<sup>62</sup>, Gehry starts pragmatically from inside out. At the beginning, he takes wooden rectangular blocks, which are signifying the elements of the program in order to determine the organizational schema. Starting with the basic rectangle that contains the functional spaces, he breaks down each geometrical shape into its parts, assembling them in a different way. That is why he was called one of the "deconstructivist architects" of the late twentieth century.

Beginning to shape them like clay models he decides their forms in relation to the functions that they are going to carry. All of his architectural elements are not necessarily carrying technical functions but some of them are added as compositional elements that help Gehry express an emotion or a theme with his building. At the end, he does not create pure geometrical forms. His aim is not preparing every inch of the building for a specific function but rather he tries to create a meaningful continuum in form. This could be accepted as one of the grounds for calling him an artist in architecture. It is not surprising that Robert Wilson<sup>63</sup> defines Frank Gehry as an architect who thinks like a sculptor with his own signature.<sup>64</sup>

<sup>&</sup>lt;sup>62</sup> Degel, Kirsten and Kjeld Kjeldsen eds. *The Architect's Studio*. Lousiana: Lousiana Museum of Modern Art, 1998, p 16-17.

<sup>&</sup>lt;sup>63</sup> Robert Wilson is an American artist who is born in Waco, Texas, and who was educated at the University of Texas and Brooklyn's Pratt Institute where he took an interest in architecture and

Frank Gehry states that he shapes his volumes in a free and sculptural manner, explaining the process by saying: "You forget about it as architecture, because you are focused on the sculpting process."<sup>65</sup>



Figure 3 2. Frank Gehry's study model. Figure 3 3. Frank Gehry's study model.

Having seen that the compositions that he has sculpted could be realized by CATIA, his imagination is liberated. Thus, beyond achieving the technical goals in the design process, he could cross the line between designing a building and sculpting a building. As a consequence, his architecture started to enter the realm of art. He stated:

"I have never felt that what artists are doing is very different. I have always felt that there is a moment of truth when you decide: what color, what size, what composition? How you get to that moment of truth is different and the end result is different. Solving all the functional problems is an intellectual exercise. That is a different part of my brain. It is not less important, it is just different."<sup>66</sup>

design. He studied painting with George McNeil in Paris and later worked with the architect Paolo Solari in Arizona.

<sup>&</sup>lt;sup>64</sup> Op.cit. Bechtler, C., 1999, p 93.

<sup>&</sup>lt;sup>65</sup> Van Bruggen, Coosje, "Toward a Unity of Opposites: A Mere Building Versus Sculptural Architecture" in *Frank O Gehry. Guggenheim Museum Bilbao.* New York: Guggenheim Museum Publications, 1997, p 103.

<sup>&</sup>lt;sup>66</sup> Ibid. p 95.



Figure 3 4. Frank Gehry in "Il Corso del Coltello" Figure 3 5. Commercial for Machintosh with Frank Gehry with the catchword: "Think different".

By means of using architecture as a medium for self-expression, Gehry created expressive forms out of standards. While the orthogonal forms modern architecture express roughness, strength, of structural constancy, constructional security, dominancy, durability, permanency, and familiarity, Frank Gehry's organic forms express softness, tactility, lightness, activity, energy, dynamism, temporality, variability, and unfamiliarity. "For me, Modernism is a way of understanding the most direct way of making things," said Richard Meier<sup>67</sup>. This direct way could signify the most appropriate form for a specific function. For example, the excessive quality in Gehry's work - the non-functional architectural elements that complete his compositions such as the ceiling of the fish gallery in Guggenheim Museum Bilbao- separates it from the buildings of the Modernist architecture that create fabricated standard solutions, for the needs of the industrial economy at the beginning of the twentieth century.

<sup>&</sup>lt;sup>67</sup> Lacayo, Richard, "Skyline", Time, 0040781X, 02/21/2000, Vol. 155, Issue 7.



Figure 3 6. Fish Gallery, Guggenheim Bilbao Museum.

For example Le Corbusier's *Plan Voisin*, which proposes a center of industry for Paris, was suggesting fabricated elements of construction to be used in a number of identical buildings. Gehry's approach is to the contrary. He sees a building as a sculptural object, which has its own peculiarities. More like Le Corbusier's Notre-Dame-du-Haut Chapel in Ronchamp, the sculptural quality of the building has priority in his work. Although in *Plan Voisin* Le Corbusier describes the new architecture for the changing life in the modern cities in the early twentieth century with the architecture of mass production, Frank Gehry stands against this idea, expressing the new face of the modern city with individual buildings and forming a harmonious whole with their different characteristic features. Frank Gehry constructs "Notre-Dame-du-Haut Chapel"s for the urban fabric, uniting the sculptural

quality with the complex functions that a large scale architectural project would carry.



Figure 3 7. Le Corbusier, Plan Voisin, 1925. Figure 3 8. Le Corbusier, Plan Voisin, 1925.



Figure 3 9. Le Corbusier, Notre-Dame-du-Haut Chapel in Ronchamp, 1956.

But if the main medium for self-expression through form is art, could Gehry's work be the art of architecture?

Due to the fact that Gehry's architecture evokes a sensation of appreciation and excitement, it elevates the imaginative power of the observer. It liberates the mind from the conventional norms of architecture and causes the user to perceive it as if it is an artwork. Because besides the function that the spaces carry, his designs are organically integrated masses, bounded to a compositional schema. In Guggenheim Bilbao Museum, one can feel that natural forces caused the building to take its shape in the construction period. The fluid masses appear as if they took their forms with the strong blow of the wind from different directions and the shapes look like they have been squeezed by a hand and organized in an organic manner. The feeling of touch is everywhere in the museum and it gives the impression that this exciting technological product is hand-made.

The American artist Robert Rauschenberg<sup>68</sup> explains his excitement for the museum, "The Bilbao Guggenheim Museum is the most awesomely man-built space I have ever experienced. It spiritually enlightens man and inspires art."<sup>69</sup> Then the answer to the question could be: "Yes, Gehry's architecture is close to the condition of art." It expresses the emotions of the architect and communicates with the perceiver, illustrating itself as a symbol of developed technology and freedom. In front of his buildings, one immediately feels that they were designed for attracting attention and being perceivable.

In addition to using a new formal vocabulary in his work, Gehry redefines the requirements of the given function. For example, the entrance hall for the DG bank Headquarters in Berlin bears resemblance

<sup>&</sup>lt;sup>68</sup> Robert Rauschenberg anticipated movements such as Pop Art, Conceptualism, and Minimalism. He attended the Kansas City Art Institute, the Academe Julian in Paris, and Black Mountain College in North Carolina between 1947-49.

<sup>&</sup>lt;sup>69</sup> Op.cit. Betchler, C., 1999, p 92.

to a horse's head, which is an interpretive formal analogy. Besides, he uses the interior space of the head skeleton as a conference area, which is a new volumetric relationship between form and function.



Figure 3 10. Frank Gehry, Entrance Hall for the DG Bank Headquarters in Berlin Pariser Platz, 1999.



Figure 3 11. Entrance Hall for the DG Bank Headquarters in Berlin Pariser Platz, interior.

In sum, it can be stated that what makes Frank Gehry's architecture art is the innovative and expressive quality that is also applicable to his work. His functional areas, which are independent from the excessive sculptural skin that envelops them, are gathered in a schema, enabling the view to utilize the interior spaces easily. Moreover, the exterior planes are perceived as works of art.

#### 3.2. Case Study: The Guggenheim Bilbao Museum



Figure 3 12. Frank Gehry, Guggenheim Bilbao Museum, river façade, 1991-1997.

When one steps out of the train in Bilbao, the first thing to do is to find one's way down to the river. At the end of the street right across the station, there lies the river with Santiago Calatrava's Zubizuri Bridge constructed over it. One is amazed by the structural and plastic beauty of Calatrava's bridge. Following the river, the main approach to Guggenheim Bilbao Museum<sup>70</sup> is made. First of all it is possible to see the sculptural steel tower from its backside.

With the rising sun, the museum starts to glaze, beginning from the tower, continuing with Louis Bourgeois's "Spider", the Fish Gallery, the terrace and the huge staircase that gives an end to the river façade (the north façade) of the building. Titanium gives the huge mass an effect of lightness. Doubling its image in its reflection on the river, the

<sup>&</sup>lt;sup>70</sup> The author has found the opportunity to visit the Guggenheim Bilbao Museum during 19-22 November 2003 for her thesis studies.

Guggenheim Museum looks as if someone caught and trapped it in a frame while it was flowing by the river.



Figure 3 13. Sketch by Dilek Yücesan, the bridge with the steel-skeleton tower in the front.

Using the bridge that is used as an important axis of transportation in the city, it is possible to reach the other side of the river. The tower, which seems at first like a monumental entity, appears as a functional element for this side, providing connection with the urban fabric to reach the ground floor where the back entrance is.

Guggenheim changes its appearance according to the angle from which one is looking at it. The color changes, the alteration in the surfaces moves the gaze and the different relationships with its site, invites one to move around it and perceive it from various points of view. Rightangled masses are integrated with organic forms, sunlight passes through the glass surfaces uniting inside with outside, and the pool on the back makes one perceive the building as if it were constructed on the river. The main entrance on the front façade is on the south side. To enter the building one has to go down the stairs of the main square, which is in front of the museum. At first glance the heights of the masses look very close to human scale, enabling one to get in touch with them. On the right hand side, the administration part of the project is located. One can think that it is not a part of the museum because of its geometrical form and color. However, this should not be taken as a failure of the architect. On the contrary, it may be accepted as a decision to underline the power of plurality in a unified whole.



Figure 3 14. Guggenheim Museum, north elevation.



Figure 3 15. Guggenheim Museum, south elevation.


Figure 3 16. Guggenheim Museum, tower.



Figure 3 17. Guggenheim Museum, administration building.

When one goes down the stairs and enters the museum, on the left side there lies the information desk and on the right side there appears the ticket desk. After passing through the gate, the most important area of the building can be observed at first glance: the atrium. The whole project is developed around this atrium. Upon entering this area, one immediately raises one's head and tries to see what is above, moving one's gaze across the vertical glass and stone surfaces, which appear as areas for circulation.



Figure 3 18. Guggenheim Bilbao Museum, atrium.

Light and heavy masses are in such a strong balance that it is impossible to hide one's amazement. One feels the movement all of a sudden. The galleries are located around the atrium on different floors. On the first floor lies the famous Fish Gallery with Richard Serra's sculpture, "Snake", as a part of the permanent collection. The Fish Gallery continues as a part of the atrium, so one is directed towards the end of it as soon as one enters the area of the atrium.



Figure 3 19. Sketch by Dilek Yücesan, the atrium. Figure 3 20. Sketch by Dilek Yücesan, the atrium.

Surprisingly the spaces of "Snake" and "Guggenheim Bilbao Museum" have similar effects on the spectator. They both turn heavy elements into light constructions enabling the perceivers to free-flow through them. Inside of "Snake" one feels the strength of the material, the effects of voices, the different shades of light and various spatial changes from the beginning until the end just like one could feel walking inside the museum.



Figure 3 21. Sketch by by Dilek Yücesan, Snake, Richard Serra, Fish Gallery, Guggenheim Bilbao Museum.

Figure 3 22. Guggenheim Bilbao Museum, atrium.

Richard Serra's volumes in "Snake" create an unfamiliar spatial effect with the curvilinear surfaces similar to the museum's dominant carved forms. In both of the designs, due to the motion on the surfaces, heavy construction materials gain plasticity.

The museum amazes the spectator as a functional shed providing area for exhibition. However, it is not perceived as a mere building. The museum evokes the feeling of "being designed" for the spectator with the expressions of the architect. This building is an artwork that is experienced, lived and contemplated at the same time. Continuously, perception is divided in the atrium area. Glass, steel and stone are mixed. Masses are hanging with the atectonic feeling that they generate.



Figure 3 23. Sketch by Dilek Yücesan, the atrium. Figure 3 24. Sketch by Dilek Yücesan, the atrium.

It is possible to lose direction in the building because one is continuously passing from one gallery to the other as one is moving around the atrium. Functional changes in the interior are signified with the change in the material. For instance, the elevator is covered with a steel structure while the wall of the gallery facing the atrium is separated from it with the usage of stone cladding. The stairs are covered with stone while the exhibition halls are covered by ceramic tiles. The colors of the walls change, separating one gallery from the other. Every function has its spatial and furthermore sculptural counterpart in Gehry's design. Galleries are both exhibition areas with sufficient lighting technology and air-conditioning in all spaces, and they are also areas of formal illusions with various optical effects. The vertical glass surfaces in the atrium are circulation areas as well as sculptural entities generating an effect of infinity. Terraces in the inside both enable the spectator to look down to the atrium and to the other galleries and divide the total space in every floor, deepening the three-dimensional effect. The bridges around the atrium connect the galleries functionally and provide a transmission area with a vista of other people moving inside the building.

The staircases, one from the car bridge, the other from the street in front are frequently used. This shows that not only the building but also the urban setting is used and has become a part of this area of the city. The Guggenheim Bilbao Museum is one of the most proper examples of influences of art on Gehry's work. Gehry was inspired from art in his designs. But where and how?

First of all he uses the elements of design in an innovative manner. The continuous flow among the spaces and among the surfaces creates the sculptural character in his work. Always searching for the new and using it as a means of expression is, what lies beneath the dialogue between Gehry and his artist friends. For instance, he looks at the innovative material usages of the artists. Both Frank Gehry and Richard Serra use CATIA in order to realize their projects. He designs the whole that is made up of several diverse elements and groups. These fragments are perceived in their individuality without being outside the

concept of his design. Frank Gehry gives his forms a sculptural quality, converting one shape to another continuously. Therefore he manipulates different perceptions of perspectives that enrich his product. The wall and roof become the same surface within a definite continuum. His architecture seems kinetic due to the organic forms in his compositions. He adds and subtracts masses due to his will, plays with shapes like clay models and stops at a certain time when he feels that the design is complete.

The relationship between art and architecture was surveyed by a number of critics by the end of 1990s. On the same subject articles were written from the view of art critics and architects. One example of this is the evaluation of Richard Serra's Torqued Ellipses that are constructed temporarily in the space of Frank Gehry's Fish Gallery in the Guggenheim Bilbao Museum. The comparison of Aruna D'Souza and Tom McDonough's "Sculpture In The Space of Architecture"<sup>71</sup> and Mark Robbins's "Notes On Space"<sup>72</sup> will give us an idea of how artworks were examined in relation to architecture. The peculiarity of these articles is that they enable us to recognize the condition of art and the condition of architecture in our case study of Guggenheim Bilbao Museum.

In the February volume of the magazine "Art in America", in which the article "Sculpture in the Space of Architecture" by Aruna D'Souza and Tom McDonough appeared, "Torqued Ellipses" was on the cover. This

<sup>&</sup>lt;sup>71</sup> D'Souza, Aruna, Tom McDonough, "Sculpture in the Space of Architecture", Art in America, 2000, Feb., v. 88, no.2. One assistant professor of art history at the Center for Curatorial Studies and one assistant professor of art history at Binghampton University.

<sup>&</sup>lt;sup>72</sup> Robbins, Mark, "Notes On Space", Architecture, 1998, Aug., v. 87, no.8, p. 51.

work makes one recognize the changing conceptions and conditions of sculpture with a specific emphasis on this work. The article of D'Souza and McDonough starts with a quotation from Frank Gehry on Guggenheim Museum Bilbao's exhibition halls and on Richard Serra's "Torqued Ellipses": "I made this space with Richard in mind…Look at the great spaces they create between themselves and the walls."<sup>73</sup>



Figure 3 25. Torqued Ellipses, Installation at the Fish Gallery, Guggenheim Bilbao Museum.

Although "Torqued Ellipses" is an artwork which carries no other aim than being a sculpture<sup>74</sup>, here it will be considered as a piece that will be discussed due to its spatial characteristics in the architectural realm. What is important about the text is that it relates the architect's spaces with the artwork's. The authors state that:

"So what are we to make of the striking analogies between the museum's architecture and the sculptures? The Bilbao exhibition of the *Torqued Ellipses* made it clear that Gehry and Serra both insist on the mobility of the viewer, for neither's forms can be taken in at a glance. It also revealed how both men are working with the illusion of weightlessness, Gehry dissolving the enormous museum into a shimmering vision of glass and metal, Serra, as we have seen, transmuting steel into frozen movement." <sup>75</sup>

<sup>&</sup>lt;sup>73</sup> Op.cit, D'Souza, McDonough, 2000, p 84.

<sup>&</sup>lt;sup>74</sup> Robbins makes a quotation from Serra about the functionlessness and uselessness of his works.

<sup>&</sup>lt;sup>75</sup> Op.cit, D'Souza, Aruna, Tom McDonough, 2000, p 85.

This evaluation includes both the architect's work and the artist's sculpture in relation to each other, underlining the relationship between their works. After scanning the collaboration of artists with architects, they make a conclusion to predict the relationship between them, which carries valuable observations. They sum up, claiming:

"The *Torqued Ellipses* may well be the finest works Richard Serra has produced, despite the fact that they can not exist in the idealist realm of meta-architecture as hoped. This is to say that they are utterly contemporary in their contradictions, existing as both sculpture and architecture, as both modern and postmodern, as both idealist and implicated. No setting could have made this clearer than Frank Gehry's Guggenheim Bilbao, a building which itself rehearses the same hybrid condition, determinedly blurring the line between sculpture and architecture."<sup>76</sup>

At this point, the evaluations of Mark Robbins in his text "Notes On Space" can be followed since he starts his article with the statement: "Distinctions between architecture and contemporary sculpture grow increasingly blurred."<sup>77</sup> He is an architect and artist, the curator of architecture at the Wexner Center and he teaches at the Knowlton School of Architecture at Ohio State University. This detail is given in order to differentiate between the approaches of the architects from those of the art critics on the same subject matter. Robins evaluates the examples from the spatial arts and architecture together due to their abilities in creating space.

Robbins begins by giving examples from the works of Gordon Matta Clark and Rachel Whiteread who operated on architecture. They have worked on architecture as such; Matta Clark cut buildings and Whiteread prepared moulds around existing structures and made

<sup>&</sup>lt;sup>76</sup> Ibid. p 88.

<sup>&</sup>lt;sup>77</sup> Op.cit, Robbins, M, 1998, p. 48.

sculptures out of them. He continues with the abstract and formal attitudes of Richard Serra, Donald Judd, James Turrell and the other artists.<sup>78</sup> He states:

"Architects often find an affinity with the Minimalist vocabulary...[i]t emphasizes space, light, and volume and freely manipulates compositional elements. It is not surprising that architects see elements of their own formal training in the work of these sculptors, but with an apparent release from program or client. In many of these works the space itself becomes the project."<sup>79</sup>

Robbins believes that these artworks present an alternative way of looking at and constructing space. What makes the connection between his article and the other one belonging to D'Souza and McDonough visible is the equal importance that is given to the artworks and the architecture in which they are located. In Robbins's words it is possible to examine the relationship between the formal vocabulary of R.Serra and F.Gehry: "Serra's spatial inventiveness –the relation between sculptural skin and internal volumes- most immediately recalls architect Frank Gehry's work and is apparent in the great number of models from which they both work."<sup>80</sup> Furthermore, according to Robbins, Frank Gehry had absorbed the formal vocabulary of Richard Serra and adapted it to his own work<sup>81</sup>. He emphasizes that the line between the two autonomous disciplines as contemporary art and architecture is blurred in the works of the Minimalists and in those of Frank Gehry.

<sup>78</sup> Ibid p 50.

<sup>&</sup>lt;sup>79</sup> Ibid.

<sup>&</sup>lt;sup>80</sup> Ibid p 50-51.

<sup>&</sup>lt;sup>81</sup> Ibid p 50.

These are two different articles examining the same product from different points of view. While D'Souza and Aruna evaluate Richard Serra's "Torqued Ellipses" from the perspective of an art critic, Robbins examines the same object with the space that it produces. One is carrying an approach focusing on the issue of material and formal vocabulary, while the other focuses on the space itself that becomes the aim of the artwork. It is possible to follow from the articles that the sculptures of the Minimalist artists carry architectonic qualities and the recent works of Frank Gehry carry sculptural characteristics. There is a transformation from one direction to the other on both sides; there is a bridge that is constructed from one discipline to the other.

After examining the Guggenheim Bilbao Museum and reading the articles that are based on the relationship of art and architecture, it would be appropriate to elaborate the formal characteristics of this building that bring it closer to the condition of art. As stated before, Gehry's architecture is not a standard building; it is both high-tech and hand-made, it expresses a sculptural quality, and offers an alternative to orthogonal architecture. But what exactly is the orthogonal architecture that is criticized by Frank Gehry with his organic forms?

The early Modernists architects were the pioneers who formed a new architecture out of traditional norms. They eliminated ornaments; they preferred pure geometrical forms and were in favor of the simple organizational schema for an architectural project. One of these pioneers was Ludwig Mies van der Rohe, who designed the German Pavillion<sup>82</sup> at the Barcelona World Fair in 1929. It is possible to make a comparison between this building and the Guggenheim Bilbao Museum in order to see how the same aim of creating a sculptural architecture, beyond the classical definition of architecture, has led two different architects to different solutions. One is completely orthogonal and the other is totally organic. Both of the buildings propose an innovative approach to architectural design. How could these works be in such apparent harmony while they appear in such a formal contrast?

Both Mies van der Rohe and Frank Gehry give importance to art. The two architects try to reach beautiful, sculptural architecture with different methods. While Mies van der Rohe uses the basic, planar, orthogonal geometry to define the functional boarders of space, Gehry uses a sculptural shell to transform his pure geometrical functional areas into fragments of an artwork.



Figure 3 26. Sketch by Dilek Yücesan , German Pavillion, Ludwig Mies van der Rohe, Barcelona, 1929.

<sup>&</sup>lt;sup>82</sup> The author visited the German Pavillion during 22-24 November 2003.



Figure 3 27. Ludwig Mies van der Rohe, German Pavillion, Barcelona, 1929.



Figure 3 28. Guggenheim Bilbao Museum, north elevation.

Currently, it would be beneficial to make a comparison between the work of Ludwig Mies van der Rohe and Frank Gehry in order to observe two different examples of architecture that approach to the condition of art.

In the German Pavillion pattern is formed with repeating orthogonal planes. Geometrical forms are organized due to order and proportion and orthogonal forms are dominant. As pure geometry is the tool for the organization of volumes, dynamism in mass is achieved through the harmony of vertical and horizontal planes forming the functional elements of construction such as the floor, the ceiling, and the separators. Reinforced concrete is the main construction element. The plastic quality of the building is achieved through the innovative approach of the architect towards the organization of pure geometrical forms. In this example, planes are functional space enclosure elements. They carry the roof, they separate the volumes and they give direction to the flow in the building. Rectangular architectural forms could be associated with directed motion; when one enters the building, one's movement flows from one part to the other following a definite path because everything in the building has a specific function. Only adequate number and amount of architectural elements are used as separators, frames and load bearers. However in Guggenheim Bilbao Museum pattern is formed with variations of organic surfaces and irregular forms are dominant. Organic geometry is the tool for the integration of masses. Dynamism in mass is achieved through the organic integration of architectural elements with each other such as wall and roof. But the important fact is that, excessive components are defining the borders of the spaces. For example, the plasterboards are

carved and embedded on the vertical surfaces surrounding the atrium of the gallery. Because of this reason, it is impossible to distinguish in the museum what is structural and what is constructional. In this building, different than the other one steel structure is the main construction element. Surfaces are space enclosure elements, which do not necessarily appear as either load bearing elements or separators of the volumes. Frank Gehry's architecture generates a new understanding for the flow on the surfaces that make them look like they are eliminating the gravitational force. The shell is the boarder in which, functional spaces float, independent from their skin. Spaces are enveloped by the steel structure and the steel structure is covered by the skin of stone, glass and titanium. Free architectural forms are associated with multidirections inside of and around the building. In Mies van der Rohe's architecture structure is combined with function whereas in Frank Gehry's work structure is combined with function and independent forms.

In both of the examples, the buildings are crossing the boundaries of traditional architecture of their age. What makes the two architects similar to each other is that, they both use architectural elements in an unfamiliar manner. While Mies van der Rohe was making an inquiry about the traditional forms of his age and, introducing the new usage of reinforced concrete to the architectural world, Gehry was proposing an alternative approach to architectural form with his age's innovative computer technology and materials such as steel, glass and titanium. In the end, when Mies and Gehry want to cross the line that separate yesterday from today, they both cross the line that separate architecture from art. The method for both of the architects to question the

architecture of their age is, producing artifacts that approach to the condition of art and are contemplated.

Focusing on Gehry's work, an important question could be asked. How does Frank Gehry's architecture approach to the condition of art? In my opinion, his architecture is shaped with the facts that he learns from painting and sculpture as well as from his collaboration with painters and sculptors. In the following section, Frank Gehry's influences from the visual arts will be elaborated.

# 3.3. Influence of Visual Arts on Frank Gehry's Work

Frank Gehry's style developed under the influence of works of art. In an interview with Christopher Palmeri, Frank Gehry said:

The artworks inspired Gehry to create a brand new type of architecture that was at the beginning inexpensive and quick, and broke completely with the aesthetic norms of the day. It is possible to follow in his words

<sup>&</sup>quot;C.P.: You famously redesigned your house in Santa Monica, using chainlink fencing and plywood. Were you rebelling against the modern designs in vogue at the time?

F.G.: I wasn't rebelling. The jobs I got, they didn't have the budgets to do the modern stuff. I couldn't get the workmanship. The artists I liked at the time, [Robert] Rauschenberg and [Jasper] Johns, were making art out of junk, found objects. People were paying hundreds of thousands of dollars for them. I thought there's an aesthetic leap here -- why not go with it and turn cheap construction into a positive? I started exposing the wood, the rough carpentry. And it worked. People started responding to it positively."<sup>83</sup>

<sup>&</sup>lt;sup>83</sup>From the interview of Christopher Palmeri with Frank Gehry "A Dream of "Paperless" Architechture" in Business Week Online, 10/2/2003, pN.PAG, 1p Item: 10966546.

that everything about Gehry's architectural approach started when he turned to the artworks of his time. Their application to his work –the cheap material preferences and the idea of constructing qualified projects with a low budget- started to form Frank Gehry's architecture, with the redesigning of his own house in Santa Monica, California in 1982.



Figure 3 29. Frank Gehry, Santa Monica House, exterior, 1987. Figure 3 30. Frank Gehry, Santa Monica House, kitchen, 1987.

Taking a traditional California house and cladding it with new materials and geometrical forms, Frank Gehry started to display his innovative approach towards structure, construction, and material. With creative organization, Gehry started to transform the concepts of formfunction, solid-void and interior-exterior. Nicolai Ouroussoff explains how his house has attracted attention in a detailed manner:

"Let's go back to 1978, Santa Monica, California. One by one, the cream of America's cultural elite is parading through a little house on the corner of Washington and 22nd Streets. Philip Johnson, the dean of American architecture, drops by and later, the pop artists Jasper Johns, Claes Oldenburg and Coosje Van Bruggen. So do the avant-garde musician Philip Glass and the sculptor Richard Serra...They are all there to see a small pink

Cape Cod style bungalow that a little-known architect has joyfully torn apart and rebuilt."<sup>84</sup>

While Gehry was rebuilding his own house, he became the center of attraction among the artists who heard about his unfamiliar design. Why were civil or mechanical engineers not talking about this little house rather than the artists? In my opinion, in the answer to this question, the core issue of this chapter is hidden; the reciprocal interest of architecture and art in each other. Gehry's work influenced by the the Californian artists, end up in a production in architectural realms that, at the end, attract the attention of the same artists. Because he questioned the nature of a house and re-invented it freely and personally with his new forms and materials, that is close to the work of an artist. Therefore, it would be practical to examine the work of Gehry in light of its relationship with the other arts.

Peter Arnell underlines Gehry's close relationship with the artists. Arnell thinks that Gehry loves understanding their problems and their way of thinking, and his architectural work is influenced from the creative approaches of the artists.<sup>85</sup> Not only was Gehry influenced by the works of the artists but they were also surprised and affected by his work. For instance Richard Serra states that:

"The first work of Frank that I saw was his house in Santa Monica, in the 70s. It wasn't that he was reckless, rather he was fearless as he went about cutting and tearing his house apart, and simultaneously reconstructing the shattered remains with mundane industrial materials. This was innovation. It immediately impelled me to reconsider the house as a container."<sup>86</sup>

<sup>&</sup>lt;sup>84</sup> Op.cit, Degel and Kjeldsen, 1998, p 13.

<sup>&</sup>lt;sup>85</sup> "Frank Gehry and Peter Arnell: A Conversation" in Arnell, Peter and Ted Bickford eds. *Frank Gehry Buildings and Projects*. New York: Rizzioli, 1985,p XIV/XV.

<sup>&</sup>lt;sup>86</sup> Op.cit, Bechtler, C., 1999, p 73.

Gehry feels that in order to find solutions to his architectural problems, he makes use of art. However he strongly underlines that he is not an artist but an architect whose aim is to produce architecture.<sup>87</sup> He does not like to be confused with the artists by means of the disciplinary studies, because he thinks that architecture needs respect as an art of creating space, performed by the architects. How an architect can utilize art, at this point, is the question. He states, "My approach to architecture is different. I search out the work of artists, and use art as means of inspiration."<sup>88</sup>

## **3.3.1. Interaction with Painting**

Frank Gehry finds resemblances between his attitude and a painter's approach towards his creation. He states that the condition of designing a "one-room building" is very similar to the state of a painter standing in front of a canvas.<sup>89</sup> Designing the materials, the relations and expressing them in a creative manner appear as the common conditions. Painting is in the first place among the arts, which he finds relevancies to his work. He claims:

"Painting and sculpture influenced my work. For instance, when I had the Bellini picture with the Madonna and Child, I originally thought of it as the Madonna-and-Child strategy for architecture. You see a lot of big buildings with a lot of little buildings, little pavilions in front. I attribute that to the Madonna and Child composition."<sup>90</sup>

<sup>&</sup>lt;sup>87</sup>Ibid. p XIV/XV.

<sup>&</sup>lt;sup>88</sup>Nairn, Janet. "Frank Gehry: the Serach for a "No Rules" Architecture", Architectural Record, June 1976, p 95. (See footnote 1) in Rosemarie Haag Bletter, "Frank Gehry's Spatial Reconstructions" in *The Architecture of Frank Gehry*, New York: Rizzioli, 1986, p 24.

<sup>&</sup>lt;sup>89</sup> Friedman, Mildred. "Fast Food" in *The Architecture of Frank Gehry*, New York: Rizzioli, 1986, p 87.

<sup>&</sup>lt;sup>90</sup> "Commentaries by Frank Gehry" in Friedman, Mildred. *Architecture and Process. Gehry Talks.* New York: Universe Publishing, 2002, p 42.

Here it is noticeable that Gehry uses the visual strategy of a painting's composition while observing an architectural formation. For example, the visual strategy in Frederick R. Weisman Museum (1990-93) is similar to the cubist paintings. As it appears to be significant in the cubist paintings of Picasso and Braque, the spatial figure-ground relationship can be observed in Gehry's composition.



Figure 3 31. Frank Gehry, Frederick R. Weisman Museum, 1990-1993. Figure 3. 32. Picasso, Portrait of Daniel Henry Kahnweil, 1912.

While the three-dimensionality of the painting comes from the solidvoid effect in a geometrical order, the volumetric transparencies and opaqueness of the spaces that is reflected on the outside of the Frederick R Weisman Museum were composed of architectural, threedimensional surfaces. The aim of making this analogy is to demonstrate the possibility of reading his forms with their counterparts in painting. This proves the existence of a conceptual relationship between his work and the artists'. While using the visual references of paintings, Frank Gehry was influenced by the creation period of these compositions, their processes. The following section will examine how artworks that are related to Frank Gehry's work inspire him also in their creation periods.

## **Process in Painting – Process in Architecture**

Frank Gehry was fascinated with the process of creation rather than the final product. He states that he likes buildings more, when they are under construction and that he gets excited by the uncompleted product. In order to find a method for applying these concerns to his architectural work, he finds the solution in looking at examples from the field of painting. He states:

"There is an immediacy in paintings, you feel like the brush strokes were just made. I think about paintings all the time, so one part of architecture that I felt an interest in exploring was how to bring these ideas to buildings... In particular, how could a building be made to look like it's in process? And how can the expressive and compositional attitudes of painting be explored in a building? That's what led me to explore opening up the structure and using the raw wood techniques and developing buildings that look like they just happened." <sup>91</sup>

He is also wondering about their quality that made them so kinetic. He is charmed by their characteristics, which make one think that someone would come and complete the building. But how could he apply such movement to architecture? This could only be possible with the forms that make one think that the building is still under construction. They

<sup>&</sup>lt;sup>91</sup> "Frank Gehry and Peter Arnell: A Conversation" in Arnell, Peter and Ted Bickford eds. *Frank Gehry Buildings and Projects*. New York: Rizzioli, 1985,p XIII/XIIII.

would necessarily look like the architect would complete the building because according to Gehry, the production of a building is the only time in which the building is in motion. He expressed his opinions on this issue when discussing the Familian House that was constructed in Santa Monica in 1978:

"This was a house for an art collector...I was interested in the immediacy of the raw framing before it was covered up... How do you get that quality into a building? That was the trust of the Familian House, to play with that immediacy and see if it could be put under glass somehow."<sup>92</sup>

The process of construction can easily be observed looking at the façades of the Familian House. The covered parts are liberated by the uncovered ones producing a different solid-void effect. Gehry states:

"I guess I was interested in the unfinished –or the quality you find in paintings by Jackson Pollock, or de Kooning, or Cézanne, that looked like the paint was just applied...I wanted to try that out in a building."<sup>93</sup>



Figure 3. 33. Frank Gehry, The Familian House, model, 1978.

<sup>&</sup>lt;sup>92</sup> Haag Bletter, Rosemarie. "Frank Gehry's Spatial Reconstructions" in *The Architecture of Frank Gehry*, New York: Rizzioli, 1986, p 56.

<sup>&</sup>lt;sup>93</sup> Op.cit. Arnell, Peter and Ted Bickford eds,1985, p 128.



Figure 3. 34. Paul Cezanne, Mont Saint Victoire.

# **Movement in Painting – Movement in Architecture**

The sense of movement in his designs is one of the most significant characteristics of Gehry's architecture. In order to explain the significance of this concept in the way that he uses it in his projects, Gehry gives the example of Marcel Duchamp's painting "Nude Descending a Staircase" by which he was influenced.<sup>94</sup>

For instance, in the design of the Telluride Residence (1995-), in Telluride, Colorado, he related this painting with his design and "Nude Descending a Staircase" became the starting point of this project.

<sup>&</sup>lt;sup>94</sup> Op.cit, Bechtler, C., 1999, p 34.



Figure 3. 35. Marcel Duchamp, Nude Descending a Staircase.



Figure 3. 36. Frank Gehry, Telluride Residence, Telluride, Colorado, 1995 -.

Frank Gehry stated:

"The house steps down the hill. Our inspiration was Duchamp's painting...It will have a concrete foundation, the frame will be very sculptural, and it will be covered with black copper which is a roofing material."<sup>95</sup>

Another painter whose work inspired Gehry was Frank Stella. Being one of the Minimalist artists, Stella was not only dealing with abstract geometrical forms but also his reliefs and architectonic sculptures were dominant with their three-dimensionality in his work. He also took the commission of an art gallery and park in Dresden between 1990-1993. In this architectural work, the clients were Rolf and Erika Hoffmann of Cologne, real-estate developers and collectors of contemporary art, who had in mind the creation of a public park in Dresden on land donated by the German government. The Hoffmanns commissioned a design from Stella, who wished to include within the park an art museum and several other pavilions.<sup>96</sup>

In this case, Frank Gehry is not the one who learns the concept of movement from the artist. Instead, the artist –Frank Stella- is the one who used Frank Gehry's forms in his commission in order to create this sense. Gehry expresses how the relationship between himself and Frank Stella affect their individual works:

"I have considered him an important source of information...He stops in front of a painting and starts talking about my work in relation to his paintings. He came to see me two years ago and showed me the project for the Kunsthalle in Dresden, and said, "It comes from you Frank." I said, "No, it is you," but it just happened that I was making shapes that looked

<sup>&</sup>lt;sup>95</sup> "Commentaries by Frank Gehry" in Friedman, Mildred. *Architecture and Process. Gehry Talks.* New York: Universe Publishing, 2002, p 183.

<sup>&</sup>lt;sup>96</sup> Available on <u>http://www.findarticles.com/cf\_dls/m1248/6\_88/62685215/p4/article.jhtml?term</u>= (January 4, 2004)

like they came from him. Until I saw what he was doing, there was no other architect working in a language that had anything in common with mine."<sup>97</sup>

In my opinion, Frank Stella's comments on Gehry's architecture summarize how two men are interactively sharing their disciplines with a deep respect for each other's work. Stella states:

"Clearly there is no better architecture being built or conceived in today's world than Frank's."<sup>98</sup>

As it is possible to see in the examples, Frank Gehry looks at a painting and observes the shapes that are composed, sees beyond the canvas and relates his construction processes with the creation period of a painting. He learns from the expression of movement in order to use it in his designs. However, painting is not the only art whose effect is observable in his work. The other one that manipulates it is sculpture.

### **3.3.2. Interaction with Sculpture**

To say that a building has to have a certain kind of architectural attitude to be a building is too limiting, so the best thing to do is to make the sculptural functional in terms of use. If you can translate the beauty of sculpture into building...whatever it does to give movement and feeling, that's where the innovation in architecture is.<sup>99</sup>

### Frank Gehry, 1997

While trying to transform the beauty of a sculpture into a building, Gehry follows the sculptors and learns from them. The three-

<sup>&</sup>lt;sup>97</sup> Opcit. Friedman, M, 1986, p 73.

<sup>&</sup>lt;sup>98</sup> Opcit. Bechtler, C., 1999, p 26.

<sup>&</sup>lt;sup>99</sup> Van Bruggen, Coosje, "Toward a Unity of Opposites: A Mere Building Versus Sculptural Architecture" in Van Bruggen, Coosje. *Frank O Gehry. Guggenheim Museum Bilbao*. New York: Guggenheim Museum Publications, 1997, p 119.

dimensionality in their work, the materials that they use, the large-scale urban projects that share the same domain with architecture are the main themes that Gehry follows in their work.

Gehry states that, "Crossing the line between architecture and sculpture is something that has been difficult for me."<sup>100</sup> In creating his characteristic forms, Gehry especially makes use of the innovative conceptual and formal qualities of Minimalist sculpture. He claims that, "[t]he artists whose work I loved most were Don Judd, Carl Andre and the Minimalists."<sup>101</sup> For instance, Gehry expressed how the work of Carl Andre titled *Lever*, 1966, amazed him:

"I was starting to work with chain link, and I was fascinated. I was looking for an architecture that you could dial up, phone in. You could call somebody and describe the coordinates and then you could build the thing...But here there were these firebricks, and I thought, this artist is smart...He doesn't even come to the gallery. He gives them a coordinate on the wall; he calls the brickyard and says, "Put in a hundred and whatever firebricks, two layers, soldier course, perpendicular to the wall." I thought it was amazing."<sup>102</sup>

In this example, it is possible to observe that Frank Gehry admires the system of the artist in the process of creation. He intends to develop a method inspired by the one of the artist.

Besides the conceptual give-and-take, the interaction between sculpture and Gehry's work is also based on formal characteristics. These features can be examined under the title of material quality.

<sup>&</sup>lt;sup>100</sup> Opcit. Friedman, M, 1986, p 206.

<sup>&</sup>lt;sup>101</sup> Opcit. Bechtler, C., 1999, p 62.

<sup>&</sup>lt;sup>102</sup> Ibid.



Figure 3. 37. Donald Judd, Lever.

# Material in Sculpture – Material in Architecture

Material is one of the most important issues that connect the works of artists with the work of Frank Gehry. This is because, Gehry is an architect who understands the nature and abilities of different materials and who has the talent to transform them in a characteristic manner. He uses steel, glass and stone as plastic elements and transforms their weight into lightness in his buildings. But do artworks affect his preferences in material?

Frank Gehry states that in the design of the Frederick R. Weisman Museum, he looked at the sculptures of Ellsworth Kelly. He explains:

"By the time of the Weisman Museum, we could no longer use lead, copper outside so I went to stainless. I'd seen a number of Ellsworth Kelly's sandblasted stainless sculptures, and I loved them because they looked like suede. I was going to use it on the Weisman."<sup>103</sup>

<sup>&</sup>lt;sup>103</sup> Op.cit.Friedman, M., 1986, p 132.

This means that, sculpture appears as a laboratory for the architect in order to experience the application of the materials before their exact usage as architectural elements. Therefore, it is possible to state that large-scale sculptures have a direct effect on his material choices.



Figure 3. 38. Frank Gehry, Frederick R. Weisman Museum, 1990-1993.



Figure 3. 39. Ellsworth Kelly, Untitled, Stainless steel, Sand-blasted, 1986.

Due to the fact that Frank Gehry is curious about the origins of the artworks, he captures diverse qualities of various materials. He observes the works and starts to imagine them as architectural elements with different features. However, as well as Frank Gehry, the artists who have seen his work are inspired by their uniqueness. They start to be interested in his approach and visualize his architectural elements as pieces that inspire their art. This reciprocal relationship can be exemplified with the comments of Rosemarie Haag Bletter. She informs us that after Gehry used the chain link in his own house in Santa Monica, Robert Irwin, an American artist and a close friend of Gehry's, came to his studio in order to study this new material. However, the beginning of this interaction was Gehry's influence from Irwin's use of scrim pieces in his work.<sup>104</sup> Pieces of cloth that were used by Irwin in his work inspired Gehry in the way that they easily start moving with the blow of the wind. The kinetic condition of Irwin's sculptures was sourced in his preference of material.

At this point, it will be useful to quote from Francesco Dal Co's observations on Gehry's contact with the artists. He specifies the material concerns that are in exchange referring to Donald Judd's and Larry Bell's sculptures in an implicit manner:

"There are obvious parallels, between the experimentation of Larry Bell on the chromatic cohesion of surfaces and the research conducted by Gehry for the facing and cladding of his architecture: how can we avoid thinking of the sculptures of Bell and Judd, for example, when we look at the façade on the freeway of the Team Disney Administration Building (1978-1995)in Anaheim?"<sup>105</sup>

<sup>&</sup>lt;sup>104</sup> Op.cit, Haag Bletter, R.,1986, p 30.

<sup>&</sup>lt;sup>105</sup> Dal Co, Francesco. "The World Turned Upside Down: The Tortoise Flies and the Hare Threatens The Lion" in Francesco Dal Co, Kurt Forster. *Frank O Gehry. The Complete Works*. Milano, Electa: The Monacelli Press, 1998, p 42.



Figure 3. 40. Frank Gehry, Team Disney Administration Building, 1987-1996.

Francesco Dal Co ends with his belief that Gehry has learned a lot from Claes Oldenburg's structural compositions and from Richard Serra's spatial sculptures. Now, it would be proper to examine the collaboration of Gehry with these artists.



Figure 3. 41. Claes Oldenburg, Balancing Tools. Figure 3. 42. Richard Serra, Torqued Ellipses.

#### 3.4. Frank Gehry's Collaboration with Artists

If you see other people's work constantly, if you keep you eyes open, and you are influenced by other people's work, it will happen over time. Ours (with the artist friends) was a situation where we were playing, where there was a contextual game, where one person was creating a context, and the other person was responding to it. Then one person changed the context in response to the other. And so on, I would love to figure out a way to keep it going, because, in the end, it makes everything so much richer.<sup>106</sup>

#### Frank Gehry, 1999

The main aim of studying the collaboration of Frank Gehry with artists is, to examine the effects of these team efforts on his architecture. The importance of this collaboration and its material results on his work were indicated in an articulate manner, by Michael Sorkin:

"After long session with artists, Gehry turned from the depersonalized architecture of the corporate world, with its abstract, immaterial air, to an architecture with which he was in direct emotional contact, the sort of building you almost imagine yourself able to hand-build, certainly to fully understand."<sup>107</sup>

In a conversation between Peter Arnell and Frank Gehry<sup>108</sup>, the issue comes to Gehry's collaboration with artists. Arnell asks what kind of a relationship leads to these team efforts. He wonders if there exists a similar way of thinking among artists and architects that enabled them to work in the same project together. Gehry answers Arnell's questions beginning with the common language that he uses with the artists. He says that he is inspired from them and gets excited by the intensity of their work.

<sup>&</sup>lt;sup>106</sup> Op.cit Bechtler, C.,p 90.

<sup>&</sup>lt;sup>107</sup> Sorkin, Michael. "Frozen Light" in *Architecture and Process. Gehry Talks*. New York: Universe Publishing, 2002, p 32.

<sup>&</sup>lt;sup>108</sup> Op.cit. Arnell, Peter and Ted Bickford eds, 1985,p XIV/XV.

He states that he is interested in their way of thinking, their approaches to the projects as well as their methods, and in this manner he sees artists as role models for himself. Instead of being an architect who designs museums for the artists' work, he becomes one of them in his discipline, which shares the practice of creation with them. Thus, it is possible to state that the interrelationship affects his architecture directly. Being influenced by their work and learning from their approaches, he turns out to be an architect who performs architecture as an artist.

Mildred Friedman's article<sup>109</sup> has vast importance in this survey with respect to Gehry's collaboration and the quality of his architecture. Friedman's article starts:

"Frank Gehry's close friendship with many painters and sculptors, and his unabashed admiration of their work have led some observers to suggest that, at hearth, he regards himself more as artist than architect."<sup>110</sup>

It would be proper to state that Gehry's attitude towards design includes both of the following conceptions: design as art and design for architecture. As seen also in Kurt Forster's observation, he is called an artist in architecture. Forster remarks:

"Gehry touches on the vulnerable nature of his chosen identity as an *artist in architecture*. His artistic goals, that is, his commitment to collaboration with artists, remain phenomenal in a field that scarcely seems to tolerate such adventures...Because the purpose of being an artist is to make something that could not be brought into existence without art, Gehry's desire to be himself found its (wish) fulfillment in being an artist...It wasn't really to be an artist among artists that he strove over, but rather to become an artist in the field of architecture...Because he tends to think of architecture as an art,

 <sup>&</sup>lt;sup>109</sup> Friedman, Mildred. "Fast Food" in *The Architecture of Frank Gehry*, New York: Rizzioli, 1986.
<sup>110</sup> Ibid. p 87.

he is inclined to see art *within*(not added to or subsumed by) architecture."<sup>111</sup>

Kurt Forster is a critic who explores Gehry's collaboration with artists, their sources and their products. He believes that what Gehry does carries an intensive responsibility, because while Gehry steps into the field of art and passes the boundaries that were placed by the artists; he at the same time allows them to enter his field intensively. Forster believes that in order to be so open to novelty, he needs to possess a different identity, a personality that is involved with the work of the artists without ignoring the fact that his duty is creating new architectural artifacts.<sup>112</sup> At this point it would be appropriate to mention that the projects for the artists like museums, galleries and exhibition areas, prepared Gehry for collaborating. As stated by Friedman, Gehry started this collaboration by departing from the projects that he constructed for the artworks. It is stated that:

"In exhibition design, the works of art become the client and the designer provides an environment in the service of art. Because of his associations with the artists, it was, inevitable that Gehry would move from the design of exhibitions to collaboration with artists in the creation of works that metaphorically bridge the gap between art and architecture."<sup>113</sup>

There are several readings on Frank Gehry's work togather with artists. Some of them underline the fact that these works widen Gehry's horizons, while others accept them as bridges that connect the two disciplines. Some of them can be exemplified as such; Rosemarie Haag Bletter underlines the fact that Gehry's work with contemporary artists

<sup>&</sup>lt;sup>111</sup> Op.cit, Bechtler, C. 1999, p 10-15.

<sup>&</sup>lt;sup>112</sup> Forster, Kurt W. "Architectural Choreography" in, Francesco Dal Co, Kurt Forster. *Frank O Gehry. The Complete Works.* Milano, Electa: The Monacelli Press, 1998, p 13.

<sup>&</sup>lt;sup>113</sup> Op.cit Friedman, M, 1986, p 97.

such as Richard Serra and Claes Oldenburg has kept him from staying inside the borders of what she calls the *formulaic approach to architecture*.<sup>114</sup> Suggesting this idea, Dal Co stated that in recent years the collaboration of Gehry with the artists and the relationship between them was largely discussed. The names that were on the writings and interviews were Donald Judd, Ron Davis, Larry Bell, Ed Moses, Gordon Matta Clark, Robert Rauschenberg, Carl Andre, and, most interestingly Cales Oldenburg and Richard Serra. He believes that because Gehry was in contact with these artists, he found the opportunity to look at art and his art of architecture from a different angle in light of the materials and ideas that could improve his architecture.<sup>115</sup>

Now, after examining the comments on his collaboration, it would be appropriate to underline Gehry's remarks on this issue. The project of Lewis House, which was designed by Frank Gehry, Richard Serra, Larry Bell, Claes Oldenburg, Coosje Van Bruggen and M.Keswich-Jenks would be one of the most proper examples to discuss the issue of collaboration. He claims:

"The collaboration takes a different form. It is another kind of interaction. For the Lewis House, I made shapes that derive from my ING office tower in Prague (1995). Richard Serra saw them, because he came here often while I was working on it; he was intrigued and made two models of his own. I was also looking back at Oldenburg's knees (though I wasn't conscious of it), and then here in my studio, he started making bags for golf clubs. He had begun to look at the same shapes Serra was interested in.

<sup>&</sup>lt;sup>114</sup> Haag Bletter, Rosemarie. "Frank Gehry's Spatial Reconstructions" in *The Architecture of Frank Gehry*, New York: Rizzioli, 1986, p 47.

<sup>&</sup>lt;sup>115</sup> Dal Co, Francesco. "The World Turned Upside Down: The Tortoise Flies and the Hare Threatens The Lion" in Francesco Dal Co, Kurt Forster. *Frank O Gehry. The Complete Works*. Milano, Electa: The Monacelli Press, 1998, p 42.

Actually it had all started with his knees, I guess. So there is a process of fertilizing one another's imagination. Nobody got in anybody's way."<sup>116</sup>



Figure 3. 43. Lewis Residence, Sketch by Frank Gehry, 1985-1995.



Figure 3. 44. Lewis Residence, Plans.

<sup>&</sup>lt;sup>116</sup> Op.cit, Betchler, 1999, p 84.


Figure 3. 45. Lewis Residence, Model.

Consequently, it would be accurate to state that collaboration enriches the final product in the act of design. In order to examine the nature of these team efforts in detail, the projects of Gehry with painters and sculptors will be two subtopics in this section's survey.

# 3.4.1. Collaboration with Painters

In this section, one project that enabled the process of collaboration between Frank Gehry and painter Ron Davis was selected as the case study: Ron Davis House.



Figure 3. 46. Ron Davis and Frank Gehry, Ron Davis House, 1972.

This project is one of the earliest examples of Gehry's work. Their teamwork affected the project entirely. But the only thing that was affected was not the project. The individual attitudes and thoughts that produced the design of the house started the interaction between Gehry's architecture and Davis's art. Gehry explains this positive relationship among them as such: "I'm idealistic in thinking that there's value in that interaction."<sup>117</sup> Pater Arnell and Ted Bricks said that:

"Gehry and Davis share an interest in manipulating perceptions of perspective, a major focus of Davis's paintings...Equally important was Gehry's idea that the collaboration with Davis should be ongoing, that Davis's use of the space –as artist, resident, a designer- would constitute a

<sup>&</sup>lt;sup>117</sup> Op.cit, Arnell, Bickford, 1985, p 58.

reaction which would in turn effect the way the architecture was perceived."  $^{118}$ 

In my opinion, this quotation signifies the facts that constitute the nature of the professional relationship between an artist and an architect. Gehry was learning from Davis's profession, which would directly have an effect on his architecture in the future. Initially, the changes in Gehry's style did not only appear conceptually. In order to find the most proper expressions for his thoughts, from now on, the appearance through material form developed with the help of this interaction. Gehry states:

"When the sculptor Ron Davis wanted a studio, he bought land, and he came to me. I made the site model and started to play with perspective. I made it so that it fit the site, so that the site and the building became a sculptural entity. I remember tipping the roof, because I had done the hay barn for Donna O'Neill with a tipped-up roof. And he loved that. It was my first metal building after the hay barn. I said, "This is interesting for me, because I can now make a very tough sculptural shape." The wall and the roof became the same material and we could do it in metal. That's when I started using corrugated metal."<sup>119</sup>

According to Rosemarie Haag Bletter, this studio has also acted as the medium in which their relationship can be developed further. She states that, "With his design of Malibu, California studio and residence for Ron Davis (1970-1972) Gehry initiated his own startling commentary on the convoluted relationship between art and architecture."<sup>120</sup> But in which manner was Gehry affected from Davis's work and in which manner was Davis under his influence?

<sup>&</sup>lt;sup>118</sup> Ibid.

<sup>&</sup>lt;sup>119</sup> Op.cit Friedman, M,2002, p 45.

<sup>&</sup>lt;sup>120</sup> Op.cit, Haag Bletter, R.,1986, p 25.



Figure 3. 47. Ron Davis, Twin Wave, 1978.



Figure 3. 48. Ron Davis House, interior.

Haag Bletter explains that, "Gehry has taken Davis's system of twodimensional optical illusions a step further into spatial artifice by imposing forced perspective on a fully three-dimensional object."<sup>121</sup> She continues with affirming that the relationship between Davis and Gehry had an influence on Davis's work. It is stated that the geometric illusionism that Davis uses was partly coming from Gehry's effect on his products.<sup>122</sup> Thus, it is possible to observe a compositional and geometrical give-and-take between Davis's and Gehry's work.

### 3.4.2. Collaboration with Choreographers

In examining the collaboration of Gehry with the dancer-choreographer Lucinda Childs and the composer John Adams for a stage design project for a musical performance of *Available Light* (1983), Friedman brought into consideration numerous important issues. First of all, the same kind of collaboration occurred before with Sol Le Witt, an American artist whose works can be classified as Minimalist art, for this performance in 1979.

Lucinda Childs explains in Friedman's text that, doubling was the dominant concept in both of the collaborations. The important fact is that two men, Gehry and Le Witt, acted in different ways using their own tools in order to reach the final aim of realizing the concern of "doubling". Sol Le Witt prepared a gigantic screen behind the stage on

<sup>&</sup>lt;sup>121</sup> Op.cit, Haag Bletter, 1986, p 28.

<sup>&</sup>lt;sup>122</sup> Op.cit, Haag Bletter, 1986, p 29.

which the figures of the dancers were projected at the same time of the performance. The action was going to be doubled using a twodimensional screen and multimedia equipment. With this tool, the image was going to be doubled with its virtual twin. Meanwhile Gehry proposed a three-dimensional solution.



Figure 3. 49. Frank Gehry, Available Light, Stage Design, 1983.

He divided the stage into two parts; one was higher than the other. By this way the dancers could use both parts of the stage doubling their choreography. This example demonstrates the diverse methods of one artist and one architect for the same conclusion.

This means, first, that an artist and an architect can be commissioned for the same project, second, the collaboration that is done with a dancer and a composer by Gehry shows us the wide range in which these team efforts could be established, and finally, the important issue turns out to be the two diverse methods directed to the same end from the eyes of an artist and from the eyes of an architect. Gehry later stated of this instance of collaboration:

"We wanted to make something that none of us would have done alone. That is the essence of collaboration. When you agree to collaborate, you agree to jump off a cliff holding hands with everyone, hoping the resourcefulness of each will insure that you all land on your feet."<sup>123</sup>

#### **3.4.3.** Collaboration with Sculptors

In the 1980s, Gehry's horizons expanded, as did his awareness of artists outside of Los Angeles and his references to diverse environments. In New York, his friendships have evolved into memorable collaborations with Richard Serra, Claes Oldenburg, and Coosje van Bruggen. At the same time his office walls are covered with magazine clippings and post card images of great historic works by such masters as Claus Sluter, Gentile Bellini and Constantin Brancusi, artists who inspire him and, in subtle ways, influence his architecture.<sup>124</sup>

#### Mildred Friedman, 2002

### **Collaboration with Richard Serra**

As examined in the second chapter in detail, Richard Serra<sup>125</sup> is known as an American Minimalist sculptor. The collaboration of Serra and Gehry are important because they were accomplished both in the fields of art and architecture.

<sup>&</sup>lt;sup>123</sup> Op.cit., Haag Bletter, 1986, p 105.

<sup>&</sup>lt;sup>124</sup> Op.cit. Friedman, M., 2002, p 13.

<sup>&</sup>lt;sup>125</sup> Richard Serra was graduated from the University of California, Berkeley in 1961, and took his

BA in literature, and he finished Yale University in 1964 where he received his M.F.A.

# **Art Projects**

# **Connections, New York, 1983**



Figure 3. 50. Frank Gehry and Richard Serra, Connections.

According to Kurt Forster, the *Connections* project can be explained as:

"For an exhibition at the Architectural League of New York, Gehry and Serra envisaged a link between the Chrysler Building and the twin towers of the World Trade Center. A giant fish shaped pylon designed by Gehry and the tilted pylon by Serra anchored this aerial bridge in the Hudson and East Rivers."<sup>126</sup>

<sup>&</sup>lt;sup>126</sup> Op.cit, Forster, 1998, p 11.

Frank Gehry states that for this exhibition Gehry and Serra have decided to prepare a project together. He says, "After research and discussion, we realized that everything was a bridge."<sup>127</sup> The design process worked out with sharing ideas on different concepts and trying to find out the counterparts of these ideas in the material world that they work in. Gehry expressed:

"I am a great admirer of his work and have learned much from him. He, in turn, has seemed curious about my work and occasionally appears to be making gestures of approval as he wanders through my spaces."<sup>128</sup>

In this collaboration the main aim was not producing an architectural artifact. Instead, brainstorming on the possibilities of architecture and combining it with sculptural shapes in realization was the main focus of their work. Serra remarked:

"The structure spanned the skyline of Manhattan was puncturing the Chrysler Building, which also functioned as its midway support. At the time people called it utopian, Frank and I considered it to be practical. This was one of the first examples of Frank using a fish to define structure."<sup>129</sup>

Looking at two buildings from the eyes of an architect and an artist made them re-evaluate these buildings in the urban fabric. The utopian proposal was the most important outcome of this collaboration, which, in my opinion, would not easily be accomplished without the teamwork of an artist and an architect.

<sup>&</sup>lt;sup>127</sup> Ibid. p 194.
<sup>128</sup> Op.cit, Arnell and Brickford, 1985, p 194.

<sup>&</sup>lt;sup>129</sup> Op.cit, Betchler, 1999, p 64.

# **Architectural Projects**

# Millennium Bridge, London, 1996

In October 1996, The Architect's Journal announced the participants of the competition for the Millennium Bridge, which was going to link the City of London with the new Tate Gallery in Bankside.<sup>130</sup>The two competing groups were composed of famous architects and sculptors. Norman Foster collaborated with Antony Caro and Frank Gehry with Richard Serra.



Figure 3. 51. Frank Gehry and Richard Serra, Millennium Bridge model, 1996.

<sup>&</sup>lt;sup>130</sup> "News In Pictures ", Architect's Journal, 1996, Oct.17, no.14, v. 204, p. 12-14.

Of their collaboration in the design of the Millennium Bridge across the Thames River in London, Serra stated:

"We were asked to make a proposal for a footbridge across the Thames, connecting St. Paul's cathedral with the New Tate. We decided that the main purpose of a footbridge across the Thames shouldn't only be to transport people from point A to point B. We proposed instead a bridge where sociality was to be the dominant practical purpose."<sup>131</sup>

"We curved the span of the bridge towards the New Tate and ended the walkway of the bridge in a large-scale plaza above the river which would permit for cultural and public events of all kinds."132



Figure 3. 52. Millennium Bridge model.

Gehry stated that they have worked with Jörg Schlaich, who was a civil engineer, for the design of the trusses. The importance of this commission can be summarized as the teamwork of one artist, one architect and one engineer in its design and realization.

 <sup>&</sup>lt;sup>131</sup> Op.cit, Betchler, C., 1999, p 65.
 <sup>132</sup> Ibid.

#### **Collaboration with Claes Oldenburg and Coosje Van Bruggen**

The other artists who worked in art and architectural projects with Frank Gehry are Claes Oldenburg and Coosje Van Bruggen. As stated by Van Bruggen, Gehry believed in his collaboration with the artists. The method that he believed in involved everybody putting an idea on the table so that their collision in different contexts would produce the most proper one.<sup>133</sup> These artists also believed in the success of the works that they produce in collaboration with Gehry. Van Bruggen remarked:

"In our leap into the unknown, we relied on Frank to catch us if we fell...At the same time we were determined not to set aside our personal interest in fusing art and architecture, but to come up with the most challenging forms we could, in the expectation that in the end this approach would yield the most beneficial environment."<sup>134</sup>

Oldenburgs see Gehry as an architect with a creative understanding of art. Van Bruggen believes that he is working in the area that is located at the intersection of science, art and architecture.<sup>135</sup> She stresses that Gehry is very open to changes and adjustments. His plastic forms can be converted from one to another freely, just as the models of the artists are open to transformation in every step of the design process.<sup>136</sup>

Due to the fact that they are also working on large-scale structures, their work resembles that of architects due to considerations of material, texture, color, structure, form and space.

<sup>&</sup>lt;sup>133</sup> Op.cit Van Bruggen, C., 1997, p 119.

<sup>&</sup>lt;sup>134</sup> Van Bruggen, Coosje, "Leaps Into The Unknown" in *The Architecture of Frank Gehry*, New York: Rizzioli, 1986, p 133.

<sup>&</sup>lt;sup>135</sup> Ibid. p 125.

<sup>&</sup>lt;sup>136</sup> Ibid. p 129.



Figure 3. 53. Claes Oldenburg, Coosje Van Bruggen, Bottle, 1982.

Van Bruggen explains:

"Since 1976 Oldenburg and I have been working jointly on realizing largescale outdoor projects...Like architects, we had to take into account building codes, earthquake and hurricane regulations, and questions of structural design and engineering, all of which affected the sculpture we wanted to make...In a process much like the one architects follow in designing a building, models are constructed, then modified and often discarded before the final design is achieved. Calculations by structural engineers are needed, and because of the size and permanence, the pieces must be fabricated by a contractor. At this stage the artist works through other people, just as an architect does in overseeing the construction of a house. However, there is a crucial difference: the artwork is not lived in. Habitability, in fact, is the primary obstacle to the transformation of art into convincing architecture." <sup>137</sup>

<sup>&</sup>lt;sup>137</sup> Ibid. 124-125.

According to Van Bruggen, the integration of art and architecture is achievable on the common basis of scale and structure in their work. Both Gehry and Oldenburgs use the CATIA computer program in order to realize their work like Richard Serra. The design steps that are followed in a comparable way could be interpreted as the work of the artists that carry architectonic qualities that create spaces, that move their art towards architecture. Meanwhile, architecture which is also involved with form, structure and space, could learn from large-scale sculptures.

#### **Architectural Projects**

Camp Good Times, Malibu, California, 1984-1985



Figure 3. 54. Frank Gehry, Claes Oldenburg and Coosje van Bruggen, Camp Good Times, Santa Monica Mountains, Malibu, California, 1984-1985.

Mildred Friedman points out to the active collaboration between Oldenburg and Gehry. Examining the project of Camp Good Times (1984-1985), for the design process of the project she quotes from Gehry when he says:

"The Oldenburgs came to my office daily for two weeks. They just sat there and watched me work, watched what an architect does. Claes made models of his own. The question of whether the camp would be architecture or art never was asked. We wanted to blur the lines."<sup>138</sup>

She continues with the consequences of this teamwork, underlining the fact that the Oldenburgs' sculpture became architectural and Gehry's architecture became sculptural at the end of this collaboration. The notions of architecture and sculpture were melted in the same pot in order to reach a unity in their work. Van Bruggen stated:

"As we visited his office, we came to understand Gehry's desire to make "a stronger sculptural statement of the shell," a concept which converged with Oldenburg's idea of enlarging stereotypical objects to an architectural scale."139

She specifies the keywords for their collaboration: the mediation between "abstraction" and "thingness".<sup>140</sup> When they agree on common facts, the most important part is the communication between Frank Gehry and the Oldenburgs. The brainstorming on the forms and functions enriches the final product. Gehry starts to see an everyday object from a different scale, which makes him re-evaluate their forms and ultimately gain inspiration from them.

 <sup>&</sup>lt;sup>138</sup>Op.cit, Friedman, 1986,p 101.
 <sup>139</sup> Van Bruggen, C.,1986, p 128.

<sup>&</sup>lt;sup>140</sup> Ibid. p 140.



Figure 3. 55. Claes Oldenburg and Coosje van Bruggen, Torn notebook, 1993.

An ordinary notebook page could thus turn out to be an inspiration for using bending materials for the planes of his buildings. Similar to Gehry, the Oldenburgs look at the technical process of structuring and realizing the plastic forms that he had imagined.

#### The Chiat/Day Building, Venice, California, 1985-1991

Claes and Coosje came out to study it and felt very comfortable with it there. So we are not working on the redesign of it, to incorporate the binocular form into the entrance building, making it a functional, usable space. It takes us back to the things we were working on in the Camp Good Times, and continues the process of our working together.<sup>141</sup>

Frank Gehry, 1986

<sup>141</sup> Ibid. p 153.



Figure 3. 56. Chiat/Day Building, plan. Figure 3. 57. Claes Oldenburg designing the interior of the binocular.



Figure 3. 58. Chiat/Day Building, exterior.

The Chiat/Day Building is an office building, which is mostly known for its binoculars. From the beginning of the project, Gehry was planning to realize the project in three separate parts. When the middle part was going to be designed, he wanted to create a striking entrance. During his trials, he thought of Oldenburg to whom he might ask for a proposal. He called Oldenburg and the collaboration has started. He stated:

"We sent all the pictures to Claes and Coosje, and they loved it. Then they started working on it...I helped them with the construction of it, how to do it, and got it built as part of the building. At that time there were many symposiums about art and architecture collaborations and nobody was really doing anything. So this looked pretty interesting to me. I had headed the public artist Siah Armajani talking about how artists are always in the background and I thought it would be interesting to see what would happen if an artist were really a part of the building process. We had all the interiors designed by ten artists. We had Kenny Price doing the bathrooms and Billy Al Bengston doing the carpets. Mike Kelly did two conference rooms."<sup>142</sup>

This project, which is famous for its sculptural entrance, is an interesting example to examine the relationship between art and architecture in the late twentieth century. Even if the definition of sculpture is not the same as it was in the beginning of this century in today's world, the process of unification between sculpture and architecture is perceivable with an alternative method in this model.

<sup>&</sup>lt;sup>142</sup> Op.cit., Friedman, M.,2002, p 60.

### **CHAPTER 4**

### CONCLUSION

In this thesis, the main objective was examining the interaction of three arts: architecture, painting and sculpture. Starting with their locations in the historical tree of knowledge and examining them in the historical environment, their interaction was studied in detail. In search for a dialogue between the arts, the dialogue between artists and architects was elaborated.

Departing from the contemporary examples of "architectural sculpture" and "sculptural architecture", the status of the arts in the late twentieth century was the center of discussion. Being aware of the fact that every artwork is an object with design whereas every design is not necessarily an artwork, the survey was based on the search for an architecture which is created with an approach to design as art.

Frank Gehry's work was selected as the case study because his architecture is close to the condition of art with its expressive quality. It reflects the spirit of its age through the senses of the architect.

He expresses that he wants to be the great master in architecture like in the ancient times. Thus, the relevancy of starting with examples of classical architecture in which buildings were artworks and finishing with a contemporary architect's work that is close to the classical understanding of art should not be disregarded.

When Gehry's architecture approached the realm of art, his relationships with art gained importance. In the historical times, the architect had to be an artist. Architecture, which was close to the condition of art, was formed through intra-disciplinary studies, which placed the architect at the center. Thus, the interaction of art with architecture is different than its counterpart in the contemporary era. In Frank Gehry's case, the inter-disciplinary work creates the architect as the coordinator of the projects instead of the one who is responsible from the work alone. Therefore, being influenced from the artworks and being in close relationship with the artists are the options of the modern architect for designing his project as an artwork. In Frank Gehry's work, it is possible to observe the effects of collaboration with artists that resulted in radical changes in his architecture.

Some of the artists who influenced his work were Robert Rauschenberg, John Cage and Joseph Albers. These three artists were together in the Black Mountain School in North Carolina. Founded in 1933 and continued its experimental education until early 1950s, the school was a reaction to the traditional schools of the time. Its core was the assumption that a strong liberal and fine arts education must happen inside and outside the classroom. Black Mountain School created an environment open to the interdisciplinary work that was to revolutionize the arts and sciences of its time. <sup>143</sup> The innovative approaches of these artists had a deep effect on Gehry. When he brought revolutionary approaches to his work -like in Guggenheim Bilbao Museum-, Rauschenberg stated, "Tradition was his enemy. Throughout the architectural challenges he confronts, the concepts and results always are audacious and new."<sup>144</sup>

In Gehry's projects, the liberation from orthogonal, pure geometrical forms is not only because of his interaction with art. Further, the computer technology enables Gehry to create and realize his characteristic forms which can be dispersed in all directions. Gehry's work became popular with the usage of CATIA computer program that is commonly used by aircraft engineers. His spaces are enveloped by planes, which do not only function as space enclosure elements but also, give a conscious sculptural effect to the spectator. His aim is not creating space due to its fundamental necessities. His spaces are surrounded by organic planes –more than needed-, which are layered onto each other. In order to generate a striking effect from the exterior the architect uses clothing forming the boundaries of the building. In the interior this dramatic effect is replaced by the free-flow among the spaces from which the exterior cannot easily be perceived.

The complex forms that can easily be built with the help of the digital technology enable Gehry to sculpt and construct his buildings both like and artist and an engineer. Thus, the influences from art and science in

<sup>&</sup>lt;sup>143</sup> Available on http://www.pbs.org/wnet/americanmasters/database/black\_mountain\_college.html (January 11, 2004)

<sup>&</sup>lt;sup>144</sup> Op.cit. Betchler, C., 1999, p 39.

his work, affected the development of a unique, sculptural quality in his work.

The consequence of interdisciplinary interaction is the improvement in the quality of the product. The two values –one coming from art and the other coming from the functional requirements of architecture- are enhanced in the conclusion. For instance, in Gehry's work, the expressive quality that grows out of architecture as art is unified with technical features that take root in architecture as a building science. The architect is inspired from artists and from engineers in creating his own vocabulary. Basically, the ideas, techniques and innovative approaches of the artists were the main concerns that influenced his architecture to assume a quality where categorical definitions melted into each other. Thus, his architecture trespassed its boundaries and interdisciplinary relations became productive activities.

Gehry's architecture was compared to Mies van der Rohe's work in the third chapter. The main reason for this comparison was, demonstrating the diverse approaches of two architects who cross beyond the traditional definition of architecture and create a new way of design in relation with the artworks. Beyond their different techniques and styles, one issue was common in their work: the sculptural organization of functional areas. The abilities of the construction materials and the aesthetic quality of details in their products appear as facts to examine these different examples together. Consequently it can be stated that there are no rules in the art of architecture. There is not only one way of approaching to the condition of art for architecture in relation with art and science. Both Mies van der Rohe and Frank Gehry are artists in 142

architecture whose work carry different sculptural and technical qualities.

Frank Gehry is an architect whose collaboration with artists has a deep impact on his work. For instance, Thomas Fisher discusses the art projects, which were handled by artists and architects including Antony Caro, John Isherwood, Frank Gehry, Alison and Peter Smithson and William McDonough in 1987, in The Triangle Workshop.<sup>145</sup> Fisher's aim was examining the products of the collaboration when he noted:

"William McDonough imposed an architectural order on the art. He gave a structure a program, a site reference...Frank Gehry on the other hand, didn't imposes his own order, but derived one from the art itself. Sculptors Antony Caro and John Isherwood both described Gehry's contribution as one of taking the large-scale pieces that they and Sheila Girling had begun to construct and arranging them as plastic sculptures, like in his buildings, creating the individual spaces of the artworks relating to one another."<sup>146</sup>

With the aim of underlining the success of this workshop in which artists and architects are in direct contact on the creation and production process, John Isherwood confirmed:

"We (artists) typically look at an object and the immediate space around it. Frank Gehry showed our group how the objects related to each other and the buildings and the landscape around them."<sup>147</sup>

"The one common ground of the architects and artists was dealing with the pure aspects of design, moving around forms and spaces. We have learned a lot from the architects. Their practice informed us how creative an architect

<sup>&</sup>lt;sup>145</sup> Fischer, Thomas, "The (Dis)unity of The Arts", Progressive Architecture, 1988, Feb., v.69, no.2,

p.25. Antony Caro and Richard Loder who invited the architects to work with the artists on common

commissions, were the founders of the Triangle Wrokshop, established in 1982 in America.

<sup>&</sup>lt;sup>146</sup> Ibid.

<sup>&</sup>lt;sup>147</sup> Ibid., p 26.

can be. There, we all spoke the same language and had the same feelings."  $^{\rm 148}$ 

In developing his characteristic forms, Frank Gehry is involved in a process similar the one of the artist. He creates shapes out of paperback models, wooden frames and clay samples, which are composed to form harmonious masses. After the rational organization of the functional areas, extra planes and surfaces are added to the composition, until he feels that his design is mature enough. Thus it is possible to observe that Frank Gehry is not designing in order to satisfy the needs of a building in minimum. Instead, looking at the artworks and working with their designers, he tries to depart from the conventional definition and economy of architecture. Hence, due to the interaction with visual arts, his architecture was transformed into sculptural architecture, an urban artwork.

It can be concluded that, through the case study of Frank Gehry's work, the relationship between art and architecture came to light. It is obvious that Gehry crosses the limits of his discipline with the guidance of art.

Disciplines interact and in the outcome boundaries are blurred into each other. Limits are constrained and further steps are taken due to the proficiencies of art and architecture that are in a close relationship with each other. In light of the research that was conducted for this thesis, it is determined that the disciplinary potentials are multiplied in the dialogue between the arts.

<sup>148</sup> Ibid.

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