

A Study of Image Composition on Curved Thematic Walls at the Entrances of Cultural Exhibition Halls

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Abstract

The spatial form of a thematic wall directly influences the narrative impact of an exhibition's opening, particularly when diverse cultural content spanning multiple settings must be organized. Taking the design of an entrance thematic wall in a cultural exhibition hall as a case study, this paper examines image composition across an elongated curved surface. Beginning with the functional requirements of entrance thematic walls, the study compares straight, angular, enclosing, and curved wall configurations in terms of information presentation, spatial guidance, and thematic integration, and assesses the suitability of the curved configuration for the content and site conditions of this case. It then examines the challenges of viewing while moving and receiving information in segments along a curved wall. Drawing on the sequential viewing mechanism of traditional handscrolls, the paper proposes a design strategy of "establishing the tone—continuous unfolding—central convergence." This strategy connects different scenes through depictions of the regional environment and brings themes together through a central motif and spatial nodes. The study offers a reference for the design of curved entrance thematic walls in cultural exhibition halls with similar content organization needs and spatial conditions.

Keywords: Cultural exhibition halls; Entrance thematic walls; Curved exhibition walls; Viewing while moving; Image composition

1 Introduction

The entrance to a cultural exhibition hall is the first spatial interface visitors encounter before engaging with the exhibition content. It serves as a transition from the external environment into the exhibition space. The entrance thematic wall is often located at the beginning of the visitor route and plays an important role in shaping visitors' first impression of the exhibition. Unlike an ordinary decorative wall, it conveys the exhibition theme and helps shape the spatial experience. As visitors enter the hall, they typically use the thematic wall to form an initial understanding of the exhibition's subject and atmosphere. Its design therefore involves more than creating images; it also requires establishing a narrative relationship between visual expression and the entrance space as a whole [1][2].

In exhibition design practice, there is no single fixed form for an entrance thematic wall. Different wall configurations emerge from the combined demands of exhibition narrative and site conditions. The shape of the wall affects how images unfold, as well as how visitors view and perceive the theme after entering the hall. When the wall must present a substantial amount of cultural information, the choice of form becomes especially consequential for the narrative effect at the start of the exhibition. An important design question is how to establish a clear sense of the theme within a limited entrance space while connecting the visual content to visitors' paths through it.

When an entrance thematic wall must present figures, clothing, architecture, scenes of everyday life, regional landscapes, and cultural symbols, organizing diverse content across multiple scenes becomes a central challenge. Such content is extensive and varied: the design must preserve the distinct qualities of each scene while establishing a clear thematic direction at the entrance. Discussions of content organization in exhibitions on ethnic cultures provide a useful point of reference [3]. If the material is handled simply as a flat collage or an assortment of symbols, cultural elements can become isolated visual fragments that lack an underlying narrative connection. The design must therefore address not only what to display, but also what form the wall should take and how visitors will encounter its content.

Research relevant to this study addresses exhibition narrative, the organization of ethnic cultural content, the expression of a sense of shared community [4], and the translation of traditional elements into visual and spatial forms [5]. Building on these discussions, this paper focuses on the curved entrance thematic wall as a specific spatial interface. In an actual exhibition space, visitors do not always see a thematic wall as a complete, flat image. Rather, they perceive it gradually as they move through the space. It is therefore necessary to consider both the wall's form and the visitor route when examining the continuous organization of images and the recognition of the overarching theme.

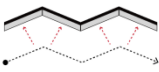
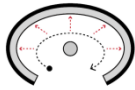
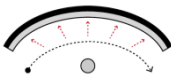
Against this background, this paper examines the choice of spatial form and the organization of images through a design case involving a curved entrance thematic wall in a cultural exhibition hall. It first considers the functional requirements of entrance thematic walls and compares straight, angular, enclosing, and curved configurations to assess their suitability for organizing the entrance narrative. It then explains how the curved wall relates to the content and site conditions of the case. Next, the paper examines how visitors perceive images unfolding across the curved surface as they move

through the space. Finally, drawing on the sequential viewing mechanism of traditional handscrolls, it proposes a three-stage approach to image organization — "establishing the tone, continuous unfolding, and central convergence"—and explores how cultural content spanning multiple scenes can be transformed into a visual narrative on a curved entrance wall.

2 Adaptability of Entrance Theme Walls in Cultural Exhibition Halls

When an entrance thematic wall presents diverse cultural content across multiple scenes, it must create a coherent first impression of the exhibition while preventing individual cultural elements from becoming isolated symbols. The choice of wall form is therefore more than a matter of appearance: it shapes both the narrative structure of the entrance display and visitors’ initial experience. This paper compares straight, angular, enclosing, and curved thematic walls in terms of their structural characteristics and suitable conditions of use(Table 1).

Table 1. Spatial Adaptability Comparison of Common Entrance Theme Wall Configurations

Wall Configuration	Structural Diagram	Adaptive Advantages	Main Limitations	Adaptability Assessment
Straight Wall		Clear form; facilitates frontal recognition	Simple hierarchy; weak enclosure; limited relational expression; static viewing; weak spatial continuity.	Signage-oriented; limited continuous multi-ethnic organization.
Angled Wall		Can form certain display nodes	Visual interruption at turns; segmented content; weak thematic recognition; insufficient continuity.	Unit-based display; sectional division; weak integrated multi-ethnic narrative.
Enclosed or Circular Wall		Provides a certain sense of immersion	Strong enclosure; limited openness; unclear circulation; weak thematic guidance and rapid recognition.	Better for immersive spaces; weaker for entrance guidance.
Curved Wall		Continuous unfolding; multi-ethnic organization; enhanced atmosphere; central guidance; thematic convergence.	Limited single-view reading; segmented reception; weakened thematic coherence.	Suitable for continuous expression and atmosphere-building; requires mobile-viewing organization.

As shown in Table 1, straight, angular, and enclosing walls each suit certain entrance settings, but all have limitations, to varying degrees, in presenting complex information continuously, guiding visitors into the exhibition space, and bringing the overall theme together. In this case, the exhibition content includes multiple figures and scenes of everyday life that need to be connected. A curved thematic wall is therefore better suited to creating a continuous and focused visual narrative at the entrance. Curved walls, however, also have

limitations. An image organization strategy is needed to maintain connections among the cultural content of different ethnic groups as visitors move along the wall and to bring that content together around a clearly defined theme.

3 Viewing Contradictions and the Transformation of Narrative Logic in Curved Theme Walls

This case concerns the design of an entrance thematic wall in a cultural exhibition hall. The wall extends along a curve, measuring 15.2 metres in length and 3.4 metres in height. Together with a central iceberg installation used for projection, it forms a visual focal point at the entrance (Fig.1). The exhibition content presents the environment of Northeast China and cultural scenes associated with twelve ethnic groups with a long history of residence in the region. Given these spatial and content conditions, the initial design stage examined the suitability of a narrative organized around a single focal point.

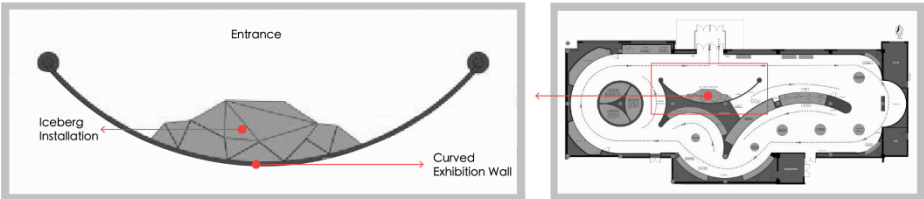


Fig. 1 Location Diagram of the Exhibition Wall

Single-center focal narrative has the advantage of quickly establishing a visual center and thematic identification, thereby responding to the entrance space's need for visual impact and thematic introduction (Fig.2). However, this type of narrative usually relies on a relatively fixed viewing position and requires visitors to grasp the overall image within a relatively complete field of vision. For a long-scale curved wall, visitors' viewing process is characterized by movement and segmentation. A single focal point can hardly maintain continuous control over the entire wall, and may also create visual competition with the central node in the entrance space. Therefore, although single-center focal narrative is suitable for establishing entrance identification, it is difficult to fully address the issue of continuous viewing in curved wall surfaces.

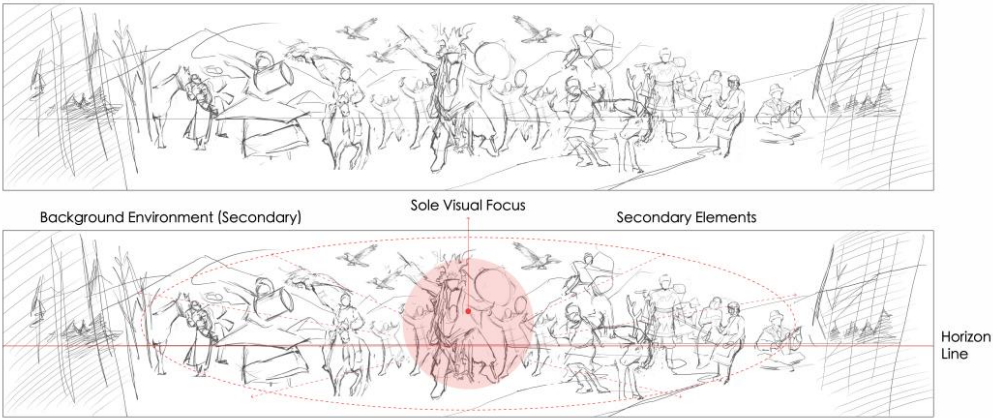


Fig. 2 Single-Focus Narrative Scheme Diagram

In contrast, the viewing mode of traditional handscrolls emphasizes continuous unfolding, mobile viewing, and multiple-point viewing. It can accommodate multiple scenes and organize the viewer's viewing process through a horizontally extended visual sequence [6]. This logic shows strong adaptability to long-scale curved walls: visitors can gradually receive image content while moving, and the figures, architecture, costumes, objects, and life scenes of different ethnic groups can also be organized into a continuous spatial relationship (Fig.3). However, if the horizontal unfolding mode of handscrolls is directly copied, the content may easily become overly even in distribution, making it difficult to form the thematic control and visual tension required by the entrance space.

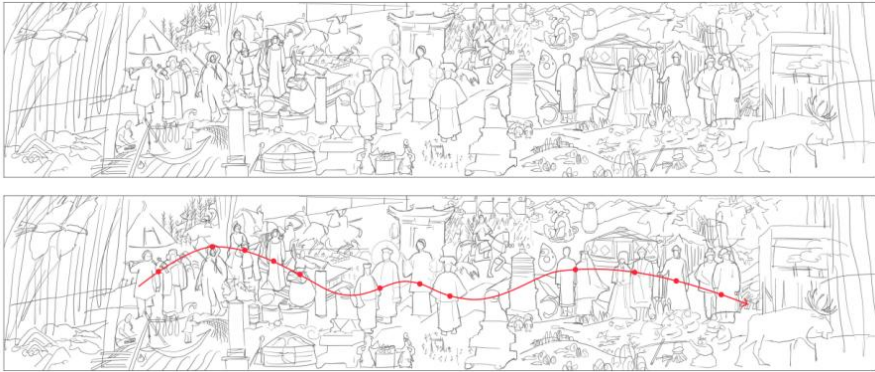


Fig. 3 Handscroll Narrative Scheme Diagram

Based on the above analysis, this paper transforms the narrative logic of the curved theme wall into an organizational strategy of “keynote establishment—continuous unfolding—central convergence.” Among these, “keynote establishment” is used to set the overall tone of the entrance space; “continuous unfolding” responds to the progressive presentation of image information on long-scale curved walls; and “central convergence” organizes the visual center of gravity, enabling multi-ethnic cultural content to form internal connections. In this way, the curved entrance theme wall is no longer merely a static display of cultural symbols, but becomes a spatial narrative interface in which meaning is gradually generated through visitors' movement.

4 Narrative Strategies and Practical Application of the Curved Theme Wall

The entrance theme wall first serves the function of setting the spatial tone, rather than fully narrating all the cultural details of the twelve ethnic groups [1-2]. Therefore, in terms of image organization, this design prioritizes the establishment of an overall thematic impression. The image creates a cultural atmosphere of Northeast China through regional environments such as mountains and forests, rivers, plains, and sky, allowing visitors to first perceive an enveloping spatial tone after entering the entrance hall. At the same time, symbolic elements such as the central sun image, stone lions, and auspicious clouds are integrated into the overall environment, forming a visual indication of the theme of multi-ethnic coexistence. In this way, the entrance theme wall completes thematic introduction and emotional atmosphere construction as

soon as visitors enter the space.

After the overall tone is established, this design takes handscroll-style unfolding as the basic viewing framework, organizing the figures, architecture, costumes, objects, and cultural symbols of the twelve long-established ethnic groups into a continuous spatial relationship. Among these elements, the regional environment serves as a continuous medium: mountains and forests, flowing water, sky, and landform trends run through different ethnic scenes, preventing obvious interruptions caused by content transitions during visitors' mobile viewing (Fig.4). Ethnic scenes function as narrative units, entering the overall image structure through figures' activities, architectural settings, costumes, and objects, rather than appearing as isolated symbols (Fig.5). Meanwhile, foreground blank spaces, low-density mountain forms, and the upper sky area serve as visual buffers, regulating the visual rhythm of the long-scale wall and avoiding visual fatigue caused by continuously high-density imagery.

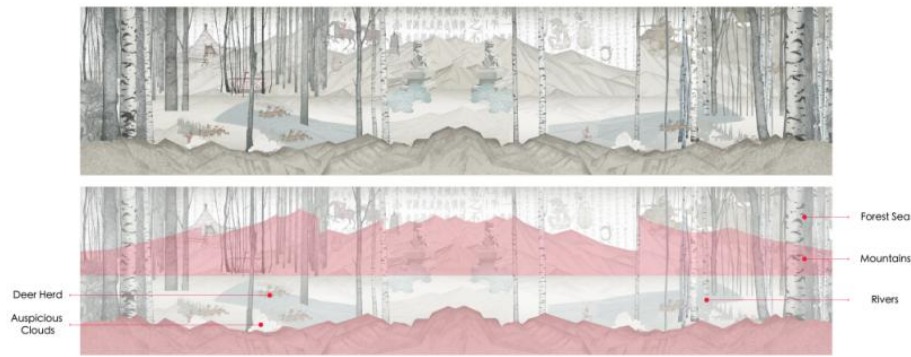


Fig. 4 Regional Environmental Continuity Diagram



Fig. 5 Twelve Ethnic Units Diagram

This design does not directly translate the logic of the handscroll into an evenly distributed horizontal arrangement; instead, it introduces a relationship of central convergence on the basis of continuous roaming viewing (Fig.6). On both sides of the image, the mountains and forests are relatively dense, while the central area gradually opens up, forming an environmental progression from the sides toward the center. The colors shift from heavy to light, and the spatial composition changes from complex to simple, guiding viewers' sightlines toward the central area. Meanwhile, the orientation of figures, the correspondence of their movements, and the interweaving of symbols create implicit directional cues, enabling the dispersed ethnic scenes to develop

internal connections.

In the final design, the regional environment, ethnic figures, cultural symbols, and central imagery are all integrated into the long-scale curved composition. The central sun motif echoes the physical iceberg projection installation in this case, allowing the image organization strategy of “keynote establishment — continuous unfolding — central convergence” to be fully realized in the complete scheme (Fig.7). In this sense, central convergence is not merely the amplification of a single visual focal point, but a narrative relationship jointly shaped by environment, figures, symbols, rhythm, and spatial nodes.

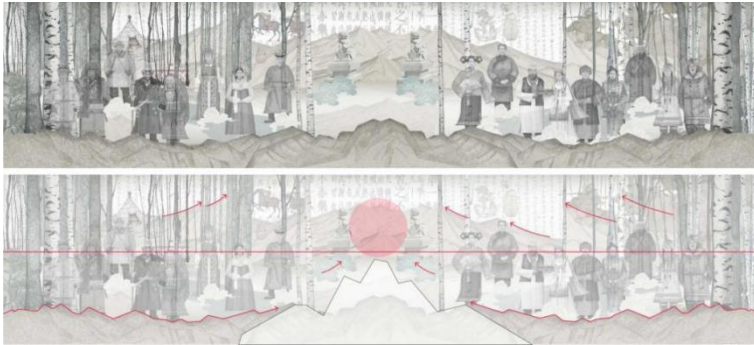


Fig. 6 Central Convergence Relationship Diagram



Fig. 7 Final Design Presentation

In terms of the on-site effect, the curved wall surface and the central spatial node jointly change visitors’ viewing distance and viewing angle. After entering the entrance hall, visitors are unable to view the entire theme wall in a single glance; instead, they gradually receive the image content through walking, turning, pausing, and moving around the space (Fig.8). The wall image unfolds along the curved space, while the central installation is incorporated into the relationship of central convergence. The figure scenes and regional environment unfold continuously on both sides, ultimately forming a viewing path of “entering the space—establishing the keynote—moving along the wall—identifying local details—returning to the central theme.”



5 Conclusion

Using the design of a curved entrance thematic wall in a cultural exhibition hall as a case study, this paper examines how to organize diverse cultural content across multiple scenes on a curved entrance surface. The study finds that a curved wall supports the continuous presentation of scenes and the creation of an entrance atmosphere, but its structural characteristics can also weaken the overall theme and disrupt narrative continuity. To address this tension, the paper proposes a three-stage design strategy—"establishing the tone, continuous unfolding, and central convergence." By integrating the wall's form, visual content, and visitor route, this strategy helps the entrance thematic wall provide clear guidance into the exhibition and maintain narrative coherence as visitors view it while moving.

The strategy positions the entrance thematic wall as more than a surface for displaying images: it becomes a narrative interface that shapes how visitors view and understand the space. On the one hand, regional landscapes and continuous scenes connect cultural content associated with different ethnic groups, avoiding an accumulation of disconnected symbols. On the other hand, a central motif and spatial focal points bring the content together around the theme, helping visitors recognize the whole despite viewing the curved wall in segments. The study may offer a reference for curved entrance thematic walls in cultural exhibition halls with similar content requirements and spatial conditions.

This study is based primarily on a single case and does not yet include systematic data on visitor behavior or evidence of its communicative impact. Future research could use visitor movement tracking, on-site interviews, and comparisons across multiple cases to further test the strategy's applicability and effects in different entrance spaces.

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