Virtual Spaces in contemporary exhibitions

/booklet

Thesis submitted to
Politecnico di Milano
for Master of Science degree
in INTERIOR AND SPATIAL DESIGN
by. Qian Jinyu
Thesis Supervisor: Luca Guerrini
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#Virtual reality
#Virtual space
#Museolog
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ABSTRACT

In the information age, based on the extensive application of virtual reality technology and network information technology, virtual exhibition and network exhibition based on virtual exhibition have come into being. With the macro development idea of the country's 13th Five-Year Plan, "virtual reality", "big data" and other cutting-edge technologies are pushed to the cusp of silent development. Especially from the year 2020, novel Coronavirus epidemic has strengthened the dependence of real life on information media. Technology is forever reshaping our lives, but "virtual reality" isn't just a technical concept. European philosophers have worried about "virtual" environments since the last century. Nowadays, more and more philosophers, curators and designers begin to pay attention to digital and "virtualized" exhibitions in order to help the transformation of museum exhibitions and obtain a wider communication space. However, few people pay attention to the difference between on-site and online, and lack of research on the integration of physical space and virtual space.

The virtual space in the exhibition studied in this paper is not to completely virtualize the physical space, but to study how to take the virtual space as the supplement and extension of the physical space. This paper aims to establish a clear principle of virtual space creation under the digital virtual framework. In fact, it is an exhibition design with virtual digitization as the design means, space as the design object and display as the design purpose. This paper is mainly divided into five parts, which respectively expound the social role of the physical space of museums and exhibitions, the definition of virtual space and its impact on physical space, and analyze the integration and interaction between physical space and virtual space based on specific cases. means, try to summarize a series of design methods, and finally carry out design practice.

#Virtual reality
#Virtual space
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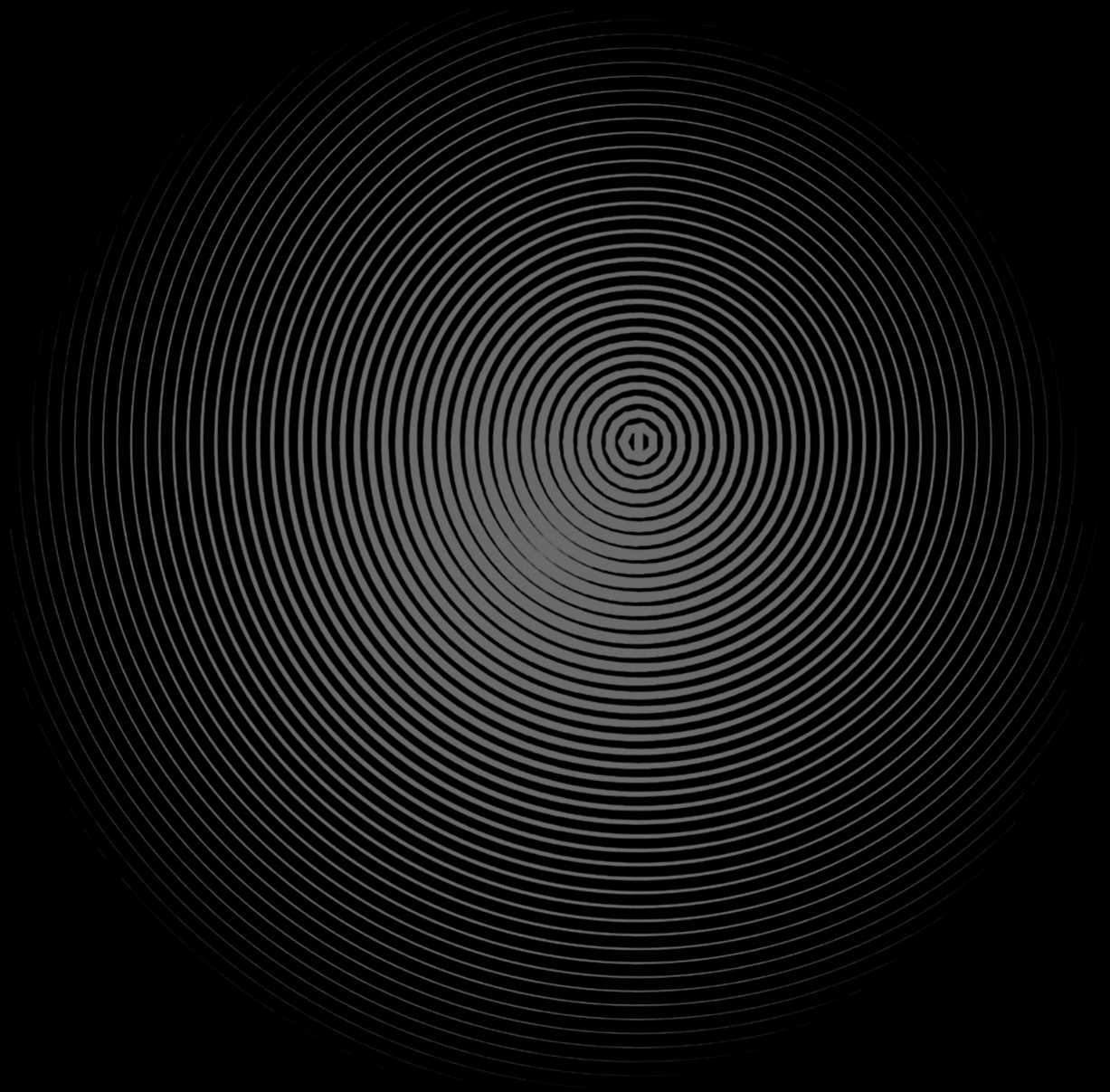
#Digital media



CHAPTER 1

Introduction

Research background

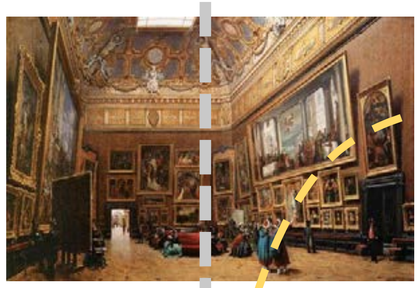
Research goal and innovation

Research stratagy

2022/10/4

Enlightenment ← Value possession

The origin and development of museums and exhibitions



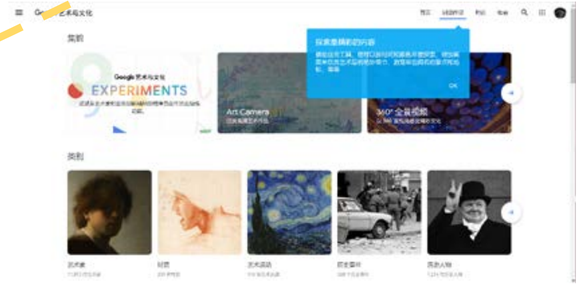
1793
The Louvre opens to the public for the first time

1584
Private Collection / Cabinet Display

1851
London World Industrial Fair

1947
museum without walls

2011
G oogle Art Project



The Industrial Revolution → Media age → Information age

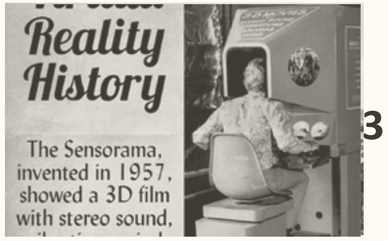
Introduction of virtual space

Period of image and text

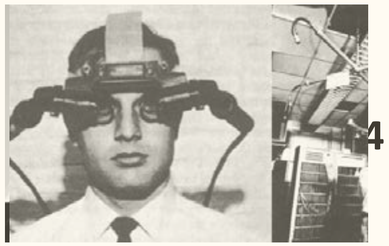
01 1509 Sistine Chapel dome fresco

02 1936 MGM red and green glasses

Period of technological exploration



03 1957 Sensorama 3D video machine



04 1966 Helmet display

Period of promotion

05 2016 Pokemon Go AR Game

06 2020 Huawei AR Map/ Dunhuang Guide

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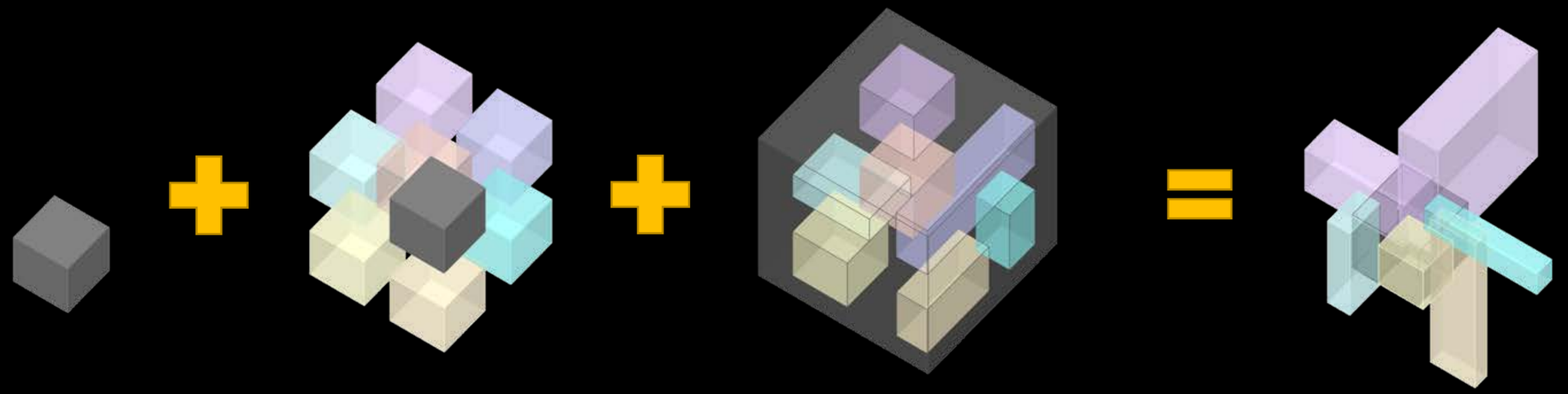
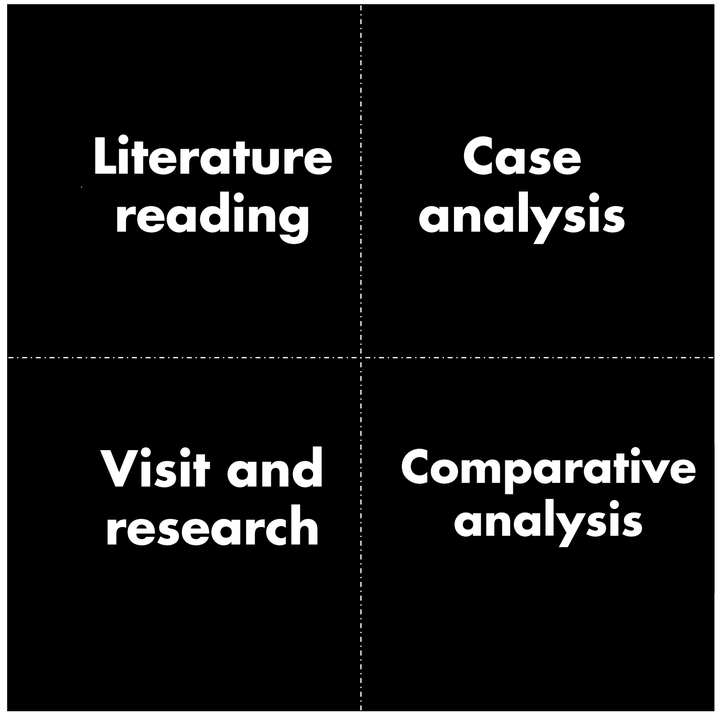


Reality + Virtual Reality + Mixed Reality = Virtual Space

RECARSH METHOD



RESEARCH GOALS AND INNOVATIONS

In general, the research on exhibitions and virtual reality is the study of gender division. They are contemporary, which is also the separation of reality and virtuality. **The formation of fertility will deduce their intersection from the essence of space and space.**

The difference is that most of its design and display will analyze and study virtual reality from the aspects of implication, technology and equipment of its virtual industry practitioners, and will mainly display it from the aspect of virtual reality or from the aspect of virtual space in essence. Combining its promotion with the physical space design of the exhibition, **it analyzes the construction and reorganization of exhibits and exhibition spaces in different virtual ways, and summarizes the social significance it brings.**

Because China has the value of contemporary exhibitions, I hope to find the meaning of exhibition space through in-depth research on exhibition space. Do not rely too much on digital media, so that exhibition space designers can more comprehensively understand the design laws and social values of exhibition space.

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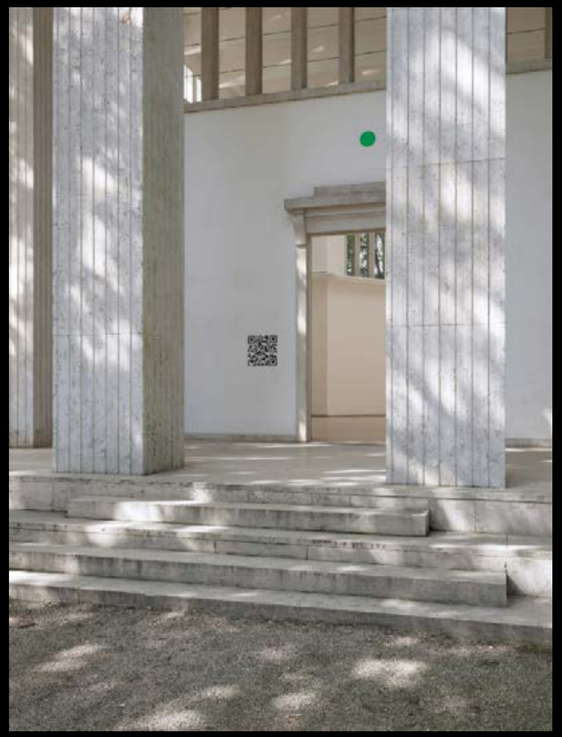
CHAPTER 2

Stolen Space:
The Core Meaning of the Exhibition's Physical Space

Demonstrate authority and educate the public
Historical Documentary and Cultural Remodeling
Avant-garde cultural dissemination
Consumerism and entertaining the masses
Landscape and Symbols
Situations and Events

2022/10/4



German Pavilion at the 17th Venice Architecture Biennale

(Reference: https://www.labiennale.org)

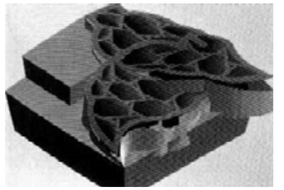
Canada Pavilion at the 17th Venice Architecture Biennale

(Reference: https://www.labiennale.org)

Literature about museums and exhibitions

Country	Author	Time	Title	The main points
Switzerland	Hans Ulrich Obrist	2013	A Brief History of Curating	These are a collection of interviews with 11 of these people in Bristol after 2090 as interviewers. The and these people in reviewing their previous work mainly reveal discussions of their work, practice, thinking, disadvantage and influence.
America	Victoria Newhouse	2006	Towards new museum	This paper categorizes and criticizes museums since the 20th century, and explores the relationship between museum space as a container and its content, the artwork.
America	Edward P. Alexander, Mary Alexander	2014	Museums in Motion: An Introduction to the History and Functions of Museums	It is a comprehensive and general book that explores the development context and mission of museums. It gives a grand narrative and overview of the history and functions of museums, and shows six categories of museums (art, nature, technology, history, The dynamic development history of the zoo and botanical gardens, children), analyzes the five functions of the museum industry (collection, protection, exhibition, interpretation, service), which is clear and detailed, and has rich accumulation.
England	Bella Dicks	2012	Culture on Display: The Production of Contemporary visitability	The number of places where culture is displayed in the form of "visibility" is increasing rapidly today. The author analyzes the various display places in the context of broader social, economic and cultural changes, including modern tourism, economic development strategies, The presentation of identity, globalization, interactivity, and social relations in consumption.
China	Guo Qing	2016	Digital Art Museum in the Era of Big Data	Analyze what is a digital art museum, the signs and states of a digital art museum in the era of big data, and discover its more possibilities and broader development space.
China	Wu Hong	2008	Spatial Narrative: Curating Three "Temporal" Exhibitions	The three exhibitions discussed in this paper all belong to the category of "experimental exhibitions", that is, the main object of the experiment is transferred from the content of the exhibition to the exhibition itself, including location, form, audience and so on. More specifically, the experiments in these three exhibitions are all related to "time" and "narrative", but each exhibition focuses on the nature of "time" and "narrative".
		2007	Art History and Art Galleries	Both urban public art galleries and art history research as a part of humanities are the products of modernization. Both of them take the art of past dynasties as the object of display or study, and they are also committed to sorting out the chaotic historical relics and incorporating them into the Narrative representation of inner logic.。
France	Malraux, André	1967	Museum Without Walls	Museums are educational, yes, but they make the relationship between visitors and works of art too stylized. Most people only care about who painted it, which genre it belongs to, etc., but they don't have time to care about the original intention of the work. The Asian Museum appeared late because of the different cultural complexes between China and the West. For example, Chinese people hope to enjoy their favorite paintings exclusively in order to communicate with each other in an ethereal way, rather than being dazed in crowded museums. Through more reproductions, modern people's art appreciation process should not be limited to museums, which leads to the "concept of museums without walls".

Core Values of Exhibition Physical Space

	Demonstrate authority Educate the public	Historical Documentary Cultural Remodeling	Avant-garde cultural dissemination	Consumerism Entertaining the masses	Landscape and Symbols	Situations and Events
TYPE						
CASES	German museum island Goetz collection Horyu-ji Treasure Museum	Germanic Museum "History Room" Acropolis Museum	Armory Show MOMA	Centre Pompidou	Guggenheim Museum  Frank Stella's projects	Miniature art gallery Serpentine Gallery by Dibedo Francis Carlyle
SPACIAL FEATURES	These art museums are often compared to formal, monumental structures such as palaces and temples, and are intentionally designed to resemble them in architectural form. Or combine with nature to form a poetic, transcendental experience. The space is mostly closed inward and isolated from the outside world.	The number of historical museums and sites accounts for a large proportion of all museums, and they are the most common and easiest to visit. The design of history museums always bears a responsibility - not to look like a cultural tomb, but to store only the "dry bones" of cultural relics.	'Unofficial', 'Not mainstream' or Collect and exhibit recent works of avant-garde art. The museum itself is modern, the exhibition has an open plan, is transparent, and integrates with the city or the community.	Architecture can provide a variable, non-fixed property like ordinary consumer goods. The Arts Center did end up being a vibrant "street theater" as well.	When a museum and its contents become a complete aesthetic whole, maybe even a brand.	"Event", "Game" and "Mobility", bring art into the everyday realm and show it to the public, challenging the tradition that art only exists in a certain institution, or can only be seen by the educated.
EXHIBITS	Historically recognized exhibits screened by official institutions	Historical relics, historical rooms	Modern and contemporary art, avant-garde works that came out soon	Modern and contemporary art, art performance, urban activity center	Contemporary artcultural symbols The space itself is an exhibit	Modern and contemporary art art event

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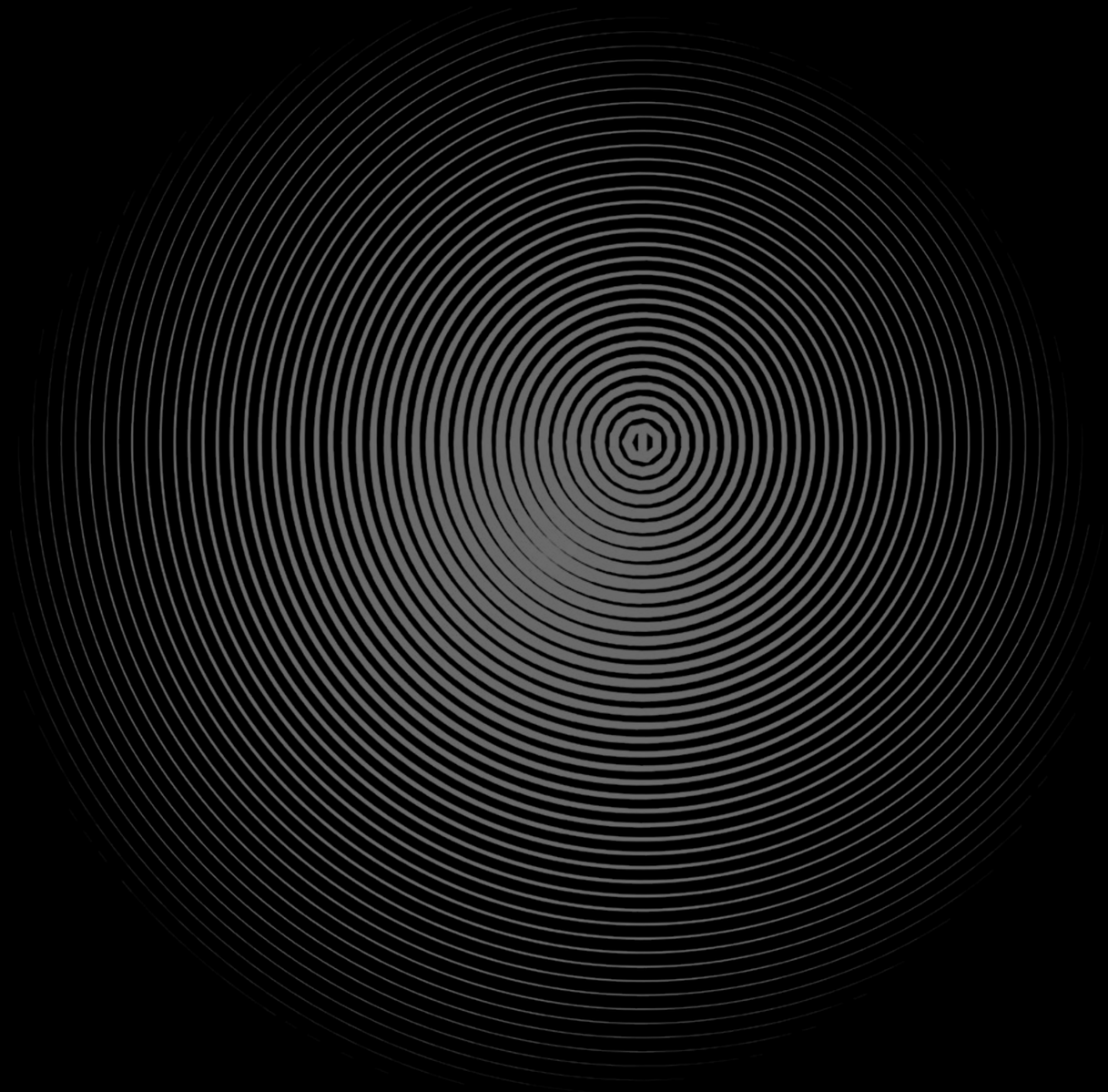


CHAPTER 3

Parallel Lines:
The "Temptation" of Virtual Space

Definition of virtual space

The impact of virtual technology on real space

2022/10/4

Literature about Virtual reality

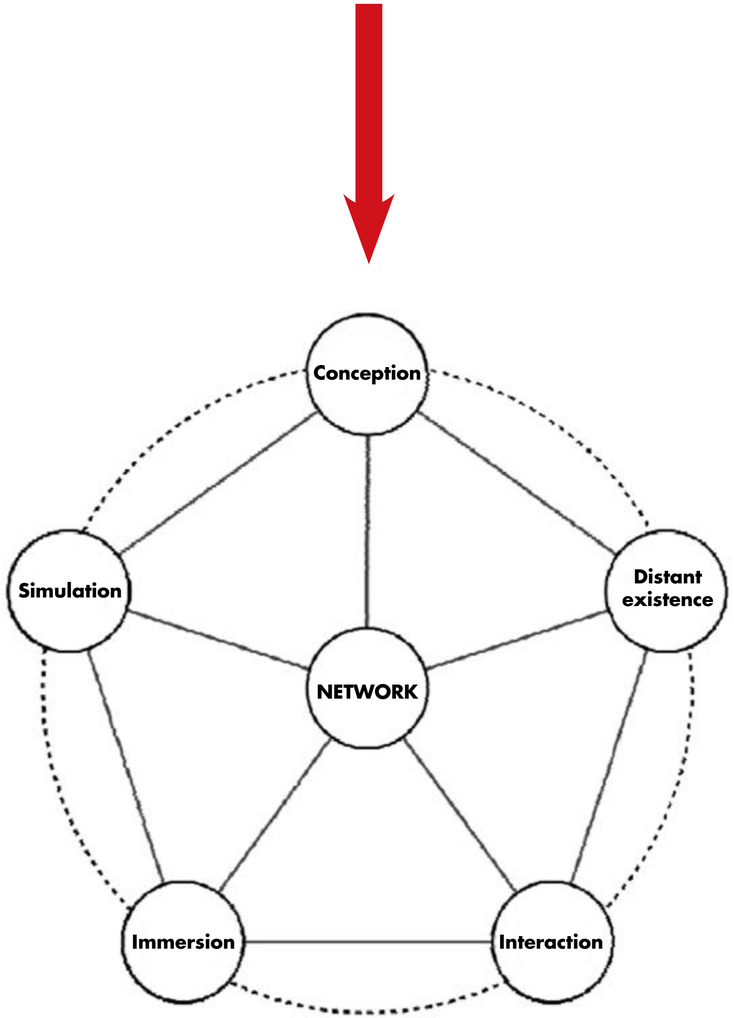
Country	Author	Time	Title	The main points
France	Jean Baudrillard	2017	Why Hasn't Everything Already Disappeared?	Compared with the existence, presence and appearance of things, nothingness, absence and disappearance deserve more attention.
France	Jean Baudrillard	2002	Simulacra and Simulations	Put forward the simulacrum theory, arguing that in our lives, images are real and real objects are not, especially in the "hyperreal" era where consumption is the mainstay, everyone is more or less affected by "simulacrum". "Impact.
America	Michael R. Heim	1997	From the interface to the network space (virtual reality of metaphysics) - Philosopher Stone Series(Chinese Edition)	This book is a thought-provoking examination of virtual reality technology from a philosophical perspective, raising questions about how this technology will affect human experience, our own perceptions, and the real world around us.
England	Christopher Horrocks	2005	Marshall McLuhan and virtuality	The relationship between McLuhan's thought and the information revolution is examined, and his probe is extended into audiovisual culture and their complex relationship with the web, the Internet, and the matrix of global commonality. The book also discusses the relationship of McLuhan's manifesto to postmodern theory, and the relationship of McLuhan's revival to the disembodied and virtual identities of posthuman cyborgs.
America	Neil Postman	2015	Amusing Ourselves to Death	He believes that strong media can redefine the real world with a hidden but powerful hinting force, and even shape the cultural spirit of an era. People actually live in the huge metaphorical world created by the media without knowing it. "The medium is the metaphor" theory.
Canda	Herbert Marshall McLuhan	2011	Understanding Media:The Extensions of Man	The medium is no longer a form, but an object of study, with its own power. The media is both an extension of man and a block of man.
China	Wang Chengwei,Gao Wen,Wang Xingren	1996	Theory, Realization and Application of Lingjing (Virtual Reality) Technology	A comprehensive introduction to the development history, theory, system composition principles and design methods, as well as typical application systems of Lingjing (virtual reality) technology.
China	Gao Shiming	2006	Mirrors and Masks - A Visual Study of Reality and Reality	Illusion is not purely on the side of the imagination, on the contrary, it is only through the illusion that we are able to approach reality, it is only the framework within which we gain a "sense of reality". Once our basic illusion is broken, we experience a "loss of reality".

Definition of virtual space

In the Vatican in 1509, Michelangelo painted the frescoes of the dome of the Sistine Chapel using a new perspective technique at the time. Architecture + decoration + perspective method form the earliest pipeline for constructing virtual space with immersive experience.

In Michael Heim's "From Interface to Cyberspace: The Metaphysics of Virtual Reality", he argues that "the essence of virtual reality may ultimately lie not in technology but in art, perhaps in the highest level of art... The promise of virtual reality Yes, not an improved vacuum cleaner, a more appealing communication medium or a friendlier computer interface. What it promises is the Holy Grail."

Architecture + Decoration + Perspective

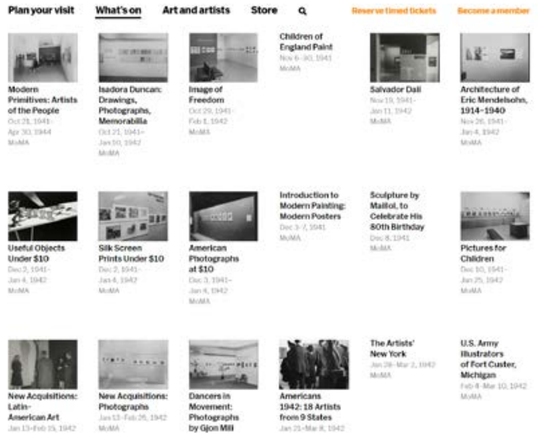


Spatial Reconstruction Theory

Graz Cultural Center Reference: Archidaily

Cincinnati Center for Contemporary Art Interior
Reference：https://www.world-architects.com/

Distance Annihilation Theory



The impact of virtual technology on real space

Liang Dong - Documentary Exhibition of Liang Sicheng's 120th Birthday
Reference：Tsinghua University Art Museum public account, self-photographed by the author

MOMA “exhibition history” page
Reference：https://www.moma.org/calendar/exhibitions/history/

The balance under the "temptation" of virtual space

The simulacrum is never that which conceals the truth-it is the truth which conceals that there is none.
The simulacrum is true.

——Ecclesiastes
Baudrillard, Jean. Simulacra and Simulations.

STAGE	Intention/image concept	Four-level order of simulacrum	The value of "things"
Natural stage	Imagery is a reflection of grand reality	Simulation was the dominant mode in the "classical" period from the Renaissance to the Industrial Revolution	Use value
Commodity stage	Imagery encapsulates and naturalizes the grand reality	Production is the dominant mode in the era of the Industrial Revolution	Exchange value
Structural stage	Imagery masks the absence of grand reality	Simulation is currently the dominant mode in this code-dominated phase	Symbolic value
Split stage	The image no longer has any relation to the grand reality: it becomes a simulacrum of itself	Stages of splitting of values (viral or radioactive) The law of value does not exist	Exchange of popular value

exhibition format

- **Demonstrate authority and educate the public**
- **Historical Documentary and Cultural Remodeling**
- **Consumerism and entertaining the masses**
- **Landscape and Symbols**
- **Virtual Exhibits/Virtual Art Gallery**

The four stages of simulacra in Baudrillard's "Simulation and Simulation" (painted by the author)

Problem solved:

How does the virtual space relate to the corresponding real world?

What types of real-world systems are suitable for electronic doubles? Why?

How do we build such a world?

How can we use these virtual spaces to study the real world?

What types of behavior can stand out from inter-agent interactions within virtual and reality?

John L. Castie, translated by Wang Qianxiang, translated by Quan Ning. Virtual World[M]. Shanghai Science and Technology Education Press, 1999.

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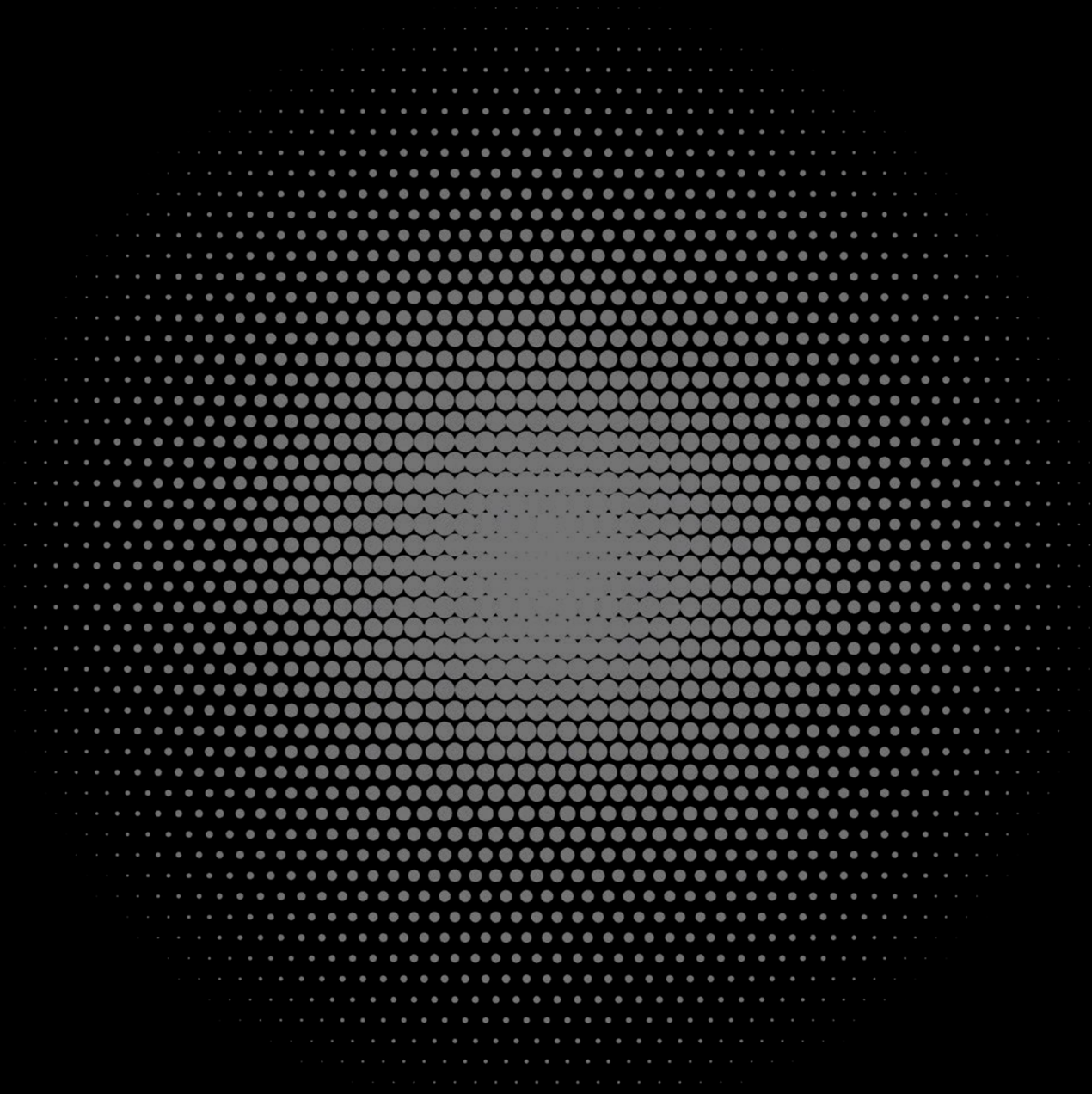
CHAPTER 4

Contemporary Exhibition and the "Deadly" Game o f Virtual Space

Virtual as an alternative to reality
Virtual as a complement to reality
Virtual becomes reality



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Literature on space design

Country	Author	Time	Title	The main points
China	Cheng Chaohui	2009	Human, Space, Time: A Study on the Design of Urban Image System	The cognition of the city image, the multi-dimensional perspective of the study of the city image system, the cognition of the city image system design, the positioning of the city image system design, the construction of the city image system design, etc.
China	Wang Minan	2015	Body, Space and Postmodernity	With a broad theoretical vision, incisive and unique perspectives and delicate and flashing words, the author has made a wonderful discussion on the production of space, on the relationship between the body, sex and politics, etc. It elevates Chinese scholars' interpretation of postmodern philosophical discourse, understanding and refinement of postmodernity to an autonomous level.
France	Gaston Bachelard	1957	The Poetics of Space	In The Poetics of Space, Bachelard argues that space is not a container filled with objects, but a dwelling place for human consciousness.
China	Zhou Zhengnan	2003	Media Architecture: The Enlightenment of Communication Studies to Architectural Design	This book is a work of interdisciplinary research between communication and architecture. The content of the book is divided into the analysis of the architectural design process from the perspective of communication; focusing on the research on the psychological characteristics of architectural audiences; analyzing the information content of the building itself.
China	Yu Tongzhou	2017	Research on comprehensive performance of hyper-exhibition based on virtual reality	In establishing a clear principle of super exhibition design and creation under the framework of virtual reality, it is an exhibition design with virtual reality as the design method, experience as the design object, and appearance as the design purpose.
China	Chen Yi	2006	Research on Contemporary Exhibition Space Design	Starting from the ontology content of the building, it discusses some new features of contemporary exhibition space, including the variation of concept, the softening of space form, the softening of spatial composition, the variation and development of the relationship between exhibition space and streamline organization, and thematic meaning.
China	Gao Bei	2006	Media and Architecture	Today, with the continuous development of media technology, we live in a space surrounded by a large number of printed publications and various images, and in the "ubiquitous" world created by the Internet, not only as a communication tool The recipient of the communication, but also as the producer of communication, not only as the inhabitant of the real world, but also as a participant in the virtual environment.
China	Yan Ying	2008	Architectural Media and Media Architecture in the Post-Media Era	This paper divides the time period of the study into the post-media era characterized by two-way communication, infinite openness and digitalization, and discusses the interactive relationship between media and architectural design as the research background. The interpretation of the two terms deeply discusses the impact of the development of digital information technology on architectural media and media architecture.
China	Zhou Na	2016	VR Art Space: The Nth Power of Imagination	The artist has a stronger control and connection of the relationship between the exhibition space and the work, and can even make the work and the space where it is located to become a new work - its layout and the layout of the work in the VR space. Spatial reconstruction has become another form of creation.

Virtual as an alternative to reality

The Forbidden City, Tencent and Hei Gong's cooperation project ""Patterns" to carry the Tao - Immersive Digital Experience Exhibition"

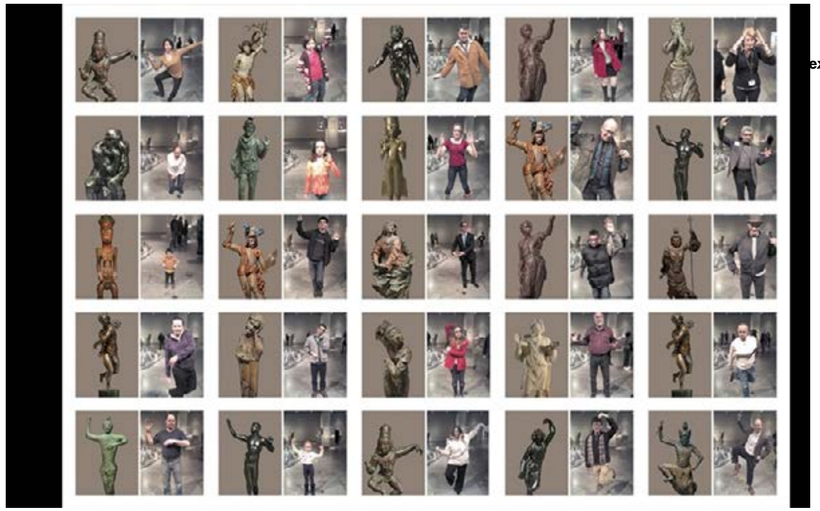
ARCHE0GUIDE PROJECT

Pure Land: Dunhuang Mogao Grottoes

It does not change the essence of the exhibits, but only restores the exhibits to the audience, and through the reproduction and presentation of detailed information, brings an exhibition experience that transcends the boundaries of time and space.

Virtual as a complement to reality

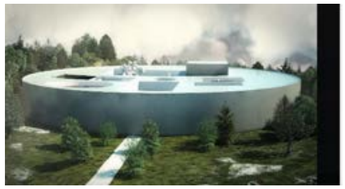
The images caused by this type of virtual space to the exhibition are often not directly reflected in the simulation of reality, but use virtual technology to optimize the display method, so that the exhibits are presented to the audience in a more modern narrative clue or interactive way. Reconstruct the exhibits and supplement the information of the exhibits.

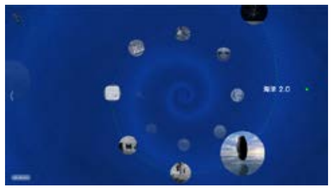
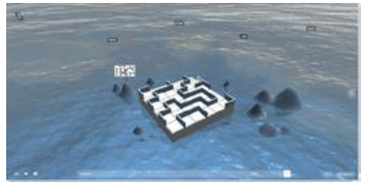
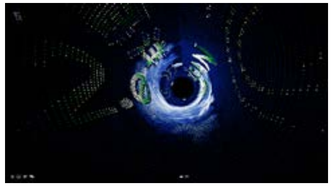


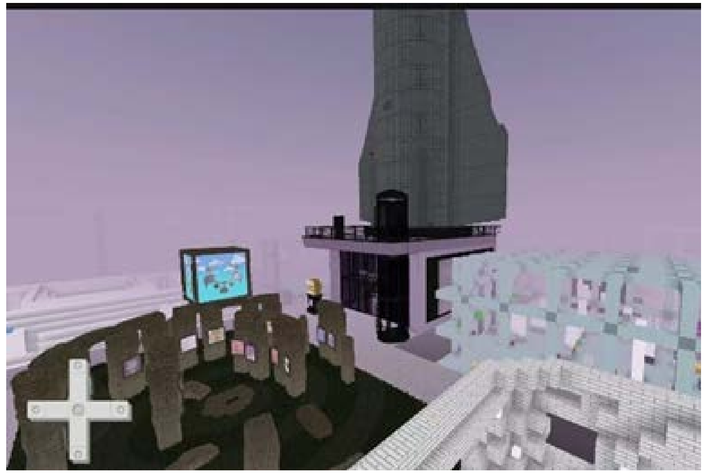
Gallery One by the Cleveland Museum of Art in 2012

Virtual becomes reality

This type of exhibition is presented entirely in virtual space or by means of virtual means. It does not require a physical space of real volume to accommodate the exhibits to exist in the concept of an "art museum". They are presented directly. The way could be a website, a game, or even a mockup, a text.





3D Virtual Museum	Sacredness	Science popularization	Avant-garde	Gameplay	Landscape
IJC MUSEUM	Powerful	Powerful	Weak	Weak	Powerful
slimeengine	Powerful	Middle	Middle	Middle	Weak
BCA Metaverse	Weak	Weak	Powerful	Powerful	Middle
Museum of other reality	Middle	Middle	Powerful	Powerful	Weak

#Virtual reality
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The social value of exhibition space

- Demonstrate authority and educate the public
- Historical Documentary and Cultural Remodeling
- Avant-garde cultural dissemination
- Consumerism and entertaining the masses
- Landscape and Symbols
- Situations and Events

Four stages of simulacra

- Natural stage
- Commodity stage
- Structural stage
- Split stage

Virtual space design strategy

- Virtual as an alternative to reality
- Virtual as a complement to reality
- Virtual becomes reality

CHAPTER 5

Design Practice: R ebuilding the Universe - Italian Futurism Exhibition

Analysis of the background of the exhibition

Design project

Exhibition case

MoMA

May 30–Sep 5, 1961

https://www.moma.org/calendar/exhibitions/2821?

Exhibits sorted by artist

Guggenheim Museum, New York

Exhibits sorted by timeline

https://www.guggenheim.org/video/italian-futurism-1909-1944-reconstructing-the-universe

The first comprehensive overview of Italian Futurism presented in the United States, this multidisciplinary exhibition examines the movement's history from its inception with Marinetti's Futurist manifesto in the Financial Times in 1909 to its demise at the end of World War II.

Featuring more than 300 works created between 1909 and 1944, the chronological exhibition includes not only paintings and sculptures, but also architecture, design, ceramics, fashion, film, photography, advertising, free-form poetry, publications , music, drama and performance.

Centre Pompidou

Le Futurisme à Paris

https://parisconnected.wordpress.com/2008/11/23/4-choices-in-paris-centre-pompidou-1-futurism-in-paris/

Futurism-influenced countries for clues: Italy/ Russia/ France/ UK

FONDAZIONE E MANIFESTO

DEL

FUTURISMO

(Pubblicato dal " FIGARO „ di Parigi il 20 Febbraio 1909)

Avevamo vegliato tutta la notte — i miei amici ed io — sotto lampade di moschea dalle cupole di ottone traforato, stellate come le nostre anime, perchè come queste irradiate dal chiuso fulgòre di un cuore elettrico. Avevamo lungamente calpestata su opulenti tappeti orientali la nostra atavica accidia, discutendo davanti ai confini estremi della logica e annerendo molta carta di frenetiche scritture.

Un immenso orgoglio gonfiava i nostri petti, poichè ci sentivamo soli, in quell'ora, ad esser desti e ritti, come fari superbi e come sentinelle avanzate, di fronte all'esercito delle stelle nemiche occhieggianti dai loro celesti accampamenti. Soli coi fuochisti che s'agitano davanti ai forni infernali delle grandi navi, soli coi neri fantasmi che frugano nelle pance arroventate delle locomotive lanciate a pazza corsa, soli cogli ubbriachi annaspanti, con un incerto batter d'ali, lungo i muri della città.

Sussultammo ad un tratto, all'udire il rumore formidabile degli enormi tramvai a due piani, che passano sobbalzando, risplendenti di luci multicolori, come i villaggi in festa che il Po straripato squassa e sràdica d'improvviso, per trascinarli fino al mare, sulle cascate e attraverso i gorghi di un diluvio.

Poi, il silenzio divenne più cupo. Ma mentre ascoltavamo l'estenuato borbottìo di preghiere del vecchio canale e lo scricchiolar dell'ossa dei palazzi moribondi sulle loro barbe di umida verdura, noi udimmo subitamente ruggire sotto le nostre finestre gli automobili famelici.

— Andiamo, diss'io; andiamo, amici! Partiamo! Finalmente la mitologia e l'ideale mistico sono superati. Noi stiamo per assistere alla nascita del Centauro e presto vedremo volare i primi Angeli!.... Bisognerà scuotere le porte della vita per provarne i cardini e i chiavistelli!.... Partiamo! Ecco, sulla terra, la primissima aurora! Non v'è cosa che agguagli lo splendore della rossa spada del sole, che schermeggia per la prima volta nelle nostre tenebre millenarie!... —

Exhinition Background

Futurism is an artistic movement started in 1909 by the Italian poet Filippo Tommaso Marinetti. On February 20, he published his Futurist manifesto on the front page of Le Figaro in Paris. That moment saw the birth of the Futurists, a small group of radical Italian artists working before the outbreak of the First World War.

In the modernist movement, the Futurists rejected anything old and envisioned a new Italy. That's partly because the weight of Italy's past culture feels particularly oppressive. In his manifesto, Marinetti asserted that "we will liberate Italy from her innumerable museums, which cover her like innumerable cemeteries."

Design site

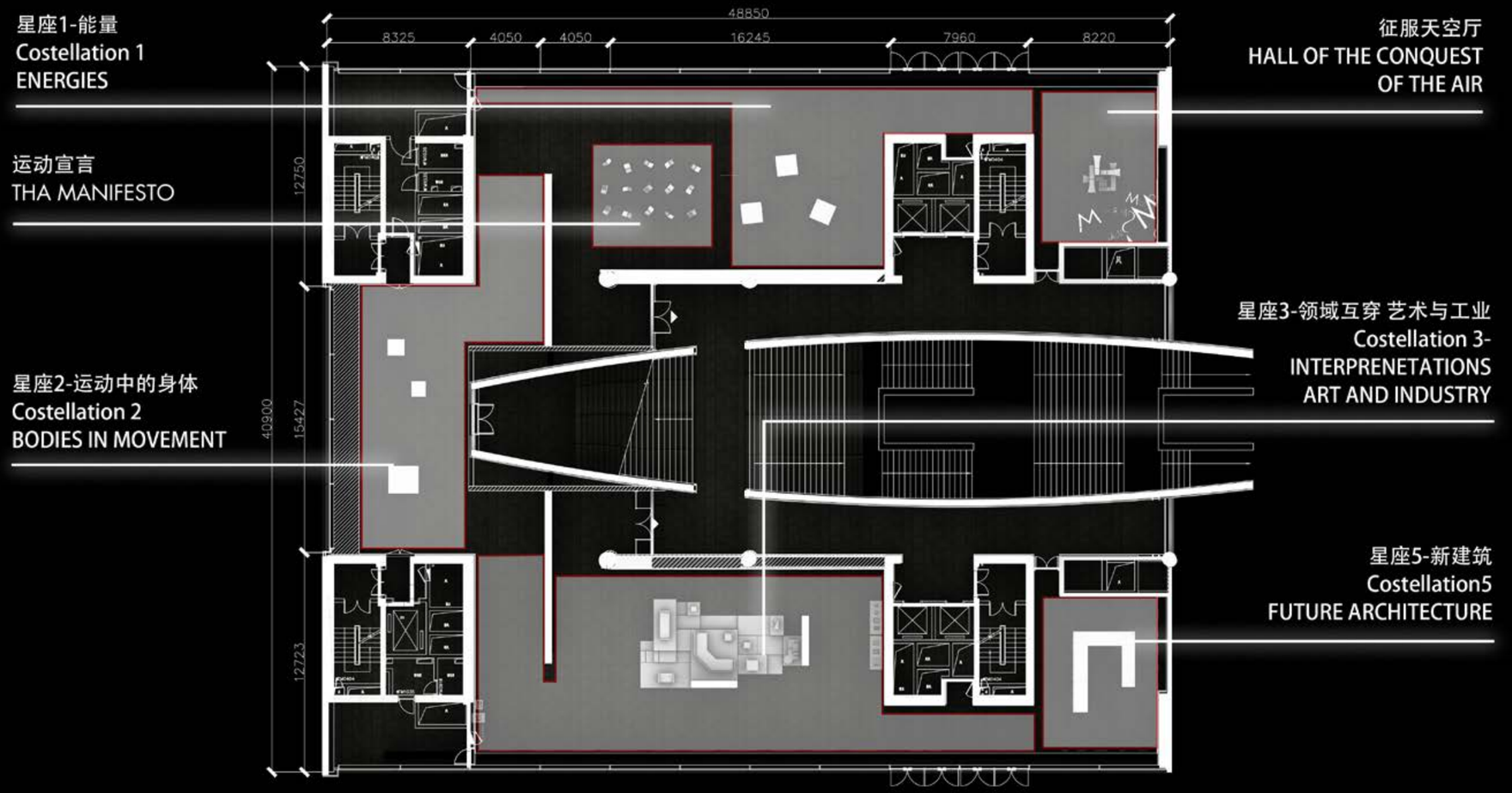
Location: Tsinghua University Art Museum 3F

Site area: 1060 ㎡

Number of exhibits: 284 pieces

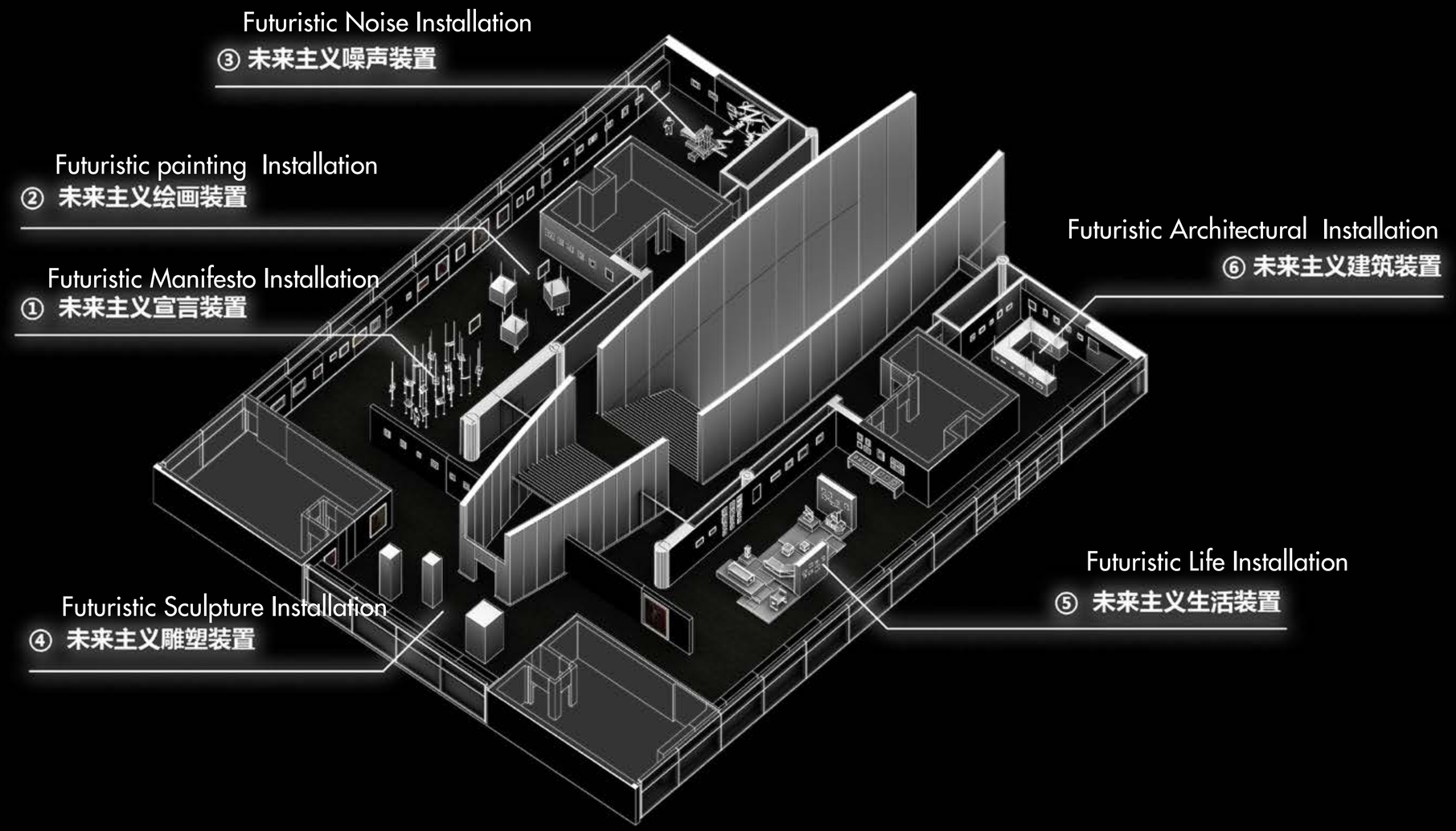
Characterized as: Catholic and cultural communication exhibitions (works selected by history)
Using virtual technology to present the history and characteristics of futurism

Exhibit classification layout



#Virtual reality
#Virtual space
#Museolog
#exhibition design
#Digital media

Virtual Space Design



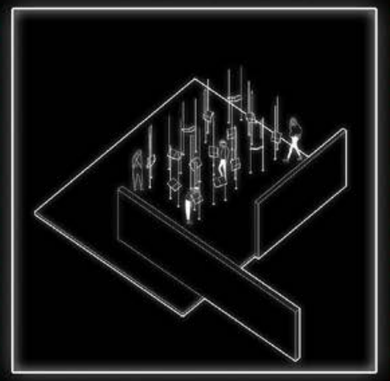
2022/10/4

Exhibit Type

Virtual Space Design

THA MANIFESTO

运动宣言

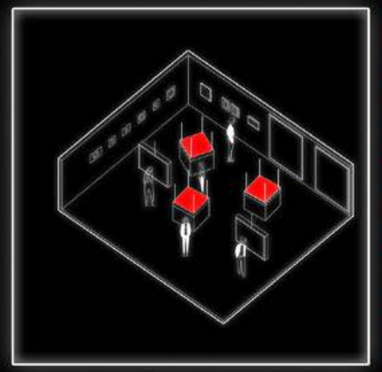


未来主义宣言装置

Futuristic Manifesto Installation

Costellation1
ENERGIES

星座1-能量



未来主义绘画装置

Futuristic painting Installation

HALL OF THE CONQUEST
OF THE AIR

征服天空厅

未来主义噪声装置

Futuristic Noise Installation

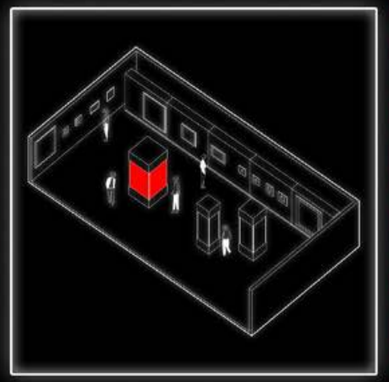
2022/10/4

Exhibit Type

Virtual Space Design

Costellation2
BODIES IN MOVEMENT

星座2-运动中的身体

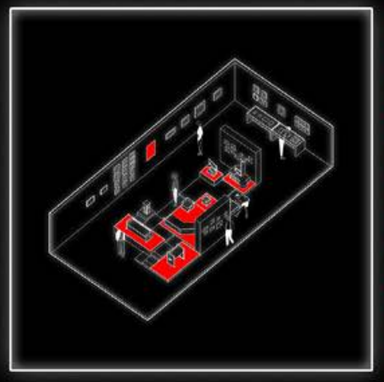


未来主义雕塑装置

Futuristic Sculpture Installation

Costellation3
INTERPRENETATIONS
ART AND INDUSTRY

星座3-领域互穿 艺术与工业

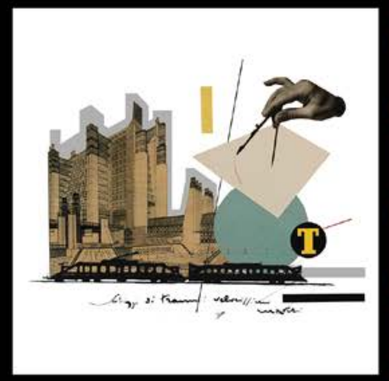


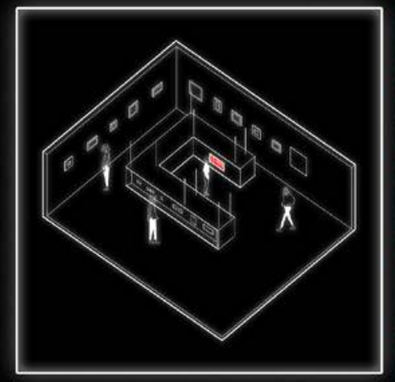
未来主义生活装置

Futuristic Life Installation

Costellation5
FUTURE ARCHITECTURE

星座5-新建筑





未来主义舞台 装置

Futuristic Architectural Installation

2022/10/4

01

清华大学艺术博物馆

TSINGHUA UNIVERSITY ART MUSEUM

未来主义——重建宇宙 *FUTURISM | RECONSTRUCTION OF THE UNIVERSE*

• Vol-01 • Edi-03• 15
June 2022

THA MANIFESTO

The *Manifesto* section covers 17 manifestos of skills in different fields, including *Manifesto Futurist*, published in *Le Figaro* by members of Futurism, such as *Manifesto Manifesto - "Anti-Neutral" Clothing futurista Il vestito antineutrale /Futurist Manifesto - "Antineutral" Clothing*, (1914), *Musical Improvisation* (1921), *Futurist Synthetic Theatre* (1915), etc., Manifesto for the rise of Futurism And development is extremely important content, and it has also become a form of propaganda that various movements in the 20th century scrambled to imitate.

Manifesto Installation

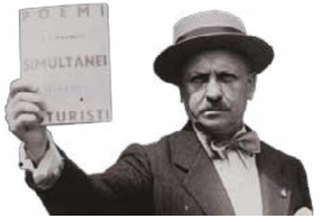
There is no virtual part in this installation, it is to express the media nature of the Futurism Manifesto published in newspapers and publications, hoping to bring the audience back to the time and space environment where Futurism is located, and combine their advocating flight, movement and aerial painting to shape A weightless effect. Viewers can travel through the 17 manifestos and read the contents of the manifesto up close.

Futurist manifesto

Keywords: installation | immersive experience

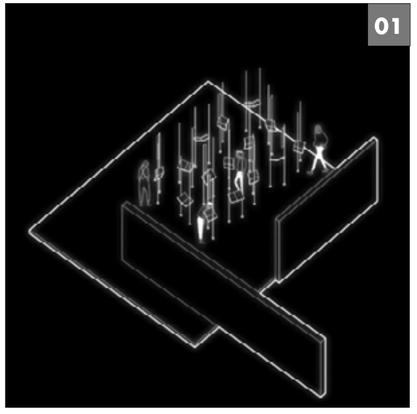
It is from Italy that we now establish Futurism with this manifesto of overwhelming and burning violence, because we want to free this country from its fetid gangrene of professors, archaeologists, antiquarians and rhetoricians.

——The Founding and Manifesto of Futurism
Filippo Tommaso Marinetti
(front page, Le Figaro 20 Feb. 1909)



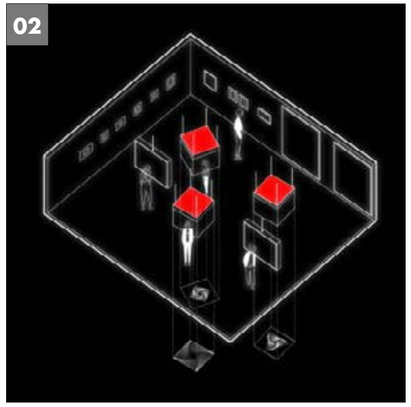
THA MANIFESTO

征服天空厅



2022/10/4

Futurist Painters



This installation is a supplement of virtuality as reality, hoping to reßect the repeated rhythm and inPnite extension of time in futuristic painting through one-way mirror glass and digital LED screen. The content of the LED screen is a digitized and vectorized moving video of futuristic painting elements, designed to allow viewers to understand how futurism reconstructs the world through images.

无题（双面绘画）
Untitled (recto/verso)
贾科莫·巴拉
Giacomo Balla
1918 c

Futurist artists hope to express the “dynamic theory”, they hope to present the “dynamic force” that cannot be seen in their paintings, and they regard the lack of reaction movement, speed, and force as the creative aesthetics of futurist art. The exhibits in this part are mainly to give the audience a new perspective to understand the dynamic that futuristic painting is to express. One of the most important of these is Giacomo Balla’s double-sided painting (Fig. 5.8), which features expressionist figures and landscapes on one side and abstract and dynamic paintings on the other. geometric figures. These two double-sided paintings most prominently reflect the rebellion of Futurist painting.

Our forebears drew their artistic inspiration from a religious atmosphere which fed their souls; in the same way we must breathe in the tangible miracles of contemporary life—the iron network of speedy communications which envelops the earth, the transatlantic liners, the dreadnoughts, those marvelous flights which furrow our skies, the profound courage of our submarine navigators and the spasmodic struggle to conquer the unknown.

——Manifesto of the Futurist Painters
Umberto Boccioni, Carlo Carrà, Luigi Russolo, Giacomo Balla, Gino Severini

Futuristic Painting - Animation Generation Installation
Keywords: interactivity | installation | immersive experience

Costellation 1 – ENERGIES
星座1-能量 未来主义绘画

THE ART OF NOISE

Futuristic Photography - Electronic Music Installation
Key words: interactivity | telepresence | installation

HALL OF THE CONQUEST OF THE AIR
征服天空厅

噪音的艺术
路易吉·鲁索洛
The Art of Noise | Luigi Russolo |1913

Futurism combines advocating industry and noise. According to Bruno Mu Mu's photographic art and the production ideas of Louie Russolo's noise machine recorded by the Zhongsheng factory line, different welding processes are selected, such as: electricity, aircraft, aircraft The sounds of aircraft, new assembly line machines, individual percussion processing, etc., are synthesized and arranged by electronic music, and the background sound of the exhibition hall.

Let us cross a great modern capital with our ears more alert than our eyes, and we will get enjoyment from distinguishing the eddying of water, air and gas in metal pipes, the grumbling of noises that breathe and pulse with indisputable animality, the palpitation of valves, the coming and going of pistons, the howl of mechanical saws, the jolting of a tram on its rails, the cracking of whips, the flapping of curtains and flags. We enjoy creating mental orchestrations of the crashing down of metal shop blinds, slamming doors, the hubbub and shuffling of crowds, the variety of din, from stations, railways, iron foundries, spinning mills, printing works, electric power stations and underground railways.

离开！让我们爆发吧，因为我们再也无法抑制我们最终创造一个新的音乐现实的愿望，在脸上慷慨地发出响亮的耳光，抛弃小提琴、钢琴、低音提琴和哀伤的风琴。让我们爆发吧！

让我们用耳朵比眼睛更警觉地穿越一个伟大的现代首都，我们将从金属管道中的水、空气和气体的涡流中，从无可争辩的动物性呼吸和脉搏的咕噜声中，从心悸中获得乐趣。阀门，活塞的来来去去，机械锯的嚎叫声，电车在铁轨上的颠簸，鞭子的劈啪声，窗帘和旗帜的飘动。我们喜欢在金属商店的百叶窗倒塌、砰的一声关上、人群的喧嚣和洗牌、车站、铁路、铸铁厂、纺纱厂、印刷厂、发电站和地下铁路的各种喧嚣中创造心理协调。

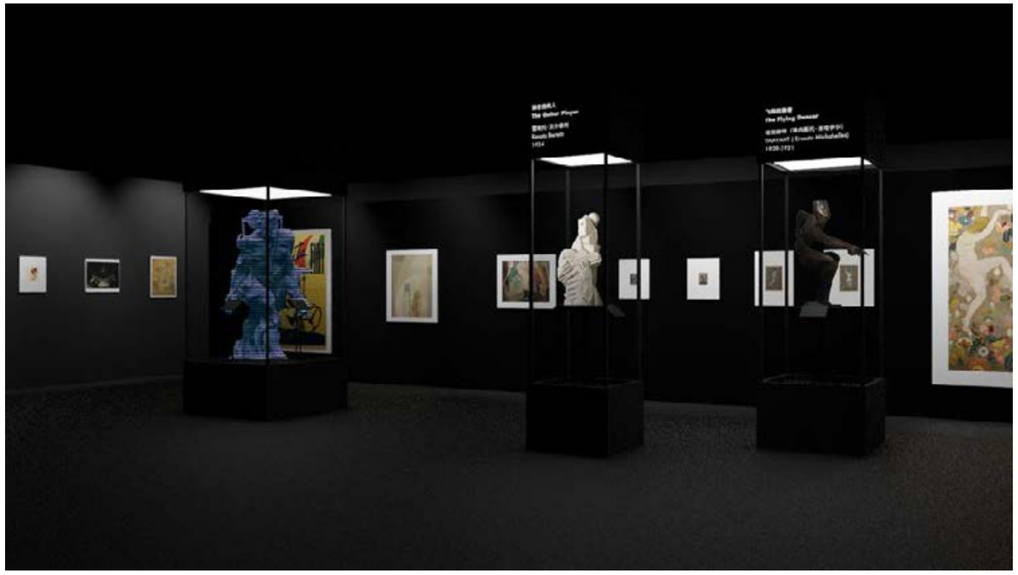
自由之声
1915
菲利波·托马索·马里内蒂

Words in Freedom
Filippo Tommaso Marinetti

噪音机器
1913
路易吉·鲁索洛

Intonarumori (noise machines)
Luigi Russolo

BODIES IN MOVEMENT



Futuristic Sculpture - Sculpture Holographic Projection Installation
Key words: interactivity | telepresence | installation

Costellation 2 - BODIES IN MOVEMENT
星座2-运动中的身体

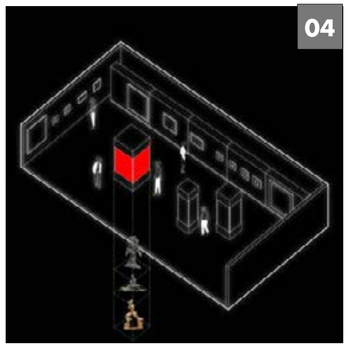
Futuristic Sculpture
Umberto Boccioni

The sculpture installation is located in the area of "Constellation 2 - Body in Motion". As mentioned above in the exhibit list, some sculptures such as Umberto Boccioni's "Unique Form in the Continuity of Space" and "A Bottle in Space" The Extension of " has only photographs, no originals, and both are representative works, both reßecting the creative methodology of Futurist sculpture. Therefore, the author hopes that through the holographic projection of the sculpture and the dynamic display generated by the sculpture, the audience can better understand the relationship between the body and space that Futurism focuses on.

In sculpture as well as in painting, one can renew art only by seeking the style of movement that is, by forming systematically and definitively into a synthesis that which Impressionism offered in a fragmentary, accidental, and consequently analytical way.
Naturally we will create a sculpture of environment. A Futurist sculptural composition will contain in itself the marvelous mathematical and geometric elements of modern objects. These objects will not be placed alongside the statue, like so many explanatory attributes or separate decorative elements but, following the laws of a new conception of harmony, they will be embedded in the muscular lines of a body.

——Technical Manifesto of Futurist Sculpture
Umberto Boccioni

The themes expressed in this part of the exhibits are all related to people, including poster designs for operas and circuses, sculpture painting sketches, human sculptures, and more. Sculptures include photography of sculptures by Emilio Sommariva, as well as Renato Bertelli's "The Guitarist" and THAYAHT's "Flying Dancer" ", these works well reflect the "movement style" and the fusion of the body and mathematical geometry described by Umberte Boccione in the Manifesto of Futurist Sculpture Technique. They preserve the paths and curves in motion and shape them into solids.



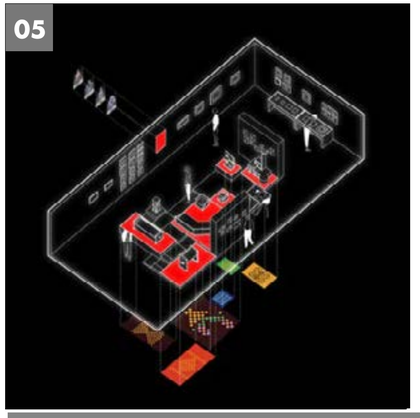
空间连续状态下的独特形式
1913
翁贝托·薄邱尼

Unique Forms of Continuty in Space
Umberto Boccioni

空间连续状态下的独特形式
1913
翁贝托·薄邱尼

Unique Forms of Continuty in Space
Umberto Boccioni

星座3-领域互穿 艺术与工业
Costellation 3 - INTERPRENETATIONS（ART AND INDUSTRY)



This part of the exhibit includes geometric tessellation weaving patterns by Studio Boggeri, tessellation weaving and floor pattern designs by Dario Di Gese, Nicola Dierge Ceramic tea set and TATO by Nikolay Diulgheroff are part of the overall design for Italian aviator Italo Balbo's living room. The most important thing is to create a futuristic influence on daily consumption and life. Giacomo Balla, who had tried to provide new patterns for the tailoring of shirts and suits based on the geometrical principles of non-objective painting, innovated a pragmatism and unisex dress based on progressivism Form and volume only follow the concept of inherent constructive principles. It reflects the purpose of futuristic cooking to increase the sensory experience of meals.

Every neutral of our future hopefuls, cut off from every neutral nation, terror and widow, tragic and tragic, romantic future and us we want to look at with future liberalism and our future freedom. Militant clothes.

——Manifesto futurista Il vestito antineutrale /Futurist Manifesto - "Antineutral" Clothing
Giacomo Balla

Combine futuristic furniture, utensils, patterns, advertising and other industrial and commercial products to create a historic space, magnify the small draft of the ßoor pattern on the virtual screen in the space, reshape a "futuristic time and space", and let the audience understand the future Doctrine is an all-round movement that not only includes literature and art, but also penetrates into people's lives through industrial manufacturing. At the same time, the Þlter interactive device of futuristic clothing is added, which can give the audience photos of the scene in the futuristic scene.

Futuristic Life - Scenario Reproduction Installation
Keywords: installation | immersive experience | remote

06

清华大学艺术博物馆

TSINGHUA UNIVERSITY ART MUSEUM

未来主义——重建宇宙 FUTURISM | RECONSTRUCTION OF THE UNIVERSE

• Vol-01 • Edi-03• 15
June 2022

ARCHITECTURE

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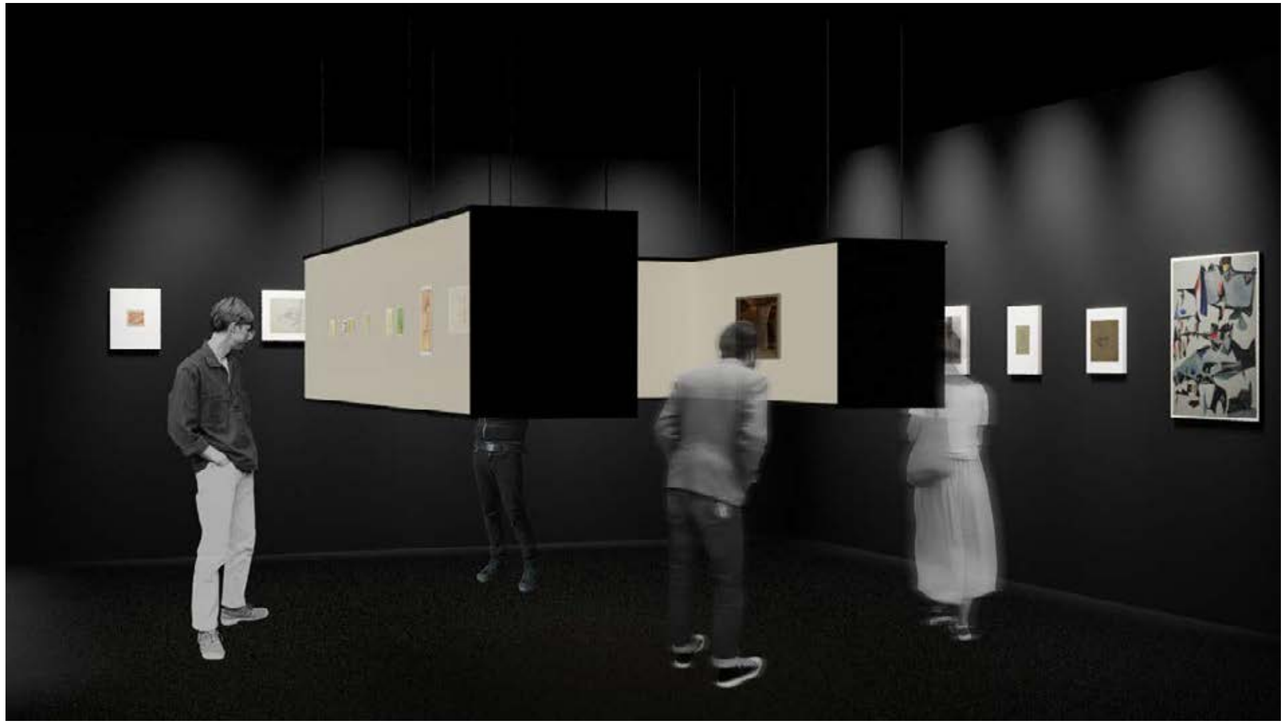
CHAPTER 5
Design Practice - Italian Futurism Exhibition

42

Works in the architectural section include architectural sketches by Antonio Sant'Elia and architectural drawings and stage models by Virgilio Marchi. Anthony Sant'Elia is a representative figure of futuristic architecture. Before modernism became popular, he predicted the architectural scene of today - cement, steel, glass and textile fibers will replace the traditional wood and stone and become the new future of futuristic architecture. Material. But his most iconic work is not included in the exhibit. In his most important work, Città Nuova, Santa Elia argues that the primary task of an industrial age city should be to facilitate transportation in the most efficient way possible.

The futuristic stage performance is reproduced using virtual technology and perspective effects. At the same time, the form and material of the space installation are combined with the modern form advocated by futuristic architecture. The stage model mainly shows the stage model of the first act and the third stage designed by Virgilio Marchi for the famous historical stage play "Boris Godunov", showing the scene of the spring festival in Florence.

"Boris Godunov", opera



Futuristic Architecture - Stage Performance Installation

Keywords: installation | immersive experience | remote

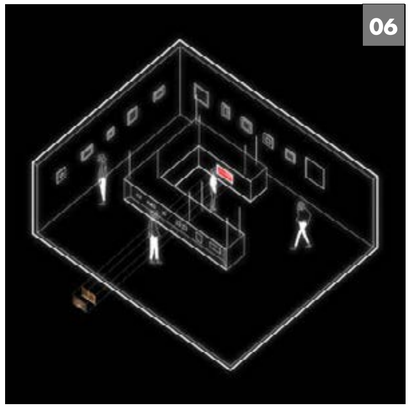
That Futurist architecture is the architecture of calculation, of audacious temerity and of simplicity; the architecture of reinforced concrete, of steel, glass, cardboard, textile fiber, and of all those substitutes for wood, stone and brick that enable us to obtain maximum elasticity and lightness;
That Futurist architecture is not because of this an arid combination of practicality and usefulness, but remains art, i.e. synthesis and expression.

——**Manifesto of Futurist Architecture**
Antonio Sant'Elia

"Boris Godunov" Act 1 Scene 3
Virgilio Marchi
Stage Model, ca.1930

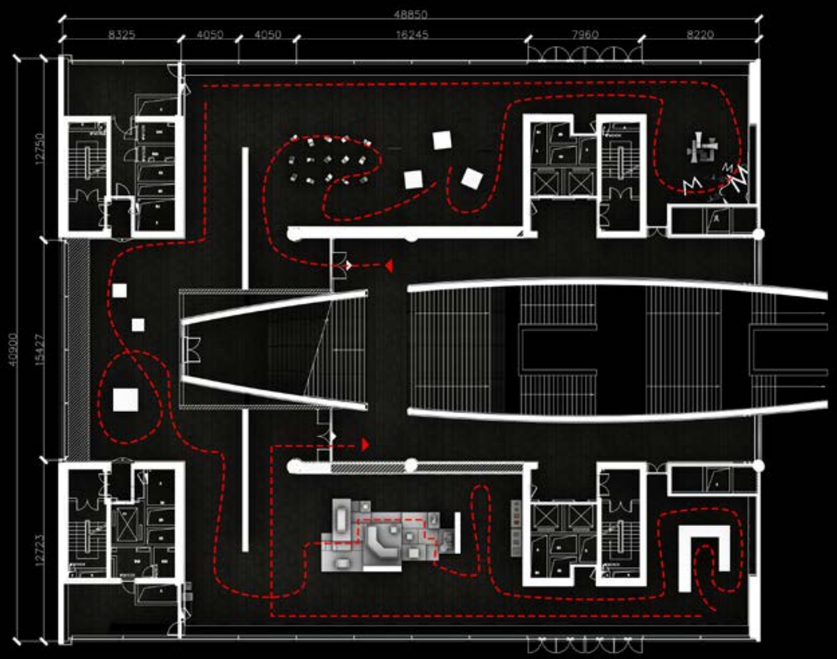
Costellation5

FUTURE ARCHITECTURE



2022/10/4

Flow line layout & Lighting layout



#Virtual reality
#Virtual space
#Museolog
#exhibition design
#Digital media

exhibition effect

40

42

#Virtual reality
#Virtual space
#Museolog
#exhibition design
#Digital media

CHAPTER 6

Conclusion

Summary of views

Future Outlook

Summary of viewpoints

At present, due to the development of information technology, both the environmental design industry and the Internet industry have entered a state of saturation. Environmental design has been able to use a wealth of technical means to realize various complex spatial forms. Since postmodern, the breakthrough of spatial forms and the process of visual art have also been inseparably linked, and contemporary art has been separated from the form itself, thinking about space. It should also be detached from the material itself - space is a social product, but also has a political nature. For such public spaces as exhibitions, it is necessary to consider the relationship between space and society in order to clarify the form, content and needs of exhibition design.

The saturation of the Internet 2.0 stage has made more social resources pour into the development of Internet 3.0. All sectors of society are full of expectations for the experience era of the Internet of Everything, and people can't wait to develop virtual space. This confirms Baudrillard's speculation about virtual reality to a certain extent. Virtual space allows the curatorial team to create, quantify, and enhance various exhibition experiences, but as an environmental designer, what should be paid attention to is how to use virtual space reasonably to optimize the exhibition, so as not to over-rely on, abuse and lose the spirit of the exhibition itself. . Since the process of building a fully virtualized space and the participating designers are different from traditional physical spaces, the study of the essential functions of museums and exhibitions also provides a reference for the designers of virtual spaces for user needs and experience.

Future Outlook

With the upgrading of the virtual space in China, more images, digital art, and new media art will be added to the exhibition. As environmental designers, we still need to consider how to make better use of the resources in the exhibition space to display works such as these. While the viewing experience of the audience is constantly upgrading, we should also increase more cross-departmental cooperation to show how the exhibition is presented.

Virtual technology provides super-ordered means for space design. Due to various physical constraints, the solutions provided by virtual space also have many new opportunities for realization of architectural designs on paper. Environmental designers can serve as a new direction of exploration in the future.

The Internet has accumulated a huge user base, and virtual space has actually opened a more “democratic” entrance for exhibitions. Virtual space will become a new virtual world and become a communication platform and exhibition. Designers and curators can use this "entrance" to give the public a better education and experience.