

A Study on Image Organization in Curved Entrance Theme Walls of Ethnic Museums: A Case Study of the Northeast Ethnic Museum

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Abstract

Museum entrance spaces play an important role in indicating exhibition themes, shaping cultural atmosphere, and guiding visitors' emotional engagement. In response to the juxtaposition of multi-ethnic cultural content, the demand for clear thematic identification, and the construction of entrance spatial experience, the selection of the spatial form of the theme wall directly influences the narrative effect at the beginning of an exhibition. Taking the design practice of the entrance theme wall of the Northeast Ethnic Museum as an example, this paper focuses on the curved theme wall in the introductory entrance space of ethnic museums. Starting from the functional requirements of entrance theme walls, the paper first compares the differences among linear, folded, enclosed, and curved wall forms in terms of information carrying capacity, spatial guidance, and thematic convergence. It argues that the curved long-scale interface is more suitable for the continuous presentation of multi-ethnic content and the construction of entrance atmosphere. On this basis, the paper further analyzes the problems of mobile viewing and segmented reception brought about by curved wall surfaces. Drawing on the continuous viewing mechanism of traditional handscrolls, it proposes a design strategy of "establishing the keynote—continuous unfolding—central convergence." The study suggests that this design strategy helps respond to the narrative expression problems faced by curved long-scale walls, and provides a reference for the narrative design of curved entrance theme walls in ethnic museums and related cultural exhibition spaces.

Keywords: Ethnic Museum; Entrance Theme wall; Curved Exhibition Wall; Mobile Viewing; Image Organization

1 Introduction

The museum entrance space is the first spatial interface that visitors encounter before entering the exhibition content, and it serves as a transitional space guiding visitors from the external environment into the exhibition area. Among its elements, the entrance theme wall is often located at the starting point of the visitor route and functions as an important visual object through which visitors form their first impression of the exhibition. Unlike ordinary decorative walls, the entrance theme wall not only serves a spatial decorative function, but also acts as an important interface for conveying the exhibition theme and generating spatial experience. At the initial stage of entering the exhibition hall, visitors usually establish a preliminary understanding of the thematic connotations and spatial atmosphere of the exhibition through the entrance theme wall. Therefore, the design of an entrance theme wall is not merely a matter of producing image content, but is also closely related to the construction of the overall narrative relationship between visual expression and entrance space [1-2].

From the perspective of museum exhibition design practice, there is no single fixed model for the spatial form of entrance theme walls. Instead, different interface types are formed under the combined influence of exhibition narrative requirements and site conditions. Differences in wall forms not only affect the way image content unfolds, but also change the viewing relationship and thematic perception of visitors after they enter the exhibition hall [2]. In particular, when an entrance theme wall needs to carry a large amount of cultural information, the selection of wall form is no longer merely a matter of visual modeling, but is directly related to the narrative effect at the beginning of the exhibition. How to establish a clear thematic indication within a limited entrance space, and how to create an effective connection between image content and visitors' viewing paths, are important issues that need to be addressed in the design of entrance theme walls.

Ethnic museums provide a typical research context for this issue. Compared with general historical and cultural exhibitions, entrance theme walls in ethnic museums often need to present multiple types of content simultaneously, including figures of different ethnic groups, costume features, architectural forms, scenes of daily life, regional environments, and cultural symbols [3]. Such information is abundant and complex in type. It must not only reflect the cultural differences among different ethnic groups, but also establish a clear thematic orientation at the entrance stage. If handled merely through flat collage or the simple listing of symbols, the visual information may become scattered, causing different cultural elements to appear as isolated image fragments. As a result, it becomes difficult to transform dispersed cultural elements into a visually coherent narrative with internal connections [3]. Therefore, the entrance theme wall of an ethnic museum needs to address not only the question of "what to display," but also the further questions of "through what wall form to display it" and "how to organize viewing."

However, existing studies have mostly focused on the overall narrative of exhibitions, the organization of ethnic cultural content, the expression of a sense of community [4], and innovation in digital experience, while insufficient attention has been paid to the specific interface of curved entrance theme walls in museums. In actual exhibition spaces, theme walls are not always viewed as complete flat surfaces; rather, they are gradually perceived through spatial

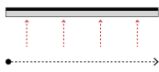
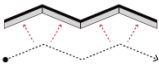
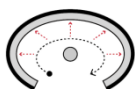
structures and visitors’ movement [5].

Based on this, this paper uses the curved entrance theme wall of the Northeast Ethnic Museum as a case to explore spatial form selection and image arrangement for museum entrance theme walls. Starting from functional demands of such walls, it compares linear, folded, enclosed and curved layouts, analyzes their suitability for entrance narrative arrangement, and clarifies applicable scenarios of curved walls in ethnic museum lobbies. It then addresses viewing characteristics unique to curved walls, examining how visitors’ dynamic sightlines drive steady image presentation. Combined with practical design and the sequential viewing logic of traditional handscrolls, this study puts forward an image organizing framework: "theme definition — sequential unfolding — central focus", and discusses narrative expression of multi-ethnic cultural elements on curved entrance theme walls.

2 Adaptability of Entrance Theme Walls in Museums

In multi-ethnic themed exhibitions, the entrance theme wall needs not only to create a unified impression of the exhibition, but also to avoid treating cultural elements of different ethnic groups as isolated symbols. Therefore, the wall form is not merely a matter of visual modeling; it further influences the narrative organization of the entrance theme wall and visitors’ initial experience. This paper compares linear, folded, enclosed, and curved theme walls in terms of their structural characteristics and applicable conditions (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, within the design context of entrance theme walls in ethnic museums, linear, folded, and enclosed wall forms each have certain applicable conditions, but they also present varying degrees of limitations in terms of the continuous carrying of complex multi-ethnic information, entrance

spatial guidance, and overall thematic convergence. In comparison, curved theme walls are more conducive to forming a continuous and concentrated visual narrative relationship within the entrance space, and are therefore more suitable for carrying the thematic expression of multi-ethnic cultural content. However, curved walls still have certain limitations. It is therefore necessary to further employ image organization strategies to ensure that multi-ethnic cultural content maintains continuity during mobile viewing and ultimately forms a clear thematic convergence.

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

The entrance theme wall of the Northeast Ethnic Museum is located in the entrance hall. The wall unfolds in a curved form, measuring 15.2 meters in length and 3.4 meters in height, and together with the central iceberg physical projection installation, it forms a visual node at the entrance (Fig.1). Based on these specific spatial conditions, the design process initially examined the applicability of single-center focal narrative.

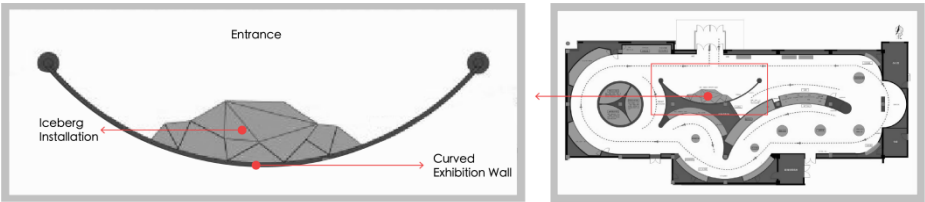


Fig. 1 Location Diagram of the Exhibition Wall

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.

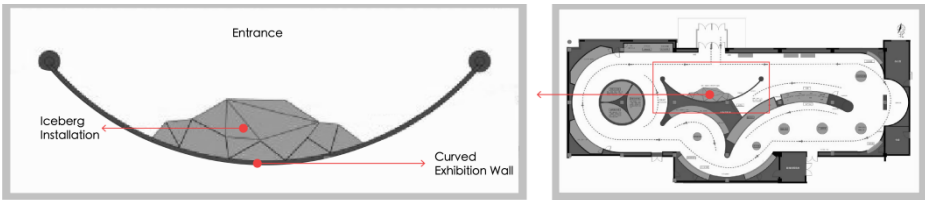


Fig. 2 Single-Focus Narrative Scheme Diagram

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.

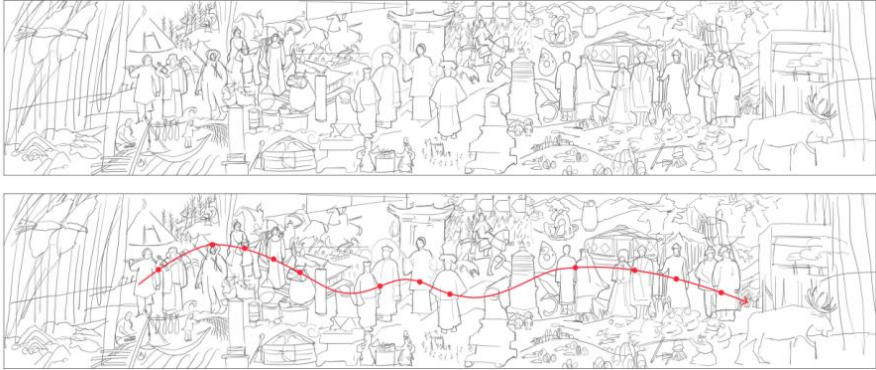


Fig. 3 Handscroll Narrative Scheme Diagram

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.

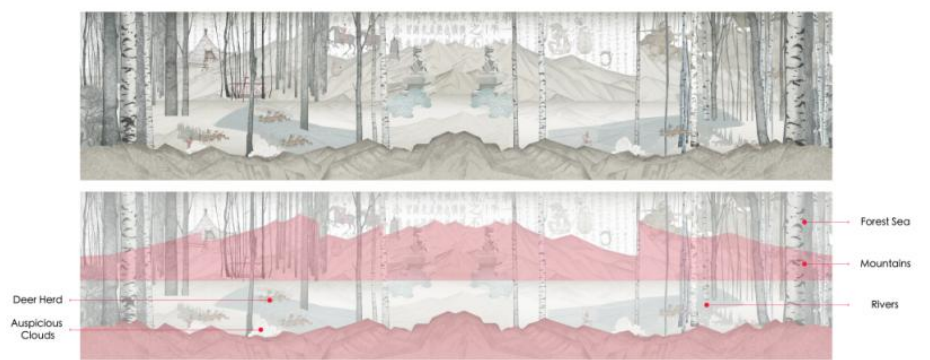


Fig. 4 Regional Environmental Continuity Diagram



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.

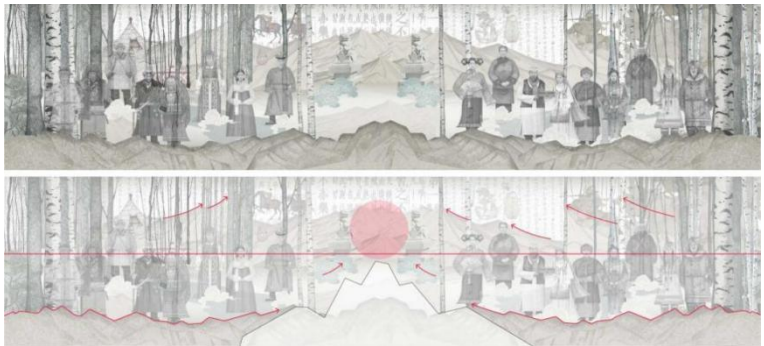


Fig. 6 Central Convergence Relationship Diagram



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.”



Fig. 8 On-site Effect and Segmented Views

5 Conclusion

Taking the design practice of the curved entrance theme wall of the Northeast Ethnic Museum as an example, this paper explores the issue of image organization for multi-ethnic cultural content on curved entrance interfaces. The study argues that curved theme walls are conducive to the continuous presentation of multi-ethnic content and the construction of an entrance atmosphere. However, their structural characteristics may also lead to the weakening of the theme and discontinuity in narrative expression. In response to this contradiction, this paper proposes a design strategy of “keynote establishment, continuous unfolding and central convergence,” integrating wall form, image content, and visitors’ movement routes so that the entrance theme wall can form a relatively clear exhibition orientation and narrative coherence during mobile viewing.

The significance of this strategy lies in its ability to move the entrance theme wall beyond the level of general image display and transform it into a narrative interface capable of organizing viewing relationships and spatial meaning. On the one hand, it organizes multi-ethnic cultural content through regional environments and continuous scenes, avoiding the stacking of symbols and loose relationships. On the other hand, it forms thematic convergence through central imagery and spatial nodes, responding to the issue of overall identification in the segmented viewing of curved walls. This paper may provide a reference for the thematic expression and image organization of curved entrance theme walls in ethnic museums and related cultural exhibition spaces.

This study is still based mainly on a single case and lacks systematic data on visitor behavior and verification of communication effects. Future research may combine viewing trajectory records, on-site interviews, and multi-case comparisons to further examine the applicable conditions and practical effects of this strategy in different entrance spaces.

DECLARATIONS

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