

OMAR
ALKURDI

UNDERSTANDING THE EFFECT OF FUTURIST MOVEMENT ON
CONTEMPORARY INTERIOR DESIGN

NEU
2021

**UNDERSTANDING THE EFFECT OF FUTURIST
MOVEMENT ON CONTEMPORARY INTERIOR
DESIGN**

**A THESIS SUBMITTED TO INSTITUTE OF
GRADUATE STUDIES
OF
NEAR EAST UNIVERSITY**

**By
OMAR ALKURDI**

**In Partial Fulfillment of the Requirements for
The Degree of Master of Science
In
Architecture**

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MOVEMENT ON CONTEMPORARY INTERIOR DESIGN**

Approval of Director of Institute of Graduate Studies

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A handwritten signature in black ink, appearing to be 'Omar Alkurdi', written in a cursive style.

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ACKNOWLEDGEMENT

I would first like to thank my thesis advisor Assist. Prof. Dr. Havva Arslangazi Uzunahmet. I have learned many things from Assist. Prof. Dr. Havva Arslangazi Uzunahmet since I became her student her door was always open whenever I ran into a trouble spot or had a question about my research or writing. She spent so much time teaching me on how to search literature and collect data to help me with my research. She walked me through every step, She took my hand and showed me the right path to walk. She consistently allowed this paper to be my own work and helped it to grow, she steered me in the right direction whenever she thought I needed it.

During the period of 5 years in Near East University I ran into many good friends that helped me to adapt to my new home Nicosia, many Doctors that stood by my side and gave all the help I needed throw my journey in this kind loving University. I would like to thank them all from all my loving heart and show my great gratitude for all their sincere giving.

My family, my parents and my brother who I have not seen for more than 5 years. I would like to thank you for all your support and all the love that you give me to help me keep going and not fall apart, I love and miss you.

Thank you so much without your love, trust and support I could not have been able to do any of this.

ABSTRACT

Since the beginning of time, humans showed great ability to adapt to the continuously changing environment condition that occurs. Each drawing expressed the time it was drawn in from the change in the technique that was used, the materials, the amount of details it contained and the way it was drawn. Each era reflected its conditions through drawings, each period of time had its own ideas and principles. Fast forward to today and the movement has evolved to take various shapes and forms, and embodied different forms of art and everyday spaces, adding sense of motion, continuity and interactive nature.

This thesis aims to employ the literature review methodology followed by a qualitative analytical study that aims to identify and compare elements from the futurist movement and highlight their presence within the interior space. It was not only an art movement; it was a revolution on the past with all its ideas and techniques. Therefore, in the chapter of literature review, the conceptual framework including to Futurism, Interior Architecture widely were examined. Then, in order to understand the development of futurist architecture in depth, some movements and buildings from these periods are discussed in chapter three. In the method section, nine different contemporary cases were analyzed, which were compared with works of art belonging to the futurist movement. The analysis in the method are revealed and discussed in the conclusion section. The results showed how movement had a great impact on architecture, especially interiors, and how it brought a more organic and interactive form of form to the daily life of the users, spreading the effect of movement, speed and continuity that define the futurist current.

Keywords: Futurism, Art Movement, Paintings, Interior Design, Architecture, Motion, Future, Machine.

ÖZET

Zamanın başlangıcından beri, insanlar meydana gelen sürekli değişen çevre koşullarına uyum sağlama konusunda büyük yetenek gösterdiler. Alfabetik bir iletişim yolu başlatmak için, sesli benzetmelerden işaret diline ve sembol çizimleri yaparak ifade biçimlerini geliştirdiler. Bir hikaye, bir olay, bir efsane anlatmak ve tarih yazmak için çizimleri kullandılar. Her çizim; kullanılan teknikteki, malzemelerdeki, detayları ve farklılıklardan çizildiği zamanı ifade ediyordu. Her dönemin kendi şartlarını yansıtan çizimleri, her dönemin kendine özgü fikir ve ilkeleri vardı. Örneğin Dadaizm, sanatın sanatçıları sanatlarında takip etmeye zorlamak için oluşturduğu tüm ilkeleri ihmal etmiş, tüm ilkelere ve “sanat güzelliştir” fikrine karşı gelmiştir. Tüm kuralları yıktı ve sanat ile sanatçının geçmişteki sanat tanımından çıkması için yepyeni bir fikir oluşturdu. Dadaizm, Fütürizm sanatçısının zamansız fikirlerini, sanata ve hayata tamamen farklı bakış açılarını, gelecek vaat eden umutlarını ve düşüncelerini ortaya çıkarıp ifade etmelerinin yolunu açmıştır. Günümüze hızlı bir şekilde ilerleyen bu hareket, çeşitli şekiller ve biçimler almak için gelişti. Farklı sanat biçimlerini ve günlük alanları somutlaştırarak hareket duygusu, doğa etkileşimi ve süreklilik gibi kavramlarda gelişim gösterdi. Bu tez, fütüristik hareketin unsurlarını tanımlamayı ve karşılaştırmayı, iç mekandaki varlıklarını vurgulamayı amaçlayan nitel bir analitik çalışmanın ardından literatür tarama metodolojisini kullanmayı amaçlamaktadır. Sadece bir sanat hareketi değildi; tüm fikir ve teknikleriyle geçmişte bir devrimdi. Bu nedenle Literatür Taraması bölümünde Fütürizm, İç Mimarlık gibi kavramları içeren kavramsal çerçeve geniş olarak incelenmiştir. Daha sonra Fütürist Mimarinin gelişimini derinlemesine anlamak için bu dönemlere ait bazı hareketler ve yapılar üçüncü bölümde tartışılmıştır. Yöntemde bölümünde, fütürist akıma ait sanat eserleri ile karşılaştırılan günümüze ait dokuz farklı vaka incelenmiştir. Yöntemdeki analizler sonuç bölümüne ortaya çıkarılmış ve tartışılmıştır. Sonuçlar, hareketin mimaride, özellikle de iç mekanda büyük etkisi olduğunu ve fütüristik akımı tanımlayan hareket, hız ve sürekliliğin etkisini yayarak kullanıcıların günlük yaşamına nasıl daha organik ve etkileşimli bir form türü getirdiğini göstermiştir.

Anahtar Kelimeler: Fütürizm, Sanat Akımı, Resim, İç Mimarlık, Mimarlık, Hareket, Gelecek, Makine.

TABLE OF CONTENTS

ACKNOWLEDGEMENT	ii
ABSTRACT	iii
OZET	iv
TABLE OF CONTENTS	v
LIST OF TABLES.....	viii
LIST OF FIGURES.....	ix
LIST OF ABBREVIATIONS.....	x

CHAPTER 1 INTRODUCTION

1.1 Overview.....	1
1.2. Statement of the Research Problem.....	3
1.3. Methodology.....	4
1.4. Aim and Objectives	5
1.5. Scope of the Research.....	6
1.6. Limitation of the Study	7

CHAPTER 2 LITERATURE REVIEW

2.1 Overview.....	8
2.2 Futurism	9
2.2.1 Concepts of Futurism	10
2.2.1.1 Motion	10
2.2.1.2 Machine	11
2.2.3 Architecture.....	12
2.2.3 Art	14
2.2.4 Music.....	16
2.2.5 Sculpture	17
2.3 Interior Design	18
2.3.1 Function	19
2.3.2. Creativity / Esthetic / Form.....	21

2.3.2.1 Organic forms/shapes	21
2.3.2.2 Geometric or Inorganic forms/shapes.....	22
2.3.2.3 Open forms/shapes	22
2.3.2.3 Closed forms/shapes	22
2.3.3 Structure	22
2.4 Interior Architecture Development from 20th Centuries to Contemporary.....	22
2.5. Interior Design	25
2.5.1 Architectural elements of an interior space.....	25
2.5.2 Structural elements of an interior space	25
2.5.3 Transition elements of an interior space	26
2.5.4 Furniture and decorative elements of an interior space	26
2.5.5 Technical systems of the interior space	26
2.6 Structural System.....	27
2.6.1 Materials.....	27
2.6.2 Structure methods.....	27

CHAPTER 3 CONCEPTS OF FUTURISTIC MOVEMENT IN 20TH CENTURY AND CONTEMPORARY

3.1 Overview.....	28
3.2 Kinetic Architecture.....	29
3.3. Parametric Style	30
3.3.1 Curved / free form.....	31
3.3.2 Organic architecture	32
3.4 Deconstructionism	35
3.5 Interactive Architecture	38

CHAPTER 4 METHODOLOGY

4.1 Research Design	40
4.2 Research Methodology	41
4.3 Case Studies	42

CHAPTER 5 CONCLUSION	59
REFERENCES	62
APPENDICES.....	65
Appendix 1.....	66
Appendix 2.....	67

LIST OF TABLES

Table 3.1: Curved / Free Form examples.....	39
Table 3.2: Organic Architecture examples	43
Table 3.3: Deconstructionism examples	46
Table 3.4: Interactive Architecture examples	47
Table 4.1: Summary of the overall study.	67

LIST OF FIGURES

Figure 2.1:	Antonio Sant’Elia, New City, 1914, italyonthistday.	16
Figure 2.2:	Giacomo Balla, Dynamism of a Dog on a Leash, 1912, oil on canvas, 35 1/2 x 43 1/4	19
Figure 2.3:	Umberto Boccioni, Unique Forms of Continuity in Space, 1913	22
Figure 3.1:	Al Bahr Towers	36
Figure 4.1:	Interior of Walt Disney Concert Hall and Umberto Boccionis’ Sculpture “Development of a Bottle in Space”	50
Figure 4.2:	Founder’s hall	52
Figure 4.3:	Concert hall	53
Figure 4.4:	Dominion Office Building in Moscow and Good Face sculpture.....	54
Figure 4.5:	Changsha Meixihu International Culture and Art Centre and Speeding motorboat painting by the artist Benedetta Cappa	55
Figure 4.6:	Galaxy building and Primavera Umbria a painting by Gerardo Dottori.	57
Figure 4.7:	The Markthal design by MVRDV design office, in Netherlands, Painting done by the Italian futurist artist Tullio Crali.....	59
Figure 4.8:	2010 Danish Pavilion by BIG design and “ Joy Vibrations “ by Freydoon Rassouli	60
Figure 4.9:	The Nazarbayev Centre by Foster + Partners in Astana and and Speeding motorboat painting by the artist Benedetta Cappa	61
Figure 4.10:	Tianjin Binhai Library by MVRDV, Tianjin, China and the painting done by Luigi Russollo.	62
Figure 4.11:	Mercedes Benz Museum, by UN Studio and painting by Giacomo Balla Vortex	64
Figure 4.12:	Mercedes Benz Museum Interior space	66

LIST OF ABBREVIATIONS

OLED	Organic light-emitting diode
NCIDQ	National Council for Interior Design Qualification
AHR	Architecture Firm
UAE	United Arab Emirates
UK	United Kingdom
USA	United States of America
UNISCO	United Nations Educational, Scientific and Cultural Organization
UN	United Nations
LED	Light Emitting Diode
MVRDV	Winy Maas, Jacob van Rijs and Nathalie de Vries Architecture Firm
SOHO	Small Office/Home Office

CHAPTER 1

INTRODUCTION

1.1 Overview

Art went through many restrictions through time; it was once ruled by the church, then by aristocrats then politics and economics. When the industrial revolution occurred, many artists decided to rebel with it against all the strict worn out principles and chains that the society made for art and artists. They decided to set their minds free and look up for change and future, they saw beyond what was common and what was forced on them to be a way of thinking and expression they saw the beauty in the new technology, the steel of factories and automobile, they enjoyed the sense of motion and movement and glorified it. They saw that the future of everything is found in continuous change, movement and technology (Wurgaft, 2013).

Futurism was an artistic and social movement that originated in Italy in 1909 after the beginning of the Industrial revolution. (Berghaus, 2016) This movement came to effect all aspects of art, it came and set the minds of thinkers, creators and innovators free. It removed all the barriers and broke all the walls that were built around their minds to force them to think and create in a certain way. On the 20th of February the manifesto of futurism was published by the Italian poet Filippo Marinetti, it was the beginning of a new era, a new life, and a promising future for everyone. (Stangos, 1997) This movement emphasized speed, technology, youth, violence, movement and objects such as the car, the airplane and industrial cities. Futurism celebrated change, originality and innovation in culture, society, art and design, it glorified the new technologies and the beauty of speed and motion, the characteristics of futurism focus on technology and the technical progress of the modern machine, age, dynamism, speed, energy, vitality and change (Adamson, 2010).

According to Prof Farhan Asim and Venu Shree, Marinetti chose the word Futurism to reflect his goal of rejecting all the principles of the art of the past and honor the change, the originality, and the innovation of the modern culture and society. In the Futurism manifesto said Farhan Asim, Marinetti's 'Manifesto of Futurism', addressed people that, "We affirm that the world's magnificence has been enriched by a new beauty: the beauty of speed. A

“a racing car whose hood is adorned with great pipes, like serpents of explosive breath—a roaring car that seems to ride on grapeshot is more beautiful than the Victory of Samothrace” (Marinetti FT. The futurist manifestoes. Le Figaro. 1909).(Adamowicz. & Storchi., 2015).

Marinetti’s manifesto worshiped the new technology and mechanism of the automobile and different machines and the charm of its speed, strength, and movement. The manifestos was written in an aggressive way to provoke the public to move and take action to change. Futurist wanted to start the change immediately and in all possible ways and aspects. In poets, sculpture, writing, acting, painting and also in the field of design, like Interior design, Architecture, landscape, cityscape and industrial design (Milne, 2000).

Old principles and cultural restricts made a firm guideline for artists and innovators to follow, they were not allowed to break these principles and their art will be completely rejected and neglected in case one of the artist decided to go beyond what is familiar and accepted. Just like when Dadaism came out to rebel on the aristocrats and their artist after WW1, when artists kept on painting luxury and welfare, ignoring all the hunger and poverty. Dadaism artist were filled up with all of that fake reality the artist was reflected, people of the public were in pain, in hunger. The artist of Dadaism gathered and decided to start an anti-art movement. They started an art movement to fight art. They basically fought art with art, the fought fake aristocrat’s art with real pain and suffer street art. They refused to pose art works as ‘beautiful’ in terms of what was known and allowed. They decided that anything you want or make you can consider as art, even if it was totally meaningless. This art movement allowed the artist to start to breath and allowed their wings to spread to fly above everything, it allowed them to be set free. Same thing happened with futurism.

After being set free to look, to express and to be, Futurism artist emerged when Industrial revolution started. They saw the beauty of machine, of cars , planes, and the new technology, Their minds flew over and looked down, They decided to throw away all the ideas of past culture, they decided to start a new world, a world that will never stop growing and developing. They movement started in 1906 and was officially launched and announced in 1909 by the Italian poet Filippo Tommaso Marinetti, On 20 February the Manifesto of Futurism was published on the front page of the Paris newspaper “Le Figaro” by the poet.

In the Manifesto, Marinetti announced that “we will free Italy from her innumerable museums which cover her like countless cemeteries”. He saw that old beliefs killed his country and took its youth and turned it to a graveyard. He says that the beauty of change, motion, movement, cars and speed, overcome any beauty of an ancient sculpture or even a renaissance painting. Some of the main co-founders and leaders of this movement were : Carlo Carrà, Giacomo Balla, Gino Severini and Umberto Boccioni.

1.2. Statement of the Research Problem

In the last century, innovations like electricity, automobile, X rays, airplanes, radio waves and many other things, were fascinating and inspiring for so many creative creators. It inspired artists to create a whole new way of expressing in art and led to the creation of masterpieces. Pieces of art that became an inspiration later in time. And inspiration for other artists, creators and designers in all fields.

In our modern world we are in a continuously changing state, we can see and feel the aim and purpose of Futurism in every single design we pass by, whether it was a graphic painting, street art, poster, a music video and especially in the field of architecture and interior design.

Now we have way too developed technology, like 4D and 3D designs and techniques, like Bluetooth, wifi, smart Nano technology that gave us smart materials. We also have a technology that allows us to interact with each other and with other devices, and a technology that interacts with us!. We are on a continuously moving wheel of development. Each new day we have a new invention and a new creation.

A design that presents the future is what all designers nowadays are looking and seeking for, their all intentions and hope is to create a design that is suitable and appropriate for nowadays and years to come, a design that will never run out or be considered as old out of time design. Thanks to new technology and the endless numbers of new creations and innovations it's now possible to create these amazing designs and creations, and there are more inspiration factors to be inspired by to design and shape interiors and exterior of the future.

Understanding that past, -in this case the beginning, principles and aims of futurism- is our right way to create and continue the march of futurism. We should emphasize the futurist

movement, not erasing it from mention by modernizing and contemporary adjectives. Contemporary is futurist-based design, it's a modern design that is suitable for our modern current world. But mainly and basically all this design is futurist base. They emphasize change, refusing the past traditions and moving forward, just as the futurism aims and principles, the glorifying of motion, speed technology and change.

There have been many discussions on Futurism and its effects until today. Many of these have shed light on the literature. Interior architecture today has developed quite a bit as a field on its own. With this study to be conducted on the effect of Futurism on Contemporary interior spaces, the contribution of this effect to the development of today's interior spaces and the nature of the effect of Futurism on these spaces will be determined and a contribution will be made to the literature.

1.3. Methodology

The thesis is a qualitative research. Its' thesis methodology has employed qualitative and literature review study for the futuristic movement, its rise, development, and evolution, with special focus on their influence on contemporary interior spaces whether functional, conceptual or aesthetical. For this thesis a set of famous buildings was chosen to be qualitatively analyzed and compared alongside paintings or sculptures following the futuristic movement, where it can perhaps clearly present the influence of the futuristic movement within the intricate details of the contemporary built environment, the cases are Walt Disney concert hall in Los Angeles, The Dominion office building in Moscow, Changsha Meixhu International Culture and Art center in Changsha, Galaxy SOHO in Beijing, The Markthal in Netherlands, Expo 2010 Danish pavilion in Beijing, The Nazarbayev center in Astana, Tianjin Binhai Library in Tianjin, and Mercedes Benz Museum in Stuttgart. Upon completion the reader will have an idea about the details of the futuristic movement and what defines it, and how strong is the influence of futurism in our everyday spaces. The main framework of this study consists of a set of chapters:

In Chapter 1: Introduction.

In this chapter of the study, the general historical background for the main topic (Futurism) is presented. Also, this part represents an outline of the principal destinations of the search,

a declaration aims of the study, problem statement, significance of the study. Finally, the research approach how it will have carried out in the thesis outline has been disclosed.

In Chapter 2: A Literature Review.

In the second chapter, which consists of the literary review of the subject, and how the Futurism was developed throughout the history of art and architecture? Then it looks for the meanings of futurism in interior spaces and the elements that influenced the current day designs. A brief look at the literary review on futurism defining its concepts, forms, and its presence in different forms of art, as in music and sculpture all the way to its integration in architecture. through architecture.

In Chapter 3: Tendencies and Some Buildings Influenced by The Concepts of Futuristic Movement In 20th Century and Contemporary.

A background on architecture following the futurism movement and the relationship of between 20th century art and contemporary architecture in it. Then, the study discusses the different types of styles that emerged in the general scope of architecture and the influences it influenced in contemporary interior spaces. Then the study linked those elements with existing case studies.

In Chapter 4: Case Studies.

In this chapter our methodology; is represents the analytical study of nince case studies that are chosen based on the implemented criteria. By the analytical study, it meant through a literary review of the cases and the creation of a table that highlights all similarities and differences between the artworks and the contemporary interior spaces.

Chapter 5: Conclusions and Recommendations.

1.4. Aim and Objectives

The lack of understanding of the origin of futuristic design that moderm designers work by nowadays and consider it as ‘Modern Style of Sci-fi’ while it’s originally based and flourished in 1909 and neglecting the principles of the futurism drove me to look more in

depth of the futurism the start point of all this (futuristic way of thinking) way of design in the field of interior design and architecture.

In this research, it is aimed to determine the effect of the Futurist movement on today's interiors. In addition, it is also one of the aims to contribute to the literature and to shed light on this issue in the field of design.

This study aims to explain and show the effects and link futurism interior design that we have nowadays with the futurism art movement that occurred in the 20th century.

- 1) This research aims to explain the effect that futurism has over modern interiors and how its principles shaped the whole design concept of the future interiors
- 2) Understanding Futurism's ideas, point of view, goals, aims and materials.
- 3) Comparing and explaining how futurism paintings were the inspiration of the design of some famous buildings
- 4) Creating a futurist painting based interior and exterior.

1.5. Scope of the Research

Futurism began about one hundred and twenty-five years ago. He saw the future and worked for it. We can say that they are fighting against traditions and old beliefs. Many modern or contemporary designers are actually inspired by futurism artworks. Today, this current has a very common interaction, which has caused it to be researched within the scope of the thesis.

Interior design and architecture are the two most touched and affected fields recently. Many designers are seeking to design a design of the future, a design that will live and stand till the end of time, and that will be considered out of this world in terms of new and originality. For this reason, the interior spaces formed by the influence of the Futurist movement have also increased. In the study, the scope of this effect was investigated, focusing especially on the interior.

Although some designers today are static when designing buildings, it is clear that their form creates an impression of movement, like the sculpture “Sculptural Structure of Noise and Speed” by Giacomo Balla. In this context, the buildings were selected and their interiors were examined.

“I believe the design of the Walt Disney Concert Hall suggests music, and I hope that when people attend concerts in the hall, their eyes will wander through the shapes of the building and find that that they see harmonies with the music they’re listening to.” (Frank Gehry at the opening of the hall speech, 2003).

1.6. Limitation of the Study

The fact that Futurism, a trend that was seen for a short time in the first half of the 20th century, had a great impact on the continuation of the century and affected the present, has been effective in the selection of the research problem. In addition, although there is a lot of research on Futurism, the lack of study on the subject of its effect on contemporary interiors, the contribution of the examination of this subject to the literature was considered and selected. While choosing the interiors used in the research method, nine cases made by various designers from different countries were selected for the reliability of the study.

CHAPTER 2

LITERATURE REVIEW

2.1 Overview

Futurism art movement had started from about more than one hundred years ago by the Italian poet Marinetti who had the idea of futurism due a complete quiescence. When he felt the speed and saw the way that could motion effect our vision and point of view of an object, he decided to revel on old principles and tradition which made molds for the minds of artist and thinkers.

The futurism art movement fought all the thought of the past, all the guide lines that were forced on artists in all fields, it invented and put its own mind, hope and dreams for the future of the world and individuals. The industrial revolution came to start the fire of the futuristic movement and gave a push forward for the Italian poet to stand up and announce the vision of the new art principles.

The futurism art movement neglected all the rules of the past, all the guide lines and all the structure of the previous art movements that were controlling the minds and allowing them to fly and see what is beyond the classic painting. It saw the future in technology, new inventions, machine and speed, it fought static status and strict art and nudity, it works for bold minds, for the youth and for a better live.

We can see the new principles of futurism in all aspects of life, where it had its effect in all arts field like painting with the sense of motion by drawing repeated shapes of lines, in sculpture by making status that gives the feeling of movement and expanding in space, in music and literature also.

In the field of architecture and interior design, futurism had the biggest effect that can still be seen, felt, and found clearly in most of our contemporary designs, whether it was the use of bold material, the use of technology, the sense of motion, or the expanding in space.

In this chapter we will overview the futurism movement, observe its characteristics and concepts , we will talk about interior design and its structure to be able to study the effects of futurism on the structure of interior design.

2.2 Futurism

In 1908 the Italian poet Filippo Marinetti who had a car accident where he was involved in it while trying to avoid hitting a moving bicycle. That experience influenced the poet to notice the difference between the machine and the old inventions, in his case was the bicycle that almost cost him his life. This incident influenced him to write the manifesto of Futurism, which is a movement that will take over old thoughts and traditions. It started to flourish first in literature and poetry. Moreover, by the year 1910, the artists Carlo Carra, Umberto Boccione and Russolo had joined the Futurist movement and shared their view with Marinetti. They saw a potential in this movement that can have a major influence beyond poetry and literature. Together they wrote the famous paper titled “The Manifesto of Futurist Painters”, and send it to Giacomo Balla and Severino, who after the signing of the manifesto made it official, marking the first time futurism was approved as a form of art, that became headed by the three artists combined (Stefano, 2018).

This movement was aimed to capture the energy that comes in various forms, as in the speed and the dynamism of the new techno world and reflect it in an artistic manner or language. They were captivated in the latest inventions in the technological field as well as in science, particularly in aviation and machine engineering. They saw the need of sweeping or the evolution of the past culture and traditions in order to allow the mind and imagination to breathe and be able to create and design. They aimed to erase everything they saw that was outdated and followed a plan that replaced it with the energy and charge of the new machine age, they wrote in their manifesto “We declare... a new beauty, the beauty of speed. A racing motor car... is more beautiful than the Victory of Samothrace.” (Futurist Manifesto -1908)

They further expanded the art, that resulted in the development of new techniques in their art to reflect movement in their works, using common art techniques like blurring and the repetition of drawing, or creation of patterns that can also be created as the implementation of the same object in different positions to express the movement and motion of the objects.

This art movement covered a wide range of art aspects, including poetry, painting, photography, architecture, theater, music, literature, and sculpture.

2.2.1 Concepts of Futurism

Marinetti's manifesto was very much inspired by the newer industrialized era and its technology, he worshiped the new technology and the sophisticated mechanism of the automobile and different machines, and the charm of its speed, strength, and movement. It marked the beginning of a new era, a new life, and a promising future for everyone. This movement emphasized speed, technology, youth, violence, movement and objects such as the car, the airplane and industrial cities. Futurism celebrated change, originality and innovation in culture, society, art and design, it glorified the new technologies and the beauty of speed and motion, the characteristics of futurism focus on technology and the technical progress of the modern machine, age, dynamism, speed, energy, vitality and change.(Wurgaft, 2013) If we wanted to break down the Concept of Futurism to two main points or two main aims or concepts, we can identify these concepts as: Motion and Dynamism, but the kind of dynamism is the kind produced by a machine. So we can say Motion and Machine.

2.2.1.1 Motion

According to the "Technical Manifesto of Futurist Painting": "All things move, all things run, all things are rapidly changing. A profile is never motionless before our eyes, but it constantly appears and disappears" (Rick Doble, 2009).

From this point one can start imaging and envision, or it can be said that, a much clearer view of the whole concept is understood along with the aim of futurism. Futurist artists did not observe objects in a still state, instead they saw and believed that everything is in constant movement, anything is surrounded by air, that means that even if the object is not moving, the atmosphere around it is moving, therefore you cannot capture and remake the desired objects in still form, you should remake it and deliver it in its moving and changing state of form. A walking man, a speeding car, a moving dog and many other examples. Their vision was to allow the world to move and breathe, to stay up to date live with the new technology and reflect it in all the fields of art.

They saw the future that will never end. They say the change is the key to last and stay young and youthful, they neglected the old, the still, the traditions and all the academic principles that were forced on artists and prevented them to flow and grow and fly in the space of creativity.

Futurism came to set free the minds of creative creators, the minds of artists, scientist and innovators to produce an endlessly renewing inventions and art works, works that will never die and will always be an inspiration.

The futurist vision and mission has aimed to establish a kind of movement that is suitable for all time and eras, a movement that provokes, inspires the constant vision to renew and renovate, a movement that can be called Futuristic in all time and all places, and a movement that will never die and will always inspire and be followed when looking for the creation of the future.

Futurism movement is looked upon as the type of art that first started this implementation of movement and the sense of motion, also referred to as the mother of moving arts. Futurism had a strong emphasis in movement as clearly seen in all manifestoes, as well as state of motion. Besides this movement glorified any influence of change, or speed in its work of art, as well as technological advances whether scientific or mechanical. Following this guidelines, one can trace back all artworks produced that contains or reflects motion, easily matching it to futurism, as all the criteria has been mentioned in details in the various manifestos published as well as their objectives.

2.2.1.2 Machine

When talking about machines, one can clearly remember and it instantly comes to mind the hopes and goals of futurism, which was a world where automobile is filling the streets and airplane planes flying in the skies, where the factories are filled with machines and humans are relying on technology, where different machines are a basic element in our daily life (Humphreys, 1999).

Machines became a fundamental element in our life, we can easily associate machine to technology. So, it can be argued that the second main concept in futurism is technology. As in this day and age, the technology helped create various types of machines, ones that move,

or cause movement or others that cause a change in state or shape. For example the technology of OLED screen, which are considered as a television that is basically a machine, is used nowadays to produce a continuous changing colors or images to buildings facades (Humphreys, 1999).

In simplified words, it can be said that, one cannot find motion in our modern world which is not connected to a machine or a mechanical dynamited movement, showing that machines and technology can be synonymous with futurism. This means that a dynamical type of movement or a machine induced movement is need to be applied in order to receive an output that is embodied in motion to static elements or change of state to any form.

2.2.3 Architecture

Like all the branches of futurism, architecture also glorified the two aims of this movement, mechanism and motion, futuristic architectures were implemented to design the cities of the future, ones that are defined as fast, and possess a rapidly changing life style.

“The manifesto ‘Futurist Architecture’ was issued as a leaflet in late July, then reprinted in Lacerba on the first of August” (Rainey,2009).

Futurism as an artistic movement repudiated the use of traditional forms and adopted the revolutionary impulse regarding possibilities that technology could revive and amplify culture, dilapidated lifestyle and the condition of cities (McGarrigle, 2016).

Futuristic architecture designs aimed to create the dream of all futurist artists and architects, the dream of creating the cities of the future, where automobile are spread widely in the streets, machines occupying most of the daily life style simplifying so many aspects of daily routine, airplanes decorating the skies, while metal and copper participate in creating core functional tools for our everyday life, and where all modern and industrial technological element and advancements show and flourish. “Standing on the world’s summit we launch once again our insolent challenge to the stars!” (Rainey, 2009).

The Avant-Garde ideas of futurists stayed as an inherent part of modern architectural edification. The futurist idea of development was to disregard history and come up with new ideologies and structure that could formulate the future cities and neighborhoods (Linardi S. Virgilio Marchi, 2010).

One of the most famous futuristic architecture is the Italian architecture Antonio Sant'Elia who had his own vision of the city of the future which he called 'Città Nuova or New City'. In which he proposed the new vision of a modern futuristic city. It was referred to it as a 'utopian' futurist city. He designed it between (1912 and 1914), it primarily consisted of a multiple level design that is connected on the upper levels above the main street level to other surrounding towers that goes up to tens of floors, allowing for a wider street for the machine to dominate, while on the urban level creating a flying bridge that can be seen as flying walkways and bridges that act as pedestrian path for the residents to navigate the city. However, the war came and along with-it destruction of whole neighborhoods and cities and the futurist dreams that left cities in states that wasn't ready for the futurist's vision.

Sadly, Sant'Elia was killed in a battle at the age of twenty eight, with almost no complete work of architecture, although he had numerous visions and conception of the cities of the future which none of which saw the light of day or were put in the execution phase, some of his most popular works can be seen in the figures below [Figure 2.1].

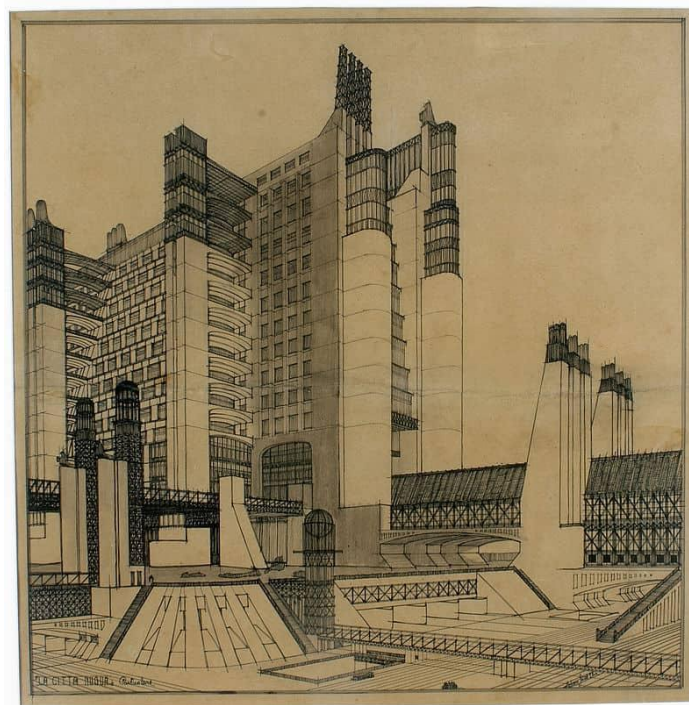


Figure 2.1: Antonio Sant'Elia, New City, 1914, (italyonthisday.com)

2.2.3 Art

In their “Technical Manifesto” of Futurist Painting, Carlo Carra , Giacomo Balla, Umberto Boccioni and Sevrini expressed their rejection of vulgarity, nudity, mediocrity and all what was considered as traditions or old beliefs (Adamowicz & Storchi, 2015).

In the 8th of March 1910 at the stage of Chiarella theater in Turin, they announced that their desire for reality and truth can no longer be found or relieved in traditional forms, techniques and colors, the capture of a still moment can no longer give them satisfaction, instead they desired to capture the energy, the movement, the changes that occurs with time (Korte, 2015).

According to Laura Wittman, Lawrence Rainey and Christine Poggi , in the Technical Manifesto of Futurist painters, the painters announced that :

“WE DECLARE:

1. That innate complementariness is an absolute necessity in painting, just as free meter in poetry or polyphony in music.
2. That universal dynamism must be rendered in painting as a dynamic sensation
3. That in the manner of rendering Nature the first essential is sincerity and purity
4. That movement and light destroy the materiality of bodies.

WE FIGHT:

1. Against the false patinas and varnishing by which it is attempted to give modern paintings the aura of older picture.
2. Against the superficial and elementary archaism founded upon flat tints, which reduces a painting to a powerless synthesis, both childish and grotesque.
3. Against the false claims to belong to the future put forward by secessionists and the independents, the new academics now to be found in every country.
4. Against the nude in painting, as nauseous and as tedious as adultery in literature.”

Many people had the assumptions that futurist artist is absurd, but despite all the false reputation they gained throughout this time, they resumed to push through in fighting for their beliefs, they believed they were setting the ground stone of a new form of art, or a new form of life, creating a whole complete transformation to the general understanding of art.

They saw the light only in what they believed in and everything else that negated their views was shown in the shadow away from the light of the sun, and as they called it the light of knowledge or the light of the future.



Figure 2.2: Giacomo Balla, *Dynamism of a Dog on a Leash*, 1912) (italyonthisday.com)

One of the main and most important character of the futurism in all its art aspects is: Dynamism and motion. We can clearly observe these characteristics in any art work that belong to this movement. One of the most famous painting that best represents the aims of futurism at its finest is “*Dynamism of a Dog on a Leash*, 1912” by the outstanding artist Giacomo Balla. The painting shows a dachshund type dog on a leash, next to the feet of its owner that is shown as walking in almost the same speed as the dog, representing motion.

In this painting we can see how the artist expressed motion and dynamism by drawing the moving elements of the scene, (the dog's body, the leash and the woman's feet and dress) in different position, in this way it gave us the feeling of motion in a still painting, it transferred the reality of a moving object, it gave endless life to the painting. "Dynamism of a Dog on a Leash" [Figure 2.2] is Balla's best-known art work. In this painting the artist achieved this motion by blurring and drawing the moving elements in different positions (Balla, 2000).

2.2.4 Music

The musicians of the futurist's movement addressed their speech to the young people, they considered them the key and important part of the new society that can also be the potential target audience of this art, they even had a term "the power of youth" as what all futurist glorified. They thought that only the youth were the targeted category to listen because only they will understand, due to their exposure of constant change and development especially during the industrialized era, that witnessed a vast number of changes in a short time span.

Francesco Balilla Pratella said "I address myself to the young, who necessarily has a thirst for things that are new, alive and contemporary. let them follow me on the paths of the future, trusting and ardent, where already my daring companions, the futurist poets and painters are preceding us, beautiful in their violence, audacious in Their revolution, luminous with inspiring genius" (Christine, Lawrence, Laura, 2009).

The Futurist musician made a revolutionary change in the music industry when he convinced young composers to create live musical pieces, fighting all the critics and the classical believes. They drove towards freedom and away from commercial, competition and academic environment. They let the sensibility, the feelings and the clarity move the composers and set their art free.

Futurist musician believed that the truth lays where we feel as a human being, therefore the artist should interpret and reflect the nature purely so he can humanize it. They thought that the maximum form is seen in a form of orchestral and vocals medium, or even in symphonic or opera form. They aimed towards pure symphonist, free forms, and what only mattered was the sense of balance and proportion (Lindenberger, 2007).

2.2.5 Sculpture

Sculpture was always rolled by the heritage of the past, the myths and the religion. The amazing extreme sculpture by Michael Angelo that captured the eyes of the public over time with its incredible reality capturing techniques, all of this standard believes were washed away by the futurists, they saw that the art of sculpture should break free, and the only way to do that is by renewing and remaking its essence, to water the routes with their new holy water, to reshape the old concepts of line and mass in space. They broke the rules that were drown by the academic concept of perfections and the nudes.

Futurist sculptures aimed to renew their self and rewrite the rules and break all the limits of the past, and considered any sculpture that have to impose a nude man or women to convey emotion, is a dead art. They looked for new sources of inspirations.

They saw that in order for the sculpture to live, we should allow it to extend in space, not considering that an object has to end were a new object had begun, it's all a whole formula that interacts with each other, to give us the movement, the unity and the formula of motion and change.

The futurist sculptures aimed to break free out of all the past chains and regulations, they wanted to achieve the same level of freedom that futurist musician and painters was able to get, they wanted for their forms to break free and concur space, they wanted their figures to breath and move in their still state, they aimed to bring life to their art works, to make them an influence and a reflection of the future life and the rapid change and development that is occurring in all fields of life, they wanted their works to become timeless and suitable for all times. One of the futurist sculptures has expressed his idea of it by saying “Impose? Let's turn everything upside down and proclaim the absolute and complete abolition of finite lines and the self-contained statue. Let's open up the figure and let it enclose the environment. We declare that the environment must form a part of the plastic whole, a world of its own, with its own laws: so that the pavement can jump up to your table, so that your head might be crossing the street while your lamp is twining a web of plaster rays from one house to the next.” (Christine, Lawrence, Laura , 2009).

One of the most beautiful and mesmerizing art work is, Unique Forms of Continuity in Space [Figure 2.3], by Umberto Boccioni 1913. It shows a powerful strong bodied figure marching

forward, a large strong legs moving in forward direction, as if it is fighting and facing a strong force like wind and speed, which is carving its figure, and its clearly transfers to the observer the feeling of power and resistance , the feeling of marching a head in a strong heavy mass, and it transfers the power of the invisible element that's reflecting the element of resistance which could be the power of wind (Gottesman, 2016).



Figure 2.3: (Umberto Boccioni, Unique Forms of Continuity in Space, 1913 (cast 1931), (.ngv.vic.gov.au)).

2.3 Interior Design

Due to NCIDQ the definition of interior design is: “Interior design encompasses the analysis, planning, design, documentation, and management of interior non-structural/non-seismic construction and alteration projects in compliance with applicable building design and construction, fire, life-safety, and energy codes, standards, regulations, and guidelines for the purpose of obtaining a building permit, as allowed by law. Qualified by means of education, experience, and examination, interior designers have a moral and ethical responsibility to protect consumers and occupants through the design of code-compliant, accessible, and inclusive interior environments that address well-being, while considering

the complex physical, mental, and emotional needs of people.” (Council for Interior Design Qualification, 2019).

Due to NCIDQ organization the main duties of an interior designer can be broke into 10 ten main categories. Such as:

1. Managing the project.
2. Defining the Goals of the project.
3. Collecting the necessary data.
4. Evaluating current conditions
5. Concept of the design
6. Selection of the element
7. Documentation
8. Pre-design and Post design services

And other duties like paper works contracts and such things.

This profession is specialized in analyzing the data of the interior to plan the perfect interior that suits the need of the use with granting the safety and main guidelines for humanity usage and everyday interacting with human use and to enhance the experience and to effect the life of the user in a positive long term way. (Hassanein, 2019)

Interior design is responsible for the design of the inside of the building, basing the design of the interior on the main design of the exterior. As well-known of the affection of the exterior on the interior and the affection of the interior on the exterior and how they are a unity that cannot be broke into pieces of separate things or element.

Interior designer is responsible for the determination of the interior space and its usage in the most convenient way.

2.3.1 Function

Interior design is combining science with aesthetic, is making knowledge and beauty come in one place to provide the best space to live, work and interact. Interior design is working with many aspects to ensure to provide the best interior to be in. interior designers function in many aspects such as:

1. Main Function of the interior: (Office, Residential, Hospital... etc.)
2. Safety
3. Space Requirements
4. Essential elements
5. Decorative elements
6. Color
7. Lighting
8. Materials

The interior designer starts by analyzing the interior from all its aspects, then determine where the problem and what is the main aim, then he starts doing sketches and basic analyzing on paper, and then he starts working with details till he achieves the desired end result (Lim, Stolterman, Jung, Donaldson, 2007).

Although when talking about interior design or design in general what comes into mind is making something beautiful, but it's not a complete definition if we want to define interior design from a scientific aspect. Interior designers' duties are:

1. analyze the interior space
2. knowing its main goal and function
3. Know the users and their back ground (analyzing the users)
4. Analyzing the surrounding environment
5. Analyzing the component
6. Choosing the best design style that reflects the exterior and has the best suit for the interior function
7. Deciding the elements of the interior design in that space.
8. Deciding the elements of the interior decoration.

So, the function of an interior is achieving and determining the best shape, form and design of the interior to achieve the purpose and aim use of the building in the most innovative, convenient way (Lim, et al, 2007).

2.3.2. Creativity / Esthetic / Form

An interior designer combine Art, Creativity and Esthetic while providing the best form that suits the function of the interior. Interior design does not work to only make the space beautiful; it works to make the space in the best form from shape, distribution and bringing it with the best result in all aspects of looks and work.

When we talk about creativity aspect in interior design what comes to mind is color and decorations, that is not completely correct. Creativity in interior design is making the interior in its best way to achieve the best and most appropriate experience for the user. Creativity in interior spaces come across the esthetic status, to have a beautiful interior with a worm distribution is to have an ugly harmful interior. But to have a beautiful interior with most appropriate function. Is to achieve the most creative interior (Ashby and Johnson, 2013).

We should not mix the aim of esthetic with the main purpose of interior design which is achieving the best interior to have an easy convenient experience for the user.

Creativity in interior design is to achieve the best solution in a difficult situation interior, or to achieve an eye-catching design that make head turns and gives an enjoyable experience.

Talking about form, we say that the form is basically the shape that defines the interior and its elements, it gives a basic guideline for the three-dimensional design that the interior will be designed on, including design elements such as color, line and lighting. So, without determining the basic form it is not possible to build an interior design.

We can combine form and shape in one category, because form includes the mass the volume the lines and their length, it also includes the effect we get from the presence and absence of light and shade. They can be created in one unite or individually. We can enhance these elements by adding color or texture or put them in specific order or place.

There are many types of form we will be mentioning of them:

2.3.2.1 Organic forms/shapes

Which are inspired from natural lines and shapes and can be found in mother nature without going under any human activity or manufacturing such as trees, tree leaves, waves, earth,

topography, and many other natural elements. Its recognized from curved lines and smooth shapes.

2.3.2.2 Geometric or Inorganic forms/shapes

These type of shapes/ forms or lines can be considered more man made, geometric based, which are inspired from non-living shapes like triangle, rectangle and other geometric shapes. It usually gives sharp edges and sharp pointing ends.

2.3.2.3 Open forms/shapes

These are the forms where we can see the inside of the form with the naked eye, in this case we can see the inside of the element or the interior from the outer shell of it.

2.3.2.3 Closed forms/shapes

These shapes tend to be enclosed on them self, we can only observe the outer shell of the form or element.

2.3.3 Structure

When talking about the structure of interior design, what comes to mind immediately is the structure of a building, the base, the columns, the metal bars, and so on. So when it comes to the structure of interior design we need to talk about the fundamentals elements the construct the interior with all its aspects like:

Walls, Ceiling, Flooring, Color, Lighting, Furniture, Decoration, Windows, Doors and materials (Ching and Binggeli, 2018).

The structure of the interior and the types and kinds of the structure elements is affected and chosen under the main desired design type, for example, the use of curved line in organic design, the use of natural light with big windows also in organic based design, the use of artificial light as a main light source and so on (Pullman and Gross 2004).

2.4 Interior Architecture Development from 20 Centuries to Contemporary

Over 100 one hundred years ago the profession of an interior designer came into as a separate profession from architecture, it came along the rose of the middle-class society (Anthony, 2001), and became very popular when the industrial revolution started in 1909, it came along

the start of the futurism art movement which in its rules and principles effected art in all its aspects, and one of these aspects was interior design (Poggioli, 1981).

Interior design was made to make the best choice of distribution for interior spaces to get the best use of the space with the best suitable elements.

We can see the beginning of interior design in ancient Egypt where they used decoration and fixed furniture with the use of animal skin in their interiors, later on we see more advanced forms of interior design in the Roman and Greek culture, where we see domed ceilings and huge decorated columns (Smardzewski, 2015).

Before the beginning of the 20th century interior design was a tool of decoration and beauty, after the beginning of the 20th century, interior design became more into function than looks. Because of having more tools and life essential elements in our daily lives like the stove, washing machines, televisions and many other examples, now the rule of the interior designer was to make the space of the interior in its best form to suit the life of the user in the most convenient (Smardzewski, 2015).

We can break interior design into different styles into basic categories since 1900 till our present time:

1. **Modern style design from 1918 – 1950:**
2. **Bauhaus 1920 – 1934:** which was originated in Germany by Walter Bauhaus and started a whole new school of design which celebrated minimal thinking and minimal use of ornamentation in interior spaces with the tendency of having open spaces and leaving the use of partitions and walls to the minimum needed amount. (Brejzek & Mayer, 2019)
3. **Country style design 1920- 1970:** which uplifted the style of warehouse and farmhouse to a whole new level of aesthetic and modernity with the touch of vintage.
4. **Art Deco 1920 to 1960:** which presents many styles and categories of design styles and features like:
 1. cubism

2. constructionism
3. Modernism
4. Art Nouveau
5. And the most important, Futurism

We can notice the usage and choice of material usage in Art deco styles tends to go for sleek and neat, shiny and reflective materials. And it drives away from detailed materials. Metal materials like silver, gold, chrome and others, and glass, they were widely used in Art deco styles (Zarembo, 2018).

Post-World War II and space age inspired designs: some consider this period of time is the base and spread of futurism thoughts and ideas, it started after the WWII with the start of the industrial revolution, so with the beginning of futurism movement, so it is basically the beginning employment of futurism ideas.

5. **Googie Architecture:** which is a minor style inspired by the thought of outer space and space ships and it rounded shape and edge (Bryant-Mole, 2018).
6. **Archigram :** after the end of WWII the movement of neo- futuristic has started, which includes numerous famous designers, including the great Zaha Hadid, Frank O Gehry, Frank Lloyd Write and Santiago Calatrava and many others, but these have the most noticed futuristic based effect and inspiration in their works of design (Lelieveld et al., 2007).
7. **Digital Revolution:** in this period of time digital design was starting to emerge, and later on designing using the new technology like computers became a most, to visualize the design and to stimulate it. (Smith, 2013)
8. **Eco-Friendly and sustainable Designs:** after 1950 scientist started to put a shade on the necessary of preserving the nature and green spaces and elements and not losing it to buildings and enclosed spaces, and how these buildings could affect the eco system in a bad way which will have major bad effects on our lives later on. So, designers and architectures started to combine nature with their designs as a main element.
(Sia & Jose, 2019)

9. Super-tall Skyscrapers: although the first skyscraper was designed and structured at the end of 19th century in Chicago, but we can see the vision of them in the Futurism movement from the Great Futuristic architect Antonio Sant'Elia, who he designed and had his own vision of the new city of the future where skyscrapers and high ways are everywhere (Li et al., 2018).

2.5. Interior Design Elements

They are the tools which the designer use to form and construct the design of an interior space, "Physical Elements of Interior space: These elements are considered as the designer's tools to formulate & shape any space into" (Francis DK. Ching , 1983). These elements can be shortened into five basic elements which are:

2.5.1 Architectural Elements of an interior space

They are the elements that shape the interiors' shell, in another word, they are the elements that are separating the interior space from outer surrounding environment. Such as:

1. Walls
2. Windows
3. Doors
4. Floor
5. Ceiling

2.5.2 Structural Elements of an interior space

They are the elements which form the structure of the design of the interior space, they are changeable due to the newest technologies, they affect the design style and define it. We can say that they are the structural element of the design strategy and style, they are for example:

1. Horizontal lines
2. Vertical lines
3. Curved lines
4. Geometrical lines
5. Structural surfaces

(Mohamed Ali Zid, 2016)

2.5.3 Transition Elements of an interior space

These are the element and parts of the design which allows the user to go from one space to another without having any other functional use despite transition, we could use them as a aesthetic element as well when designed in a creative way, like:

1. Stairs
2. Hallways

And also, windows and doors could be considered as transition elements beside being an architectural element (Mandala, 2020).

2.5.4 Furniture and decorative elements of an interior space

The choice and the distribution of the furniture in space has a major role in the process of the design of the interior, also the choice of decorative objects and elements has a huge part in defining and the creation of the desired atmosphere in the interior space, these elements include:

1. Furniture in general
2. Decorative objects like paintings, chandeliers, sculpture, ... etc. (Heuberger & Special, 1997)

2.5.5 Technical Systems of the interior space

These include all the electromechanical systems and devises, which are chosen, used and distribute in the interior space to provide comfort for the user of the space and to give it the best experience in the most convenient way. These elements are chosen based on the main function of the interior space and the needs of its users, such as:

1. Elevators
2. Screens
3. Interactive surfaces
4. Electric stairs
5. Air conditioning systems
6. Heating systems

(Bittencourt et al., 2015)

2.6 Structural System

The structure of the interior is the basic elements that form the interior space and shape its components, “Structure is a basic component in the architectural space Components, as it is primarily.

responsible for the configuration of the spatial content to perform the required function on strength & economic basis” (Omar Ben Al-Hashemy,2000).

2.6.1 Materials

They are the physical components of the interior structure, they have specific chemical and physical properties that give them their suitability for the usage in particular spaces and specific parts of the interior spaces, like:

1. Metals
2. Wood
3. Glass
4. Paint
5. Fibers

Technology has a major contribution in the field of materials, the new technology and innovation had given us an amazing new approach of materials which was called “Smart Materials” or Nano technology materials, these elements have superior specification and ultimate characteristics, like translucent wood, changeable in translucently glass. Interactive surfaces which combine Nano technology with electronica technology and many other examples (Newswire, 2019).

2.6.2 Structure methods

They are the way the design or the space is constructed, how the shapes and designs are formed and put in action for construction. Technology and machines have a huge rule in the evolution of the structure methods whether it was actual structure or computer-based 3D structure. construction methods affect all aspects of structure, from building to cladding to the implementation of materials and forming the interior in the desired way and materials (van Hoolst et al., 2019).

CHAPTER 3

CONCEPTS OF FUTURISTIC MOVEMENT IN 20TH CENTURY AND CONTEMPORARY TIME

3.1 Overview

The effects and vision of futurism had its touch all over our contemporary design concepts in the field of architecture and interior design. When we say a futuristic design in our current time, we refer to the design that contains a new form or shape, a sense of motion or speed or directional movement, the use of technology or innovative science inventions in it. What we outlook is that all of the previous giving are the main structure of the futurism manifesto which was all about the motion and dynamism, the youth and the parrying of the past principles.

When we observe the tendencies of the contemporary architectural and interior design styles and vision, we find the soul of the futurism movement living in many of them, giving them the soul to not be a static figure, to be timeless and sensual.

The soul of futurism was reflected clearly and non-doubtable in 3 main types of contemporary design style which are : **Kinetic**, with all its motion and dynamism and technological use, **Parametric**, with its 2 types that reflects non-stop motion with sense of continuity and expanding in space, **Deconstructionism**, with its strong bold lines and the sense of breaking the unity of a form into pieces with each piece flying into a different direction, and **Interactive**, where the sense of motion did not stop at the use of forms, lines and shapes, but also the use of new technology where human became able to interact with the design elements.

The main concept of the Futurist movement that emerged in the first quarter of the 20th century was to glorify and focus on the new technology and the industrial revolution era and to emphasize dynamism, movement, mechanism, free forms, energy, bold lines and speed. Although the current has existed for a short time, its effects on the next generations have been quite extensive and permanent. It is possible to observe these effects in designers who showed different trends, orientations or individual attitudes throughout the century. In this

section, this issue is discussed in order to make the analysis of the data to be used in the result more comprehensive and consistent.

3.2 Kinetic Architecture

This movement included oval lines, streamlining shapes and lines, sharp edges , triangles and unique angles, it drove away from 90 degrees, orthogonal and perpendicular shapes and designs. The approach of futurism took from the environment the structural elements and emphasizes it, to show the impression of continuity of the shapes structure within its dynamic forms. Where in futurism was all about movement and worshipping the new age of technology, machine, youth and motion even if this movement was only as an illusion, also kinetic arts and design were working in the same vision and direction of achieving continues sense of motion whether it was an actual one or an illusion one. In kinetics the sense of motion, dynamism and machine with the sustainability were a most and a main focal point or we can say they were considered as a main concept and aim of the whole design (Hassanein, 2019).

In the building of “Al Bahr Towers” which are a group of buildings located in Abu Dhabi in the UAE (United Arab Emirates), they were designed by, AHR which was called before” Aedas UK”, the design of the towers finished by the year of 2009 and the construction started 2009 and finished by the year of 2012, the façade of the towers go by a kinetic concept which took the Islamic feature “al-mashrabiya” to control the intensity and amount of the entered sunlight into the the interior space, due to the strong intensity of the sun rays in the UAE and overall golf country. The design main aim was to achieve a moving element that works and move in a certain dynamism and be controlled by a machine to open and close the elements of the façade design, but the control is done by the mechanism of the design itself, where there are sensors to detect sharp intense sunlight and the designed machine dynamism work to close the blades into the closed shape, and when the sun intensity is lower and the light is more faded the blades by the same dynamism opens to allow the sunlight to enter into the interior spaces of the towers. So we can find how the futurist effects are seen in this field of design in the presence of : actual movement, dynamism, machine reliability, and the use of technology by using the sensors. (Figure 3.1).

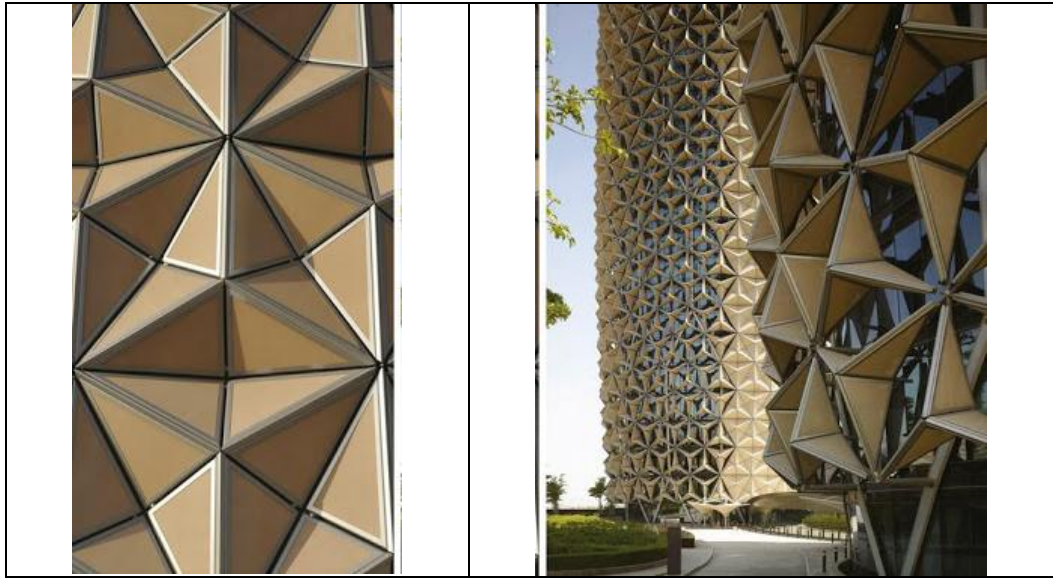


Figure 3.1: Al Bahr Towers (archdaily.com)

3.3. Parametric Style

Although the inspiration of natural-based algorithm lines were found in early 20th century, but later on in the 80s this style of design had a major leap towards a new strong direction, and the evolution in technical and technological field helped this kind of designs to be and to see light and to start a string non-stop evolving style.

The main characteristics of the parametric designs are continuous flexible lines and shapes, the sense of fluidity in space, the sense of motion seamlessly, the sense of continuity and none stop progress, the same sense we get by water movement. In addition, we find the search of youth, technology and dynamism in the parametric designs in the search of sustainability and suitably with the cotemporary modern world. Parametric design took the minds of designers in all fields to a whole new level of none stop line or shape, just as same as futurism, where the sculpture was sculpted as none stop extending figures in space (Marta Pakowska, 2014).

We find it the in common points between parametric and futurism in the aspects of extending in space, sense of movement, fluidly / air based movement, youth, technology and dynamism.

We can recognize and categorize Parametric design into two basic categories:

3.3.1 Curved / Free Form

Curved architecture is a tendency of parametric style, where a group of engineer sciences researches in the university of Zhejiang, in their research (Research on curves parametric design model) they clarified and stated that: “As an extension to parametric design based on points, lines and circles, an approach to parametric design is presented, which are plane curves based. The new concepts of curves parametric design, curves dimension and curves' control polygon analogy degree are given. The inner relationships among the modules of the curves parametric design are described. Some curve expressions are proposed which are suitable for variation geometry, including basic line element, conic line of cut and basic modeling curve etc.” (Zhejiang Daxue Xuebao, Gongxue Ban, 2002).



In that order we find that curved / free form is a basic approach or branch or as they called it “an extension” of parametric design where the design elements are consisting of a form of free fluidic shapes and lines which is influenced and inspired by natural streamlining of natural elements like water movement, wind blowing, sand free forms, mountains continuity, land and water space lines on earth and demographic lines of land. This type of architecture leaves out orientations and focuses on minimalism, which gives its structure a sleek continuity and neat finish. The architecture of Curved or free form is usually characterized by a large scaled single free line shape, it does not prefer multiple lines, just a single solid strong form. This created effect of motion, so it has influences of Futurism (Marta Pakowska, 2014).

As a perfect example of free form architecture, we have “Curve Appeal” a design by Wimberly, 7/Allison Architecture studio and, Tong & Goo, which are AKA. (WATG). The designers announced that this design would be “the world's first freeform 3D-printed house”. The design is a design of a house, which is arch-based; they won the first prize of “The Free Form Design Challenge” in 2016 over this house design.

This design gives the sensation of strong confident movement in curved lines and in turning phases and bases, the design of the interior used the element of repeated lines to continue the motion concept inside out. We find the concepts of futurism in this building in the matter of motion, continuity, youth, dynamism, and fluidity in space.

Other existing examples of curved/ free form are: Fornebubanen Metro Line, Norway and The Qatar FIFA World Cup Stadium, Qatar. These examples are placed in Table 3.1.

Table 3.1: Curved / Free Form examples

Designs	Images
<p>Fornebubanen Metro Line, Norway Zaha-hadid.com</p>	
<p>(FIFA World Cup Stadium, Qatar) Zaha-hadid.com</p>	

3.3.2 Organic Architecture

What makes organic architecture different from free form or curved architecture is that first of all organic architecture can have details and orientations but sleek minimal orientations, its inspired from all natural forms so it may have small multiple lines and shapes, it also can contain shapes within shapes, it may mimic natural shapes like beehives but in architectural and streamlining way.

Frank Lloyd Wright is the first to give this name to this style of architecture, it was a life style for him, he considered nature as a reflection of God. According to Frank Lloyd Wright, “Organic architecture refers to shapes or lines or function reflects, imitate or copy nature. We can consider organic architecture also as a form of eco-friendly and sustainable designs” (Frank Lloyd Wright, 1953).

He aimed and worked to bring architecture and nature as close as possible. He used asymmetrical lines, shapes and structures and natural material this unique combination gave

organic architecture its characteristics. He saw architecture and nature as a complete unit that cannot be separated.

WE can see the characteristics of futurism in the organic architecture in the form of : dynamism, youth, sustainability and motion where the organic design is inspired from nature and nature is always in motion whether it is forward or backward.

In the building of Norman Lykes House, Phoenix / USA which was designed by the organic architecture founder, we can see clearly the dynamism of the lines forming the structure and the overall mass of the house, which is taken from the forms of the nature and its seamless curved lines, we can see the house mail walls have oriented windows which diverse it from the curved architecture. We can also see the sense of continuity and moving forward in fluidity in the main line forming the ceiling and overall structure of the house design.

This remarkable one of the most famous and well-known buildings designed by Wright. This landmark building in located in Manhattan, New York, USA. It was designed in 1959. It was considered as a heritage site by the UNISCO.

This building gives the illusion of a wrapped ribbon or a beehive or an insect shield. It has a spiral ramp that moves up towards a skylight. It gives the feeling of going up none ending.

The third example we have is the haydar Aliyev done by Zaha Hadid, this remarkable building was designed by Zaha and but in construction between the year of 2007 and 2013 in Baku, Azerbaijan.

This building has a liquid form that reflects the lines of earth, topography and reflects the nature around it, just as if it was taken from the ground and lifted up with some routs still pulling the structure downwards.

"Its fluid form emerges from the folds of the natural topography of the landscape and envelops the different functions of the center" (Peter Cook, 2013).

And just as the most of her designs, the building is headed up towards the sky. It gives the feeling of motion, the movement from the ground to the high sky with the element of resistance that is pulling the building back to the ground or sticking it down at one point.

This building somehow gives the feeling of dancing in space by following the movement of the line starting from one point and following by the other till the end.

This outstanding building was built from reinforced concrete and glass, which takes us back to the point of relying on the nature of the material instead of covering it up with orientations or other materials.

This building reflects perfectly the style of curved architecture that Zaha works with and has nearly invented and surely developed. The large scaled curve, the continuous lines, the absolute lack of orientation elements and small details like small windows and openings and so on.

When we talk about the interior of the center, we can easily connect the design of the interior to the design of the exterior, because always these two have reflected on each other. We can see that clearly in all Zaha designs, they are never disconnected, they are always emerging from each other just as a complete unity.

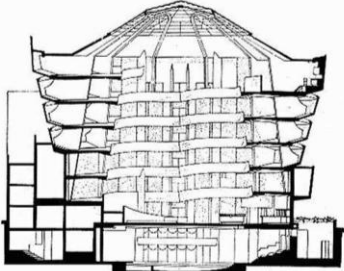







In the interior of Heydar Aliyev Center, we can see the liquid forms shaping the space, just like flying lines along the walls towards the roof flying in space creating the sense of motion, the sense of liquid spreading.

The large continuous curves concur the whole space of the interior, just like a wave in the sea. Continuous, strong, and enormous.

The sense of continuity and motion is visibly clear, the line in moving in one direction non-stop, the use of light enhanced that sense and gives it a further dimension of unfolding forward. The whole space gives the illusion of being underwater and flooding in water and just being in a unity with it (Marta Pakowska, 2014).

Some of other famous designs is: Guggenheim Museum, New York, USA, and Dongdaemun Design Park, Seoul, and Heydar Aliyev Center in Baku, Azerbaijan (Table 3.2):

Table 3.2: Organic Architecture examples

Designs	Photo #1	Photo #2
<p>Guggenheim Museum, New York franklloydwright.org</p>		
<p>Norman Lykes House, Phoenix / USA franklloydwright.org</p>		
<p>Dongdaemun Design Park, Zaha Hadid, Seoul Zaha-hadid.com</p>		
<p>Heydar Aliyev Center in Baku, Azerbaijan Zaha-hadid.com</p>		

3.4 Deconstructionism

Deconstruction-means to break down or to demolish a constructed structure, it work with the manipulation of surfaces and distort and fragmented shapes, it redefines forms and create complexity. In simple word we can define deconstructionism as breaking the whole into pieces, disassembling the shape and reassembling it.

What distinguishes deconstructionism from free form or organic architecture is its sharp ends and angles, its defined shapes with cut edge ends, it does not have soft or curved ends, its shapes are constructed just as if it was a glass that was broken into pieces, even curved shapes have sharp cut edges and sharp angles (Sirkka Heinonen*, Matti Minkkinen, 2016).

When we talk about deconstructionism the first architect to come in mind is Frank Gehry and the Walt Disney concert hall in Los Angeles, in California, the Zaha Hadid and her iconic building, Vitra Fire Station Weil am Rhein, Germany.

First starting with the Walt Disney concert hall in Los Angeles, in California, this building was designed by Frank O Gehry at the year of 1999 and was built between the year of 1999 and 2003. The building shows deconstructionism at its finest. The scattered look shapes and elements, it shows the influence of futurism clearly in the sense of motion that we get when we look at it, it gives the sense of air scattering papers in space in a spiral way motion. The curved edges with sharp point ends, and the use of metal and industrial elements like aluminum and glass. This building reminds us strongly with the sense we get from futuristic sculpture where sculptures always are fighting gravity of air force.

The second example is one of her early designs that reflected the concept of futurism in the style of deconstructionism, Vitra Fire Station in Weil am Rhein, Germany, which she designed and was put in construction between the year of 1989 and 1993.

This sharp design building reflects the early bold start of Zaha Hadid style, it reflects how strong and free minded she was, she designed this building which later was considered as an iconic building of hers because of its out of time design.



We can notice the boldness in that sharp pointed shape which she used at the fire car gate, which gives the feeling that is headed to the sky nonstop, like if it was launching toward it, which reflects power, just as the car reflects in real life, power, strength, and majestic, the use of light in particular places to give the feeling of something out of earth, not a common building constructed by humans, the use of concrete and metal, two of the most strong construction materials, without covering them up under any other kind to hide them.





The complete combination of the building reflects nothing but power and motion in all directions. When seen from above we see how it gives the feeling that the building is going and moving towards all directions in a strong confident motion, just like fire cars, they head strongly in fast base motion in all directions to help and save. The interior of this building is nothing less powerful and strong impressionist type than the exterior, it is a whole complete structure where the outside is reflected perfectly on the inside and emerged from it. The interior has the same characteristics as the exterior with the same vibes.

The interior of this building was designed to suite its use for a concert Hall. So, the sound alchemy and physic were studied firmly and widely and was took in all consideration while designing the shape and elements of the interior.

Another example is embodied in the building Louis Vuitton Foundation, Paris was designed by Gehry at the year of 2006 in Paris, France. This building was designed in a fluidly form, implies the feeling of motion in space like objects are flooding or moving in air-water space in circular motion. Which reminds us of futuristic sculptures. The interior of the building reflects the exterior concept in a great way, due to the reflection that exterior have on interiors and vice versa. We can see how the shades of the shapes shade on a great combination shapes and lines, and gives the perfect shield over the terrace of the building and balconies. Selected examples are seen in Table 3.3.

Table 3.3: Deconstructionism examples.

Designs and location	Photo #1	Photo #2
Walt Disney concert hall in Los Angeles, in California (Frank Gehry) archdaily.com		

<p>Vitra Fire Station in Weil am Rhein (Zaha Hadid) Zaha-hadid.com</p>		
<p>Louis Vuitton Foundation, Paris archdaily.com</p>		



3.5 Interactive Architecture

It also called as digital architecture, its where the designer uses the latest technology as a main part of the design, it employees the newest invention in the field of technology as screen, Nano technologies, materials, and many others examples. This field of architecture aims to create an interactive environment between the users and the space. It creates a relation between factors, system and individuals. This type of architecture allows technical electronic waves to flow into space and create a futurist feeling and will be reflecting everyday life in the future where all the elements and component of the design will be interacting with the user of the space.

We can see the vision and aims of the futurism in all the characteristic of the Interactive architecture, like: technology, mechanism, motion, interacting, sustainability, youth and power (Hassanein, 2019).

One of the most famous building that reflects interactive architecture is Beijing’s National aquatics center by Jennifer wen ma + Zhen Jiawei as seen in Table 3.4.

Table 3.4: Interactive Architecture examples

Design	Photo #1	Photo #2
Beijing's National Aquatics Center interactivearchitecture.org		

CHAPTER 4

METHODOLOGY

4.1 Research Design

This study intended to understand the effect of the Futurist Movement on Contemporary Interior Design in order to contribute to the literature. There are many Futurist-influenced designs made in the 20th century. In this study, it is aimed to understand its effect on contemporary interiors. For this purpose, first, a literature review was made and data was obtained in order to determine the Futurism movement and its effects on design and interior space in the 20th century and today.

When observing art works from the futurism period, we rely on how this movement still have a print on our modern and contemporary design in our present time, some of the art works actually are master inspiration for some amazing designs in the field of architecture and interior design. Some of these art works, and others are sculptures, and even sketches, futurism era had its effects all over our present time designs and creative thinking, the guidelines of futurism are still taking in considerations when it comes to creativity and out of the box thinking. When a designer wants to make something out of time, they still follow the principles of futurism, the principles which works for all time and all places, principles which are immortal and timeless. The concepts of Futurism power, youth, motion, machine, strength, movement, technology, dynamism, speed, energy, vitality and change.

Many architects and interior designers of our present time, had been inspired by a work of art work of the futurism art movement, which affected the design in a major positive way, and made their work of art looks like it is an art work of the futurism had come to life. A painting turned into a fire station or a museum, a sculpture had turned into a fashion house or a concert hall.

In this section, nine cases about how some works of art of the futurism movement effect on contemporary interior designs are examined in conceptual framework.

4.2 Research Methodology

This research followed a qualitative approach, that relied on intensive research from the futurism literature, that is extracted from multiple internet and journal articles sources, starting first by setting up a proper understanding of the futurism that sets up a number of criteria that has been used in the qualitative analysis of the cases. All the analysis applied has focused on the interior aspect of all cases, and has compared them with existing artwork, whether it is a painting or a sculpture. This approach will help show the effects of futurism in our built environment especially the interior spaces, and highlight how the elements of futurism can be seen in not just buildings but also in pavilions, market places, museums, and even cultural places, while analyzing the different ways futurism techniques has been employed in sculptures and architecture, and the evolution of futurism into the interior spaces. The cases are chosen based on their different interpretation of futurism within their interior space, as well as the different types of spaces that employed futuristic styles in their design, to show the flexibility of futurism in different environments and functions. The next stage involves the side-by-side comparison of the cases, alongside a similar sculpture or a painting that holds equal features with the case, both being inspired by the futuristic movement, then number of similarities will be listed shedding light on the influence of futurism from sculptures and paintings affected the interior spaces.

4.3 Cases Study

1. Walt Disney Concert Hall, by Frank O Gehry ,1999 - 2003

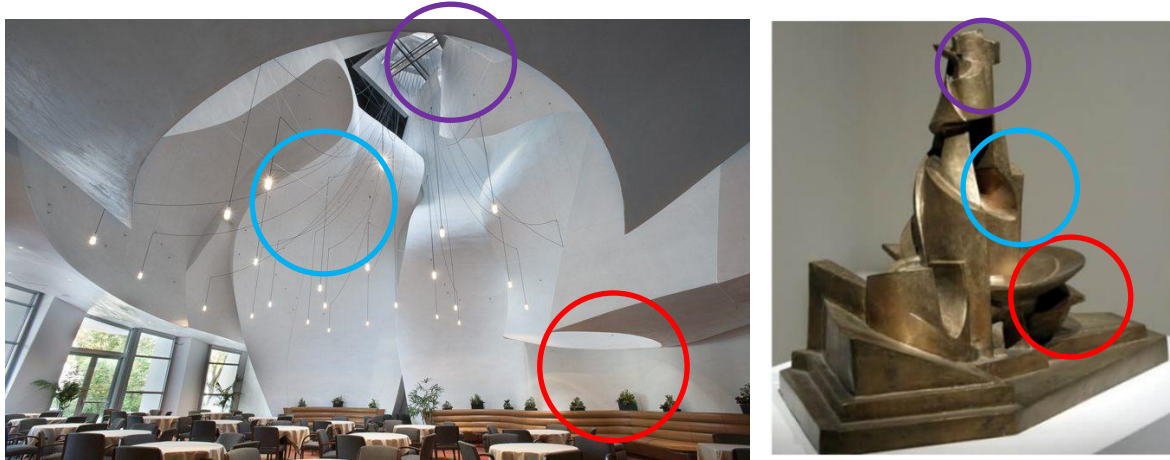


Figure 4.1: Interior of Walt Disney Concert Hall and Umberto Boccioni's Sculpture Development of a Bottle in Space.

Walt Disney concert hall was designed by Frank O Gehry in the year of 1999 and was finished constructing by the year of 2003, it was a metal structured building in the city of Los Angeles in the state of California in the United States of America, meanwhile we have Umberto Boccioni's Sculpture "Development of a Bottle in Space" which he sculpted between the year of 1912 and 1913 in Italy (Toyota et al., 2020).

By studying and analyzing these two works of art we find nine obvious similarities that catch our eyes instantly (Figure 4.1, 4.2, 4.3):

1. First of all, a general observation can be deduced based on how this building was inspired from this sculpture by seeing that most of the elements of the sculpture is found in major points within the building structure, from its curvilinear nature and its deconstructivity approach.
2. Both designs possess a number of rounded edged shapes most prominently seen in the lower right corner of the sculpture that can also be observed in the building in some places across the whole composition.

3. The designs also has long-curved shapes present at the lower left angel of the sculpture that is also found also in the lower parts of the ceiling matching the properties of the sculpture.

4. Moreover, it can be seen that there are sharp pointed shapes at several parts within the layout, linking between curved shapes and sharp edges, showing an influence of motion while evoking thought, as shown in the sculpture.

5. Also the it can be observed that the highest most part of the architectural design, contains similar characteristics as in the sculpture, that both acts as a perspective changing elements, while also guiding the eye to a deeper endless path that evokes motion, and shows flow.

6. Another common element that can be observed and cross compared between both cases are the all over use of the same material, where the inner material of the court is fully white, and the exterior is fully metallic, and sculpture is fully painted in metallic bronze color.

Where in the aspect of the design of the interior, we see no difference or other concept, what is seen clearly is the obvious reflection that the design of the exterior has on the interior of the museum which is futuristic based also.



Figure 4.2: Founders Hall

We can see how the design of the interior of the founder's hall is also based on the illusion of movement of an object -which could refer to a fabric or any other flyable or have fluid movement material such as paper, water or sand - in space in fluidic form and seamlessly. The design of this majestic Hall gave us a holly sensation of a great form of object is purring downwards in a holistic way forming the main illustration creating the design of the interior of the hall.



Figure 4.3: Concert Hall

The design of this space ceiling gives us an unquestionable sense of air in space, the sense of flying object who hovers over the entire hall gives us the sensation of motion a continuous motion but as an illusion, the way these objects ordered in space, the use of light from both the windows and the artificial light and most of all the way the objects were designed as wrinkled objects.

2. The Dominion Office Building in Moscow, Russia by Zaha Hadid , 2012-2015

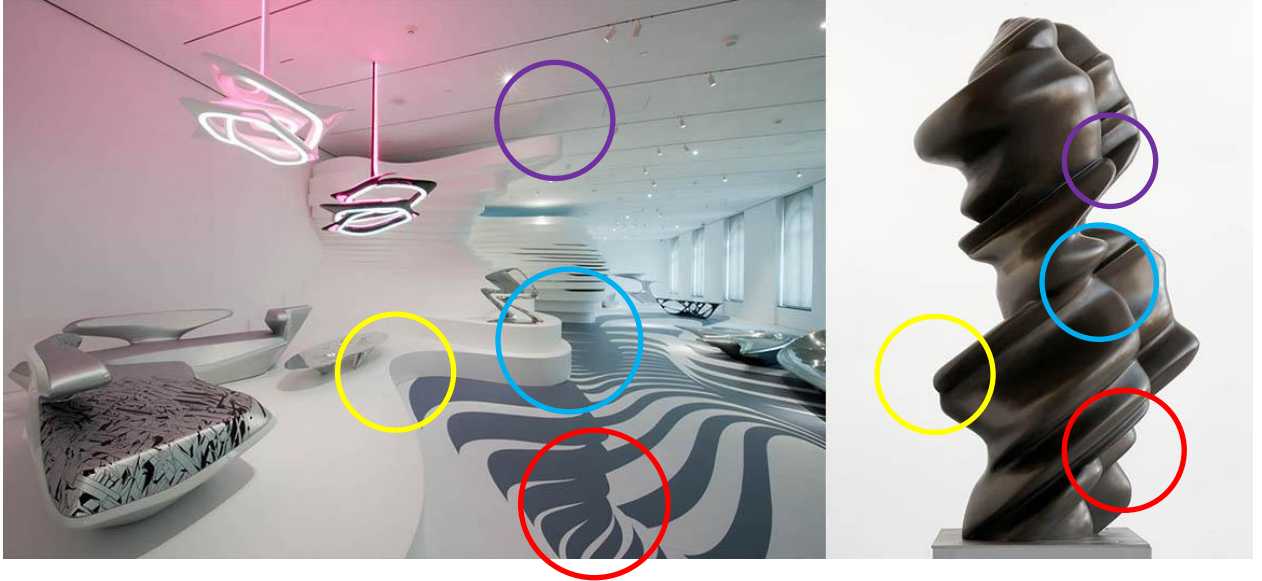


Figure 4.4: Dominion Office Building in Moscow and Good face sculpture.

On the left we have the Dominion Office Building in Moscow, Russia which was designed by Zaha Hadid for the federation of Russia in the year of 2012 and was done constructed by the year of 2015. On the right we have the Good Face sculpture which was designed in futuristic style by the artist Tony Cragg in the year of 2009.

These two-art works gives us the same vibes and the same overall concept of moving waves in space that gives the feeling of fluidly and continuity in space, which is a concept of futurism.

By observing these two works of art we can notice four main similarities which makes the interior feels like its inspired by the sculpture and the futurist vision and concept (Figure 4.4):

1. first of all, we notice the shapes and type of the curves in the interior space and how they are drawn in repetitive way in the same curved order, which we see clearly in the sculpture in many parts of it.
2. then we see the location and shape of the first main curve in the interior space and its directions, which we see also in the sculpture in the same direction and angle and in the same order of being a main curve rather than an secondary or repetitive curve.

3. after that our eye catch the second main curve in the interior space which is located and directed and have the same curve angles of the second main curve in the sculpture.
4. then we see the third main curve in a main element in the design of the interior space located and has the same shape, direction and thickness as the third main curve found in the sculpture.
5. we can see clearly how these two works of art have the same vibes and over all feeling in construction and composition, and how they both reflect and work by the concept and vision of futurism.

3. Changsha Meixihu International Culture And Art Centre By Zaha Hadid , 2012-2019

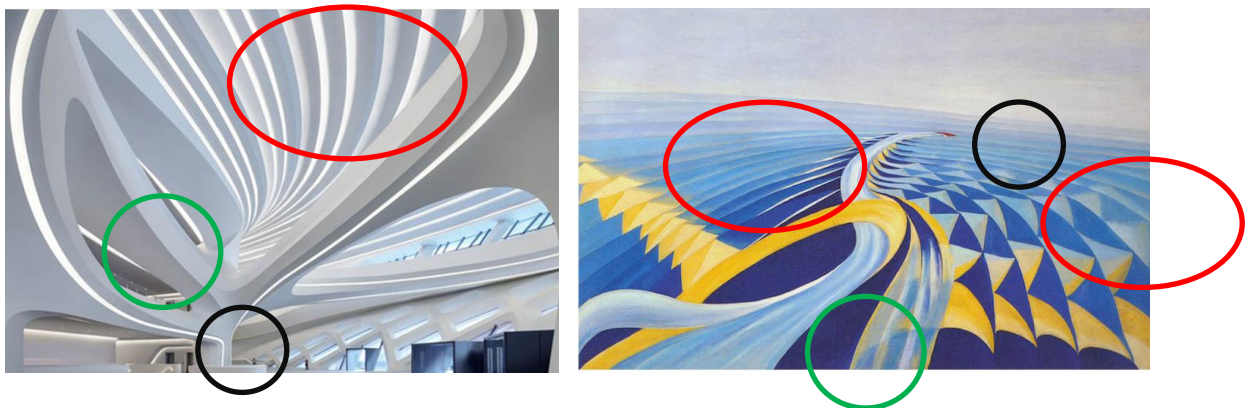


Figure 4.5: Changsha Meixihu International Culture and Art Centre and Speeding motorboat painting by the artist Benedetta Cappa.

On the top we have the Speeding motorboat painting by the artist Benedetta Cappa in futurism style the year of 1923. .(Kofler, 2021) Which shows a speeding motorboat breaking the water surface and creating continuous repetitive waves on both sides of the boat which gives us the Illusion and sense of the boat motion and speed.

on the bottom we have the Changsha Meixihu International Culture and Art Centre which was designed by futuristic concept and vision by the famous architect Zaha Hadid in the year of 2012 and was done constructed by the year of 2019. The design of the interior space gives

us the same vibes, concept and composition same as in the painting, both of them have that sense of motion and continuous fluidly in space, which is a concept of futurism.

By observing and studying the elements of these two works of art we can notice three main similarity points (Figure 4.5):

1. first of all we notice how the roof elements in the design of the interior space have the same effect of disturbed water surface in the same repetitive and direction concept. Just as same as in the painting. (Red Circles)

2. secondly, we see a major white cord moving in the roof space of the interior creating main elements and the repetitive lines which create the secondary elements, we can see that clearly in the painting where the path of the motorboat creates a main white route in water, and the water surface distribution have the secondary repetitive lines (the green circle)

3. third, we notice how the cords of the roof of the design of the interior space have a main starting point which after in diverse into many lines, we can see that clearly in the painting where the boat and its bath are the main starting point of the whole movement. (The black circle).

4. Galaxy SOHO by Zaha Hadid, Beijing, China, 2009 – 2012



Figure 4.6: Galaxy building and Primavera Umbria a painting by Gerardo Dottori.

On the left we have Soho Galaxy building, which is an urban complex building in Beijing, China, designed by the architect Zaha Hadid in the year of 2009 and was done construction

by the year of 2012, this building was one of two building designed by the famous architect Zaha Hadid (Troiani, 2019).

On the right we have Primavera Umbria a painting which was painted in the year of 1923 by Gerardo Dottori, who is an Italian futuristic painter.

When examining and observing many futuristic art works from the futurism art movement we notice many similarities between them and many works of arts in many fields such as architecture, sculpture, graphic design, industrial design and interior design. These similarities could be in color, composition, concept, overall sensation.

In these two artworks we can find four points of similarities which are (Figure 4.6):

1. We find that the main composition of the painting which is a centered circular shape is the main element of the design of the ceiling of the interior of the Soho Galaxy complex building. (The yellow circle)

2. secondly the multiple repeated circular lines that reflect motion inwards in the Primavera Painting in also found in the design of the interior of the Soho building which was used in repeating and shaping the floors which overview the interior hall. (The black circle).

3. lastly but least the primer lines which are forming the main circle in the painting which are also repeated in order to reflect and give the sense of moving inwards in fast smooth way, are also found in the composition of the interior of Soho where they are turning and curving to form the whole structure of the middle circle with the repeated floors. (The red circle).

At last, we can see clearly how the whole composition of the painting elements and the overall sensation can be found clearly and in an obvious way in the structure and in the whole formation of the interior of the Soho Galaxy urban complex building.

5. The Markthal design by MVRDV design office, in Netherlands, Rotterdam, 2014

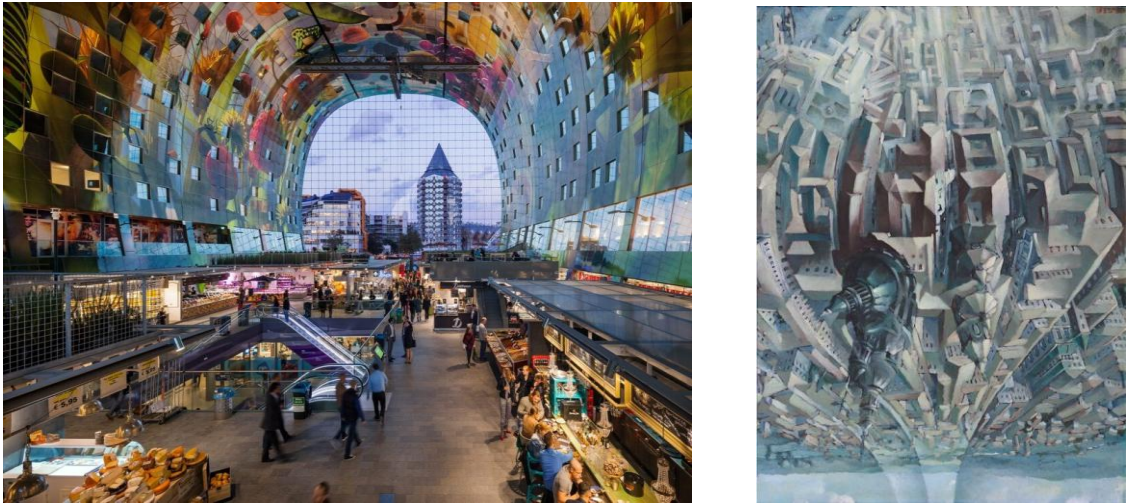


Figure 4.7: The Markthal design by MVRDV design office, in Netherlands, Painting done by the Italian futurist artist Tullio Crali.

On the left, we have the Markthal building that presents one of the most exciting effect of futurism on a contemporary built environment, which is the motion effect that is achieved by the giant cover of the central hall at a height of 40 m tall, and covers around 11,000-meter square in size. This mural is covered by a giant painting inspired image, from the 17th century Dutch still paintings, specifically ones by Arno Coenen and Iris Roskam (Knikker, 2019).

One the right, we have a painting done by the Italian futurist artist Tullio Crali who's work follows the late futurism principles that compose the scenery of flight and aerial vision to some of the earlier notions of futurism which are the feeling of motion and varying perspective that changes based on the viewer's position.

When a side-by-side comparison is displayed we can observe some of the common element of futurism in the Markthal building and the painting (Figure 4.7):

1. First it can be noticed that the sense of motion that exist in both cases reflect the sense of movement, and guides the eye to the furthest point, as shown by the tunnel effect in the Markthal building and in the painting, we can see the two depths of fields created in the painting on the upper and lower ends.

2. The Second key element can be seen in the varying perspectives created by artworks, as the building created a mural cover where a painting is revolving around the ceiling give a skewed view of the art shown on it, and the other painting is showing the same effect but as a result of the aerial vision and the wide perspective it provides.

6. Expo 2010 Danish Pavilion by BIG design office in Shanghai, China, 2010.

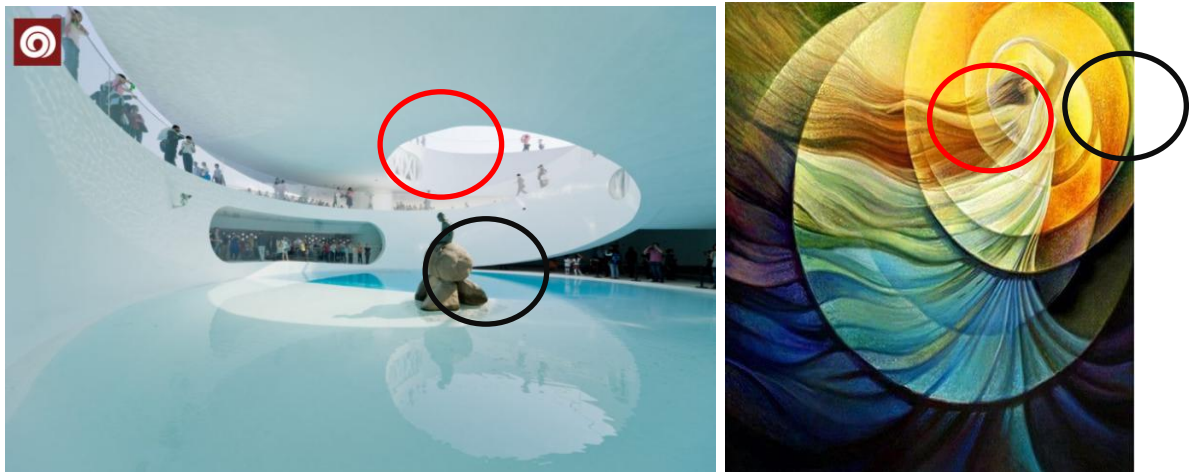


Figure 4.8: 2010 Danish Pavilion by BIG design and “Joy Vibrations “by Freydoon Rassouli

The left image shows the Danish pavilion erected in china to reflect a sense of Danish culture and lifestyle embodied in the ecological blend between nature and the urban environment, shown in the spiraling path from the lower level all the way to the roof, transporting pedestrians and cyclist from one level to the other while centering the focal point on the heart of the pavilion, which is the little mermaid that was originally located in the sea of Shanghai (Halskov & Ebsen, 2013).

On the right side, the figure shows the “Joy Vibrations “by Freydoon Rassouli

An Iranian artist who was born in Isfahan in 1949, the painting features a woman dancing in joy in a holistic circle of light, sky and earth.

A side-by-side comparison presents some common characteristics identifiable in the futuristic style (Figure 4.8):

1. First the sense of motion embodied in the painting, shown in the ladies dancing is reflected in the building design in the form of flowing lines that creates a flow of movement between different levels.

2. Secondly the painting presents a radial pattern that shows a ripple outward from the subject's face, that architecturally in the building design is shown as an inspiration for the form of the space as it creates a 3d ripple pattern surrounding the mermaid which acts as a subject in this case, and creates this form that traverses across multiple levels.

7. The Nazarbayev Centre by Foster + Partners in Astana, Kazakhstan, 2014.

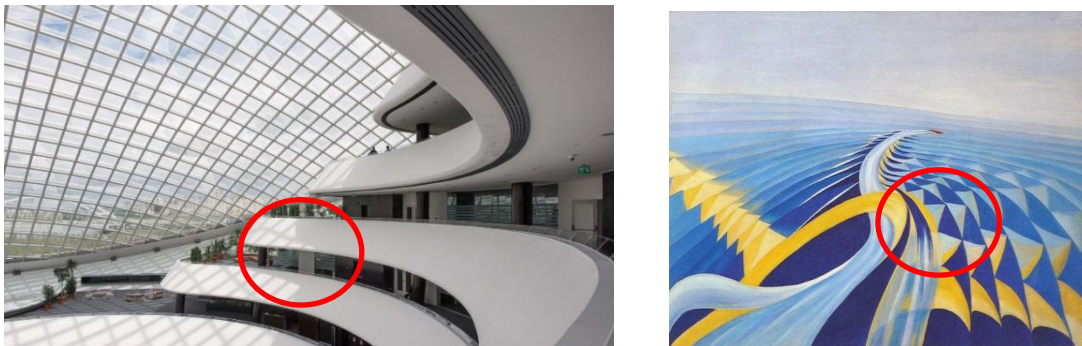


Figure 4.9: The Nazarbayev Centre by Foster + Partners in Astana and and Speeding motorboat painting by the artist Benedetta Cappa.

On the left we can see the Nazarbayev center which is an archive and a library located in the heart of the expo city of Astana, designed by the renowned architect Norman Foster, where the space is oriented towards the north with a bowl like roof, covered in a mesh support for the glass on top of it, spanning over 90 meters that permits light to the library section. (Helbig et al., 2015)

Based on the observation a list of characteristics can be identified as a futuristic element (Figure 4.9):

1. First identifiable element is the flow of motion that can be seen in the painting and extends to the furthest point reflecting a continuous movement, as shown in the Nazarbayev center and the kind of flow created by the different levels, and the smooth edges that inspires continuity.

8. *Tianjin Binhai Library by MVRDV, Tianjin, China, in 2017*

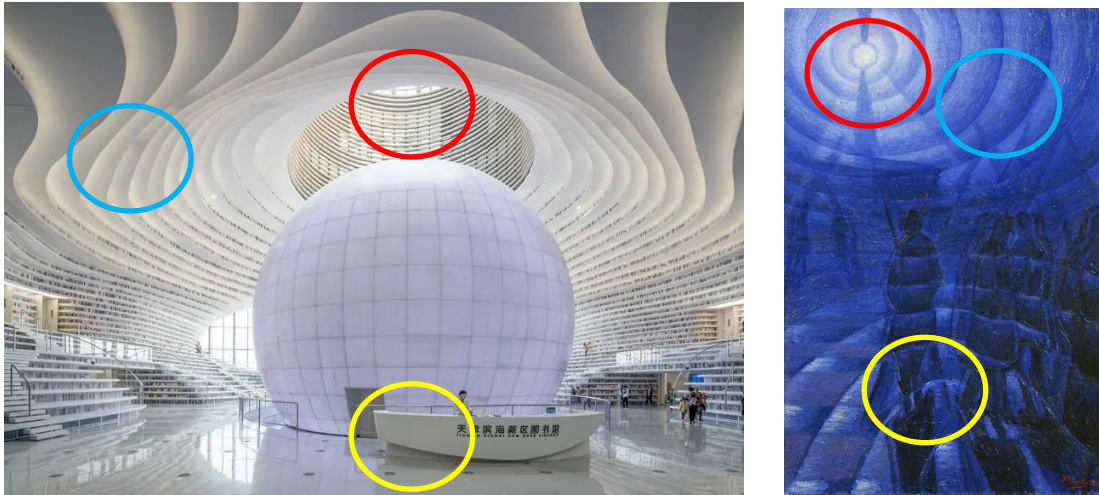


Figure 4.10: Tianjin Binhai Library by MVRDV, Tianjin, China and the painting done by Luigi Russollo

On the left we can see the Tianjin library that incubates a central spherical auditorium and surrounded by a series of decks that house a vast number of books that doubles both as an educational space as well as a social space. The center sphere in the middle of the space, acts as an oval opening, that created the ripple/wavy flow of layers all over the space, further giving a sense of openness and wide space. The library is five levels high, with the central atrium being the main access, that organizes movement around it (Duveau & Dumenil, 2018).

On the right shows the painting done by Luigi Rossello who was a renowned futurist artist, who specialized in drawing noise. This piece is named the solidity of fog shown here resembling a sphere that has a set of other circles originating from it and their intensity reducing the further it goes, while the closer part shows figures standing while oriented towards the glowing orb.

Side by side comparison shows common elements of futurism (Figure 4.10):

1. First the spherical core in both designs is the central focus of both of them, where a ripple of flow and motion is affected by it.
2. Secondly it can be observed that there is a continuity on the flowing lines in the designs, as shown in the painting at first, and inspired the continuity effect in the Tianjin library where

the continuous lines keep flowing into the distance while a continuous several layers keep connecting the other levels together.

3. As well as, the various different layers in both artworks reflect speed and motion, whether inwards or outwards.

9. Mercedes Benz Museum, by UN Studio, Stuttgart, Germany, 2006

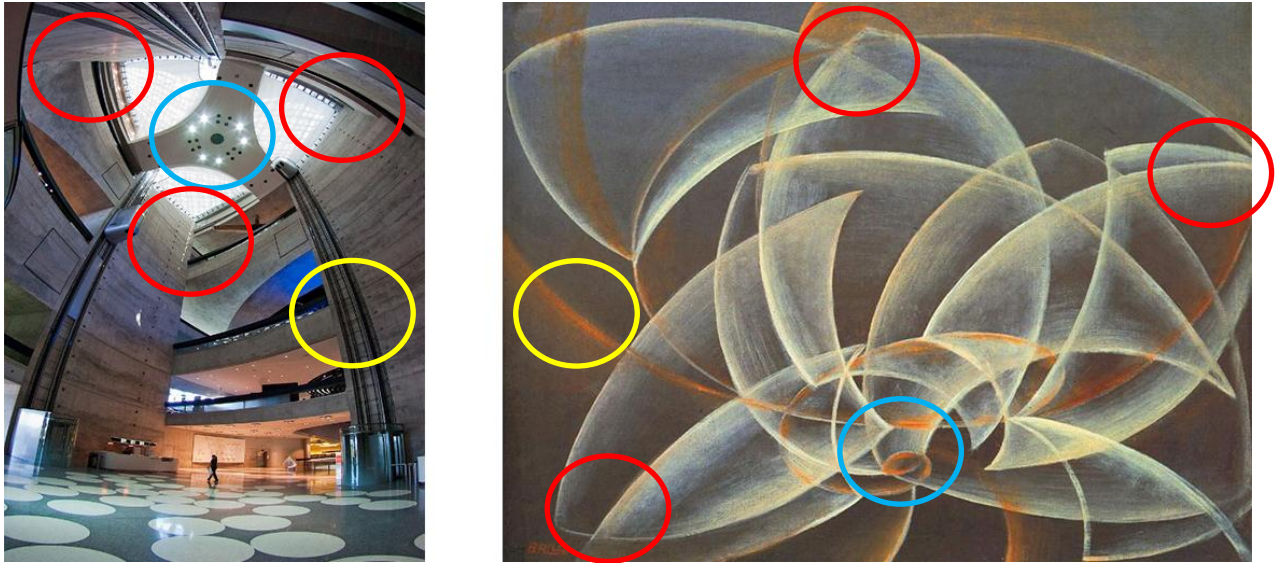


Figure 4.11: Mercedes Benz Museum, by UN Studio and painting by Giacomo Balla
Vortex

On the left, the image shows the Mercedes Benz Museum, that is designed by the UN studio, with the intention of capturing the visitor's attention and get them attached from the first look. What can be seen from inside complements the outside envelope, as it shows that the museum's geometry revolves around the central axis, as well as follow a helix shape, which is a reference of the Mercedes logo, that is created in the ceiling of the main atrium. ("UN Studio Cross-Fertilizers a Three-Leaf-Clover Plan with a Double-Helix Circulation for the Mercedes-Benz Museum in Stuttgart," 2006).

On the right, there is this painting by the amazing painter Giacomo Balla Vortex, space, form, which he had painted in the year of 1914. we notice the huge similarity that the design of the Mercedes Museum had which was designed in the year of 1993 by the UN Studio with painting of Giacomo Balla.

We can clearly see how this amazing building design was influenced in a strong way by the Giacomo Balla painting. From the whole composition to the whole sensation. When we consider a similarity with different artworks, we should find three or more in common elements.

A side-by-side comparison across both cases shows equal futuristic characteristics (Figure 4.11):

1. First round repeated shapes of both designs that provides the sense of motion, guidance and technology, as shown also in the form of the blend between the concrete walls and the exposed elevator that carries visitors to different level, further enhancing the sense of motion in the space.
2. Second it can be noticed that both designs share the same main shape in the middle of the structure which was featured by the curving surfaces that surrounds the central sharp objects, reflecting flexibility as well as giving the interior of the space a sense of motion, as it shows the central atrium is revolving around the Mercedes logo, as in the painting where it shows the curvy lines revolving around the central sharp line.
3. Moreover, the central atrium object in the ceiling which is the logo of Mercedes which is also found as an overall main shape in the painting of Giacomo Balla , also shows a key characteristic of futurism, which is acting as a connector between all the walls with each other, giving a sense of motion, as shown in the painting where the central element induces movement and link between different lines from one side to the other.

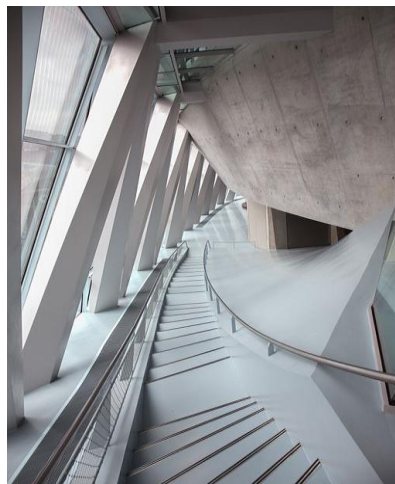


Figure 4.12: Mercedes Benz Museum Interior space.

Table 4.1: Discussion of the overall study.

#	Name	Country	Futurist Concept	Differences observed	Architecture Style	Year
1	Walt Disney Concert Hall	United States of America	<ol style="list-style-type: none"> 1. Sense of motion (flying and scattering in space) 2. Extending in space 3. Youth 4. Power 5. The use of Technology and Machine in construction 	- Difference in material as observed in the sculptures	Deconstruction	2003
2	Mercedes Benze Museum	Germany	<ol style="list-style-type: none"> 1. Sense of motion (moving in circular) 2. Use of metallic materials 3. Youth 4. power 	- Dominant straight lines in the design compared to the futuristic drawings that possess more curvilinear lines.	Deconstruction	2006
4	Expo 2010 Danish Pavilion	China	<ol style="list-style-type: none"> 1. Sense of motion (Fluidity in space in circular motion) 2. The use of line to reflect motion. 3. The use of new materials like GRC in the construction of the interior 	- The color palette in both designs differ were one is the expo is monochromatic compared to the colorful palette	Curved / Free form	2010

			<ol style="list-style-type: none"> 4. Extending in space 5. Youth 1. The use of Technology and Machine in construction 	in the futuristic painting.		
5	Galaxy SOHO	China	<ol style="list-style-type: none"> 1. Sense of motion (Fluidity in space in circular motion) 2. The use of repeated lines to reflect motion. 3. The use of new materials like GRC in the construction of the interior 4. Extending in space 5. Youth 6. The use of Technology and Machine in construction 	- Overlapping curvilinear lines compared the flowing unobstructed.	Curved / Free form	2009
6	The Dominion Office Building	Russia	<ol style="list-style-type: none"> 1. Sense of motion (Fluidity in space) 2. The use of repeated lines to reflect motion. 3. The use of new materials like GRC in the construction of the interior 4. 2.Extending in space 5. 3.Youth 6. 4.The use of Technology and Machine in construction 	- An observed difference can be seen in the ceiling, where it is straight compared to the fully curvy and flowing sculpture form.	Curved/ Free form	2012
6	Changsha Meixihu Internation	Mexico	<ol style="list-style-type: none"> 1. .Sense of motion (Fluidity in space) 	- The futuristic drawing possesses more	Curved / Free form	2012

	al Culture And Art Centre		<ol style="list-style-type: none"> 2. The use of repeated lines to reflect motion. 3. The use of LED light stripes to reflect fluidity and motion 4. The use of new materials like GRC in the construction of the interior 5. .Extending in space 6. .Youth 7. .The use of Technology and Machine in construction 	patterns compared to the architectural interpretation of it.		
7	The Nazarbayev Center	Kazakhstan	<ol style="list-style-type: none"> 1. .Sense of motion (Fluidity in space) 2. The use of repeated lines to reflect motion. 3. The use of LED light stripes to reflect fluidity and motion 4. The use of new materials like GRC in the construction of the interior 5. .Extending in space 6. .Youth 7. .The use of Technology and Machine in construction 	- The interior design nature adopted only the curvilinearity but not the color palette as shown in the monochromatic approach.	Curved / Free form	2014
8	The Markthall	Netherlands	<ol style="list-style-type: none"> 1. the use of technology 2. sense of motion and change 	- The resemblance is very close however the only difference lies in the	Interactive	2014

				saturation of the colors and images used in both designs.		
9	Tianjin Binhai Library	China	<ol style="list-style-type: none"> 1. Sense of motion (Fluidity in space around a center point) 2. The use of repeated lines to reflect motion. 3. The use of LED light stripes to reflect fluidity and motion 4. The use of new materials like GRC in the construction of the interior 5. .Extending in space 6. .Youth <p>.The use of Technology and Machine in construction</p>	- The difference can be noticed in the light intensity that is produced by the main spherical source, as shown the design emits an even intensity compared to the gradient produced in the painting.	Curved / Free form	2017

CHAPTER 5

CONCLUSION

The study aimed at identifying the influence of futurism in architecture especially within the interior spaces, in pursuit of this the study followed a qualitative approach, structuring the background on the topic by applying an intensive literature review on the rise of futurism, and its different types, followed by a brief mention of the most prominent examples from the 20th century architecture, in order to develop a good base that has aided in the comparison with the contemporary interior design cases presented earlier.

Accordingly, it showed that the futurism movement is still expanding at full force and evolving into more branches of public spaces, not only confined to museums or stadium, but is also being seen in pavilions and exhibition spaces as the one seen in Shanghai, China which is developed by BIG, this reflected the motion inducing nature of the Danish people and their love of nature by including a blend between the urban lifestyle and the water element, where the center of attention was the mermaid, and the building form influenced the flow of life around nature and how it had a great resemblance in the painting next to it (joy vibrations).

With the analysis of the samples discussed in the method section, the continuity of this effect in the interior was also understood (Table 4.1). A more organic and curvy form is seen in the cultural halls, all of which can be clearly seen in the upper ceiling of the main hall, where the outer shell influences or reflects the interior spaces, such as Frank Gehry's Walt Disney concert hall facilitated by the latest technological developments. Another prominent cultural example can be seen at Zaha Hadid's Changsha Meixihu International Center for Culture and Arts, as well as Foster + Partners' Nazarbayev Center in Astana, which demonstrates the heavy use of flowing lines and rounded corners that influence a state of constant movement. It reflects a fundamental principle that expresses and emphasizes the importance of dynamism and movement and the effect of endless lines, as we have shown in futurism, the ceiling and the levels of difference in the interior.

Aside from the cultural buildings, futuristic styles have seen an integration in more delicate settings like library buildings as shown in the Tianjin Binhai Library by MVRDV, Tianjin, China, that showed the inner space turn to a sculpture, as the inner space looks to revolve and bend around the central sphere which is the auditorium, This created a ripple like levels in the space, that created various different lines that flow along the whole radius of the space in a flowing and a dynamic manner, where the spaces created by each of the levels doesn't only act as a level connectors, but also act as a social space, which adds a totally different dimension to the use of the space, defying the typical norm, which was always one of the characteristics of futurism which advocated for imposing new understanding of old norms and new usage of space and lines, which can be seen clearly in every view within the library, where a sense of motion, continuity, dynamism is presented.

Not to mention that Futurism has been seen more increasingly in less expected types of buildings like a public market place, as in the Markthal in Netherlands which is designed by MVRDV, where the central hall, possess a mural that covers the public stores shops spanning around 11,000 square meter, were this mural is bending creating a deformed semi-circle above the visitors, which already gives a sense of continuous flow of motion. However, the element that adds an extra value to it along with an additional futuristic characteristic is the high-resolution image that is implemented along the whole roof that adds the element of perspective and interactivity to the whole interior environment of the space, especially one that is a market place. Furthermore, the other building type that hasn't witnessed the influence of futurism was the housing sector, as before private villas was created following the futuristic style as in the case of Norman Lykes House, Phoenix in USA, while very few cases has taken the approach of Zaha Hadid in creating the Galaxy SOHO urban complex, where the building and its interior structure and as well as its plaza space gives a sense of enclosure structured by flowing lines and repetition in different levels that was also an element of drawing movement in painting which can be seen in this type of designs, another element that can be seen is the rounded ends and edges all over the space, referring to the infinite lines and continuity and constant state of motion.

Aside from all the aforementioned similarities some noticeable differences, had been observed, despite not being drastic, it reflects some of the modernistic approaches applied in futurism, whether its is the unobstructed continuous flow of lines, or the monotonous color palette, or even in the change of the light intensity as in the case of the Tianjin library. All which point towards that the futuristic style is in an evolving state, influenced by the change in materiality and the change in the general taste of this style that encourages more daring approaches as shown in the previous cases.

Finally, one of the common spaces where futurism can be witnessed are in museums, however, as in our case here, the corporate museum of Mercedes Benz could reflect a different idea and feeling about the space, where it can be observed the dynamic nature of space despite the use of a rigid material as concrete. Moreover, various flowing lines can be seen revolving around the central space that links all the way to the highest point of the ceiling, that also have other straight lines from the ground up, all pointing towards the corporate logo of Mercedes that gives a sense of continuous motion and development of the company and reflect a progressive ideology within the company that propels it forwards, while giving the visitors a sense of dynamism, while traversing through its spaces.

In conclusion, with this study, it has been understood that the effect of the futurism movement on contemporary interiors is quite extensive. It is witnessing perhaps more than ever before, with increasing use in less prominent sectors of architecture and the interiors that follow. And based on the cases analyzed, most futurism-style designs can be inferred from the outside of the building before being experienced inside, in about six of the nine cases presented. What is evident from these six examples is the obvious reflection that the exterior design has on the interior of the space, and more work may be needed on this.

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APPENDICES

Appendix 1

Ethical Approval Later



ETHICAL APPROVAL DOCUMENT


Date: [20/09/2021](#)

To the Graduate School of Applied Sciences

The research project titled "UNDERSTANDING THE EFFECT OF THE FUTURIST MOVEMENT ON CONTEMPORARY INTERIOR DESIGN" has been evaluated. Since the researcher(s) will not collect primary data from humans, animals, plants or earth, this project does not need to go through the ethics committee.

Title: Assist.Prof.Dr.

Name Surname: Havva Arslangazi Uzunahmet

Signature: 

Role in the Research Project: Supervisor

Appendix 2

Originality Report

Bu sayfa hakkında

Bu sizin ödev kutunuzdur. Bir yazılı ödevi görüntülemek için yazılı ödevin başlığını seçin. Bir Benzerlik Raporunu görüntülemek için yazılı ödevin benzerlik sütunundaki Benzerlik Raporu ikonunu seçin. Tıklanabilir durumda olmayan bir ikon Benzerlik Raporunun henüz oluşturulmadığını gösterir.

OMAR ALKURDI

GELEN KUTUSU | GÖRÜNTÜLENİYOR: YENİ ÖDEVLER ▼

Dosyayı Gönder		Çevrimiçi Derecelendirme Raporu Ödev ayarlarını düzente E-posta bildirmeyenler							
<input type="checkbox"/>	YAZAR	BAŞLIK	BENZERLİK	PUANLA	CEVAP	DOSYA	ÖDEV NUMARASI	TARİH	
<input type="checkbox"/>	Omar Alkurdı	ABSTRACT	%0 	--	--		1648282182	14-Eyl-2021	
<input type="checkbox"/>	Omar Alkurdı	ÖZET	%0 	--	--		1648281643	14-Eyl-2021	
<input type="checkbox"/>	Omar Alkurdı	CONCLUSION	%1 	--	--		1648286882	14-Eyl-2021	
<input type="checkbox"/>	Omar Alkurdı	CHAPTER 4	%2 	--	--		1648285382	14-Eyl-2021	
<input type="checkbox"/>	Omar Alkurdı	CHAPTER 3	%5 	--	--		1648286233	14-Eyl-2021	
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<input type="checkbox"/>	Omar Alkurdı	CHAPTER 2	%12 	--	--		1648283827	14-Eyl-2021	