

# The Paradigm Shift of Spatial Research: The Triadic Construction of New Media Exhibition Space

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## Abstract

“Space” and “time” are the basic forms of material existence, but for a long time, people tend to prefer the study of time, and ignore the significance of space in people’s social life. Until the emergence of the “space turn” in the 70s of the 20th century, Lefebvre called for the humanities and social sciences to shift the perspective of research to the spatial level, arguing that the academic community has seriously underestimated the function of space for centuries, and the traditional idea of seeing space as rigid and static should be criticized. As a result, space is no longer just a noun concept, but a product of nature, social development and various events, and people’s definition of space has undergone a fundamental change. While the importance of space and space in understanding and interpreting cultural and social phenomena has gradually become prominent, the exhibition space as a social and cultural window has also undergone a transformation of space construction, and many exhibition activities have begun to use new technologies and new media to expand and package the original exhibition space, and have begun to pursue the experience and immersion of space, enriching cultural expressions and disseminating social values through space. Compared with the traditional exhibition space, the contemporary exhibition space environment with the intervention of new media technology pays more attention to the collection and mobilization of visitors’ senses in the exhibition space environment. Breaking the traditional linear time clues, it guides visitors to form their own display content architecture with dynamic streamlines to obtain a unique spatial experience, and space and experience have begun to become the theme of contemporary exhibition space. Therefore, the study of the social attributes of space provides a dynamic analytical framework for the new media exhibition space, which is different from the “instrumental” construction logic of the traditional exhibition space, and introduces the three-dimensional structure of material exhibition space, symbolic narrative space and daily social space, so that the exhibition space is no longer a static and passive container in the traditional sense, but is endowed with dynamic and multi-dimensional meaning, and becomes the intersection of society, culture, and practice.

## Keywords

Spatial steering; triadic dialectics; new media exhibition space; The return of technical rationality



# 1. THE “INSTRUMENTAL” LOGIC OF TRADITIONAL EXHIBITION SPACES

## 1.1 Linear spatial logic

The traditional exhibition space is a typical hierarchical space in terms of spatial layout and presentation of works: different exhibition halls have obvious spatial divisions: the exhibition hall layout is carried out according to the category of exhibits, such as painting gallery, bronze gallery, calligraphy gallery, etc.; The artworks in each exhibition hall are displayed linearly according to the time of creation, and each exhibition hall has an exit and entrance. In terms of spatial nature, it is a neutral and homogeneous exhibition environment. Therefore, the spatial layout of the traditional exhibition space is mainly based on geometric spatial patterns, and the sense of order is emphasized by “linearity” to guide the visitors’ viewing order.

In the previous exhibition hall, we can see that the two-dimensional plane display method is the most common, the designer through the interface of the exhibition board, the exhibition wall and the booth as the medium of information bearing, to display the theme of the development of the timeline to the display content and the division of the exhibition space to form a two-dimensional plane linear display mode, this display mode makes the use of space to achieve a perfect balance, will not cause a sense of visual “crowding”. For example, the Hongyan Revolution Memorial Hall (Fig 1), built in 1999, is located in Chongqing, and this memorial hall belongs to the “Red Culture” memorial hall built earlier, and the exhibition hall tells the story of the Hongyan spirit formed by the Communist Party of China in the struggle for national liberation and people’s democracy in the practice of struggle for national liberation and people’s democracy under the leadership of the Southern Bureau of the Communist Party of China during the War of Resistance Against Japanese Aggression and the early stage of the Liberation War.



Figure 1: Hongyan Revolutionary Memorial

At the same time, due to the constraints of traditional display forms, the display space of traditional artworks is often presented as a simple rectangular structure, and the internal space is not obstructed, but has the same entrance, resulting in a single route for visitors and an obvious linearized route. The display units also present a deterministic and linear superposition structure in the plane form of the space, and the continuity of the space can be determined by the opening and closing of the whole space. The flow of visitors in the traditional exhibition space is roughly divided into straight lines and circular lines. (Fig 2) the linear tour route

sets the entrance and exit opposites, and visitors pass through the exhibition hall in a straight line according to the order of the exhibits to complete the visit. In the loop route, visitors need to complete a “turnback”, and the entrance is the exit, resulting in a circular viewing mode.

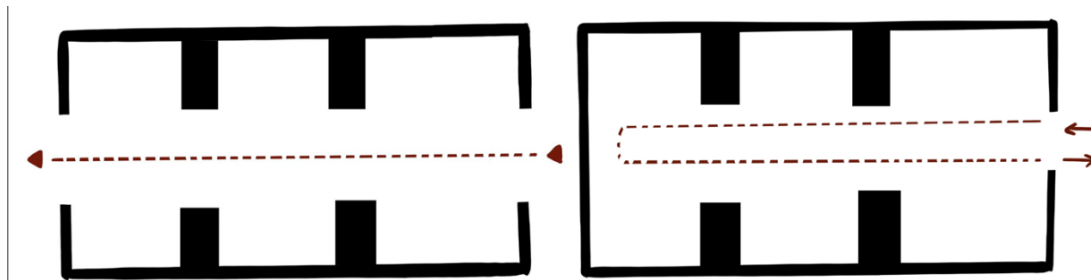


Figure 2:Left: straight line;Right: Ring line

## 1.2 Static perceptual environment

Vision is the sensory channel through which human beings receive the most symbolic information and obtain information the fastest. When we open our eyes to see the world, vision is a basic means for human beings to perceive the world, and the relationship between people, people and society, and people and culture is constantly constructed through the act of “seeing”. This view has been confirmed in psychology: “Vision is the main way for people to understand the world, and human beings form visual representations in their minds through the practical activity of seeing, and then construct memories and develop cognition”. (Liu X H,2020)

Static perception refers to people’s behaviors such as stopping and resting in the exhibition space, and the overall perception of environmental elements through sensory organs dominated by vision. In the article “Visual Field”, Zhao Junxiang divides the macro visual information in the exhibition space into three types: the first is based on the visual perception obtained in the real space, including the material, color and form of the exhibits themselves. The second is the spiritual value contained in the exhibits, that is, the inner expression of the exhibits. The third is text and visual information that is indirectly transmitted through the media, such as display boards, information screens, etc. When the exhibits are framed and hung on the wall or placed in isolation in a certain position, the frame can be regarded as another space that is different from the original space of the artwork, but the mosaic relationship between this space and the overall space also creates a neutral, sacred, and static space style. Vision has become the only way to observe the work and the space. In this static visual perception, space is also stationary, becoming a container of knowledge. In the exhibition hall of the Legacy of the China Arts and Crafts Museum, the overall spatial background is shown as a dark gray, so as to focus the visitors’ attention on the utensils and words, and introduce the production process of the guqin with words. (Fig 3)



Figure 3:Exhibition Hall of China Arts and Crafts Museum

### 1.3 One-way information reading

In McLuhan's theory: the medium is the environment. He believed that every medium is an extension of the human body, and that each extension changes the equilibrium of the five senses and creates a new environment. When a medium is used universally for a long time, it shapes a social culture. Exhibition activity is a social activity for the purpose of disseminating information, when the exhibition designer uses various spatial modeling factors and means to block or enclose the space, and uses various media to create a specific atmosphere, the purpose is to enable the audience to obtain display information through this spatial environment. Traditional exhibition activities are limited by fixed time and space, and the dissemination of information is singular.

For example, in a 19th-century art salon, space and painting were separate from each other (Fig 4). The walls are only used as supports, and they are covered with paintings from top to bottom, leaving no gaps like wallpaper. "Each painting is seen as a self-contained whole, completely isolated from the neighboring paintings by the heavy borders and the complete perspective system within the painting." (Li H;Shen K, 2009) The relationship between the visitor and the exhibit is that of two independent individuals with a sense of space and distance, and the visitor receives information in the exhibition space by "seeing".



Figure 4:19th century art salon

Therefore, the dissemination of information can only form a passive single mode in the traditional exhibition space, and the visitor is a passive visual experience mode based on the physical exhibits. "Seeing, which precedes words, is not only an individual experience, but also an essential historical experience of the audience's relationship with the past, that is to say, the search for the experience that gives meaning to life, and the experience of trying to understand history so that we can become creators in it". (John B; Dai X Y, 2005) Its experience mode is to form a retrospective spiritual resonance of visual experience to stimulate historical experience from the perspective of the reader's "seeing".

## 2. A CONTEMPORARY TWIST ON TRADITIONAL EXHIBITION SPACES

As a place for human survival and development, space is also the carrier of human daily activities and artistic creation, the creativity of space is enhanced, and its form is constantly changing, which in the exhibition space has also begun to focus on "space" to "tell stories", through the shaping of the exhibition space environment to guide visitors to participate in the exhibition experience, and to construct their own spiritual perception. At the same time, new technologies and new media are constantly integrated in the construction of exhibition space, as a means to assist exhibition activities and the shaping of exhibition space, which also requires the collaboration of multiple disciplines to create a space that conforms to people's life experience.

Therefore, the current new media exhibition space has gradually become a common space shaping mode for various theme exhibition activities, and the combination of materialized content and non-material means maximizes the carrying capacity of display information and the interest of display activities. As an "upgrade" of the traditional exhibition space, the new media exhibition space first intervenes in the environmental construction of the exhibition space from multiple sensory levels such as vision, hearing, and touch by means of digital technology. Secondly, it provides an interactive display medium or carrier as a work of art, expands the interactive relationship between people and works, and creates a new reading code for display activities. However, the application of new media and new technologies has also promoted the core of display to gradually shift like the pursuit of novelty experience mode, and the "landscape" of display form and the "shallowness" of display content have begun to become problems faced by the construction of contemporary new media exhibition space. A beautiful and interesting space began to outweigh the content with depth of thought, and the form of the space began to become the standard for measuring an exhibition activity, so there was a retrospective of the "instrumental" cognition of space. It's just that in the contemporary new media exhibition space, the "instrumentalization" of the space is wrapped by a large number of visual illusions created by technology, and people's experience in the new media exhibition space also stems from the shallow cognition of the content in the exhibition space.

## 3. A CONTEMPORARY TRANSLATION OF LEFEBVRE'S TERNARY DIALECTIC

Lefebvre's spatial triadism divides space into three dimensions: natural space, spiritual space and social space, and also corresponds to three structures of space production: "spatial practice", "spatial representation" and "representational space", which are perceptible, conceivable and experiential. Therefore, the division of spatial ternary exists in any space type, and at the same time provides a framework for us to understand and analyze different spatial structures.

### 3.1. Spatial practice of new media exhibition space

The spatial practice of the new media exhibition space combines the real space with the material attributes and the virtual space with the technical attributes, which can also be expressed as the new media exhibition space is the exhibition space entity with media attributes.

The production of new media exhibition space needs to occupy a certain physical space, so the new media exhibition space has material attributes, and at the same time, it is also a physical space that can be perceived.





The “objects” in the new media exhibition space include exhibits and display props, and visitors can perceive the exhibits and display props as “things” through sensory experiences such as sight, hearing, touch, and smell, so as to gain cognitive experience. Therefore, “things”, as the core experience of perception, are existing things and are intuitively perceived. According to the previous research, the traditional exhibition space embodies a kind of instrumental attribute, which uses the space as the background of the physical exhibits to form a sacred space, which isolates the interconnection between the exhibits and the space, and the mechanical relationship between the two is simply the container and the content. As new media art and technology began to intervene in exhibition activities, image-based digital screens and interactive control devices began to enter the exhibition space, the traditional physical display began to turn to a variety of media information display, and the space and exhibits were no longer limited to the traditional physical means of insertion, and developed in the direction of mutual integration and mutual shaping.

In the new media exhibition space, the exhibits are not arranged in the space or hung on the wall according to the traditional display method, but by embedding digital intelligence means, covering every physical interface of the physical space, “reducing” the overall perception space with the same function and concept as the display device. For example, in 2019, the “Immersive Van Gogh Exhibition” (Fig 5), which toured in China, pasted LED screens on the square space interface to show the display content, taking into account the ground effect in the form of ceiling projection, and the ground projection and the film content cooperated with each other, occasionally showing special effects scenes such as lightning, smoke, and falling chrysanthemum petals. In the perception and interpretation, the construction of the transformation of space like exhibits is realized.



Figure 5: Van Gogh: The Immersive Experience

### 3.2. The spatial representation of the new media exhibition space

In Lefebvre's *The Production of Space*, the representation of space is interpreted as the projection of physical space, the projection of the mind on the basis of physical space as an event, which is expressed in the language of knowledge or symbols. Therefore, it is a symbolic narrative space based on the materialized exhibition space. According to the cultural philosopher Ernst Cassirer, “all forms of culture are forms of symbols”. (Cassirer, 2013) The perception of symbols, on the other hand, is based on associations with past experiences, and “when we move from the impression of one object to the idea or belief of another, we are not determined by reason, but by the principle of habit or association.” (Hume; Guan W Y, 1997) Just as when we see blue we think of the sky and the sea, when we see fire, we think of burns and pain. Therefore, the use of symbols is a kind of construction of artistic conception, the new media exhibition space as a kind of display activity space that reflects social and cultural phenomena, its spatial artistic conception itself is intangible, so it can only be expressed with the help of concrete and perceptible material forms, which is the construction stage of perceptual space, and the conceived space is the stage of recognizing and thinking about these material symbols, and visitors can experience the cultural spirit contained in it through the realization of the spirit of the perception place and the dialogue of the space. Zhu Legeng's Art Exhibition (Fig 6) held at the China Arts and Crafts

Museum in 2023 extracts Chinese cultural symbols and constructs an aesthetic image with the characteristics of the ancient Chinese image of “the unity of heaven and man”. He also wrote: “This concept of spatial structure comes from the concept of the unity of heaven and man in Chinese culture, and the concept of ‘viewing the world under heaven’.” The new media exhibition space embodies the theme of the exhibition in the form of symbols, so that visitors can associate the visual symbols with the theme of the exhibition, and finally realize the production of the conceived space through the interpretation of the spiritual level.



Figure 6 :Scene of Zhu Legeng’s Art Exhibition

### 3.3. Symbolic new media exhibition space

The symbolic new media exhibition space is a space directly owned by visitors, a real experience space, a space that truly reflects people’s daily life, integrates and transcends space practice and spatial appearance, that is, people’s daily social space, but also the use of material space and symbolic space. The symbolic new media space accommodates various factors such as space and society, culture, etc., and the use of new technologies and new media also makes the spatial relationship between people and people and objects in the space more complex.

As a kind of cultural entity space that deeply participates in the life of the public, the exhibition space is also the “material public sphere” (Habermas,J;Cao W D,1999) in the mouth of Jürgen Habermas, and is a social space integrating social communication activities such as information transmission, public performances, public communication, and leisure and entertainment. However, the traditional exhibition space is often regarded as a container for placing exhibits or a background for display, and its socio-cultural and cultural exchange attributes have not attracted widespread attention. However, with the increasing development of media technology, “physical places are no longer necessary elements of communication”. (Meyrowitz Joshua, 2002)With the increasing development of digitalization and globalization, the physical space of the exhibition is unprecedentedly constructed with the network virtual space to form a more complex cultural landscape, when the public through mobile phones, computers, tablets and other network intelligent terminals wander through the website, social media and related short video platforms and other online virtual spaces to obtain the “grass” of a certain display activity, and with a variety of forms such as “punching in”, “learning”, “nostalgia” and other forms into the physical space to watch the exhibition offline, display every exhibit in the space, Every space, even the little-known “corner”, has the potential to be disseminated across fields and groups with the public’s digital practices, and eventually become a social topic or Internet celebrity “check-in place” (Fang L L;2023)that everyone can participate in.

The exhibition space is not only a place for production, but also a tool and purpose for production. As a constructive force, new media technology not only connects the physical exhibition space with the virtual cultural space, but also enables the often neglected visitors to actively participate in and transform the structural relationship between the exhibition space and themselves. The new media exhibition space is used as a creative platform for social communication, and visitors no longer engage in their own “knowledge production” all the time. Therefore, space transcends the attributes of ordinary production sites, and shifts from “the pro-

duction of things in space to the production of space itself.”(Henri Lefebvre ;Liu H Y,2022)As a new “Internet celebrity check-in place” in 2023, “Creating in Inheritance: Modeling, Performance, and Art Scenes--Zhu Legeng Art Exhibition” is just as the famous art theorist Professor Li Xinfeng said: “This is a “phenomenal” exhibition, and there has never been an art exhibition so close to the audience and let the audience join in so deeply.” In the two groups of works, “The Triple Realm of Flowers” and “The Spirit of Flowers” (Fig 7), the behavior of the visitors has become an important part of the expression of the works, and visitors who come every day with the purpose of “checking in” have flocked to the “mirror space” plastered with mirrors around them, and played various poses with their bodies. Zhu Legeng’s art exhibition does not adopt the traditional way of publicity and promotion, but the spontaneous sharing of visitors on social platforms has formed a huge flow, and more and more visitors have entered it and participated in the creation.



Figure 7:Scene of Zhu Legeng's Art Exhibition

#### 4. THE RETURN OF RATIONALITY UNDER THE CARNIVAL OF TECHNOLOGY

In contemporary society, the real space is almost entirely dyed with technological factors. In the relationship between space and technology, first of all, any technology is developed in a given space, and different technologies also need to be expressed through different spatial forms. Secondly, space is also modified and shaped by technology, and different technologies can shape different forms of space. Therefore, the increasing maturity of technical means provides a form of “reproducing reality” for the new media exhibition space. Here, art installations such as exhibits, sounds, and multimedia attract the attention of visitors in their own ways, which not only pull visitors into a new representational world composed of space, technical objects, and visual symbols, but also form a “panoramic intellectual illusion”. paralyzing the thoughts and actions of visitors. The intervention of technology has accelerated the virtualization of the world, and at the same time raised people’s expectations for visual sensory capture. Bella Dicks argues that “a model that simply provides a sensory experience cannot demonstrate knowledge or principles that the subject can use elsewhere if the content of the exhibition itself is underinvested.” (Bella Dicks, 2004)That is to say, if we rely solely on the external form of technology to shape and ignore the support of the display connotation, it is difficult to produce concrete perception of the illusion experience created by technology alone, and it is impossible to link emotions with the real world, so it is impossible to escape the “dilemma” dominated by appearances. In the final analysis, technology is only a means of spatial production, and it cannot become a “dominant force”. As a social subsystem that includes politics, economy, culture, education and other categories, the real core of the exhibition should be: “To use the ideological conflict and collision of an exhibition to leverage the social



exchanges of a wider range and more people, and to allow the audience to participate in a deeper cultural struggle.” (Zhuang Y N,2021)Therefore, it is the future development direction of the new media exhibition space to resist the domination of science and technology with the core of culture, to take the exhibition itself as a cultural practice activity, to dominate the core of the display with the core of culture, and to connect the spatial level and the audience experience with technology.

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