

From Viewing to Spreading: A Study on the Social Media Dissemination Motivations and Behavioral Characteristics of Immersive Exhibition Audiences

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Abstract. With the continuous development of digital technology, immersive exhibitions have rapidly emerged as a new form of exhibition. Although there are many studies on immersive exhibitions regarding their presentation forms and technological applications, or their role in educating audiences and enhancing audience experience, the impact mechanism of these exhibitions on audience social media communication behavior has not been fully explored. This article, based on the SOR theoretical framework, empirically analyzes how different forms of exhibitions influence audience social media behavior through perceived immersion and perceived enjoyment using a questionnaire survey method. The study found that immersive exhibitions significantly stimulate higher social media communication behaviors compared to traditional display exhibitions, and perceived immersion plays a complete mediating role in this link, while perceived enjoyment, although positively correlated with communication behavior, does not show significant mediating effects. Based on this, the article suggests enhancing the 'shareability' of exhibitions, balancing immersive experiences with content depth, and actively guiding social media communication to enhance the communicative effectiveness and cultural impact of exhibitions.

Keywords: Immersive Exhibitions, Social Media Behavior, Communication Motivation, SOR Framework

1. Introduction

For a long time, traditional exhibitions centered on visual objective realism, believing that exhibitions (especially the exhibits) are merely for viewing [1]. With the continuous development of digital technology, the methods and media of cultural communication are gradually being reconstructed, and the form of exhibitions is also being challenged. From the establishment of TeamLab to the global phenomenon of immersive exhibitions such as 'Horizon of Khufu,' a new exhibition format focused on multi-sensory experiences and digital interaction—immersive exhibitions—has entered the public eye and is gradually being applied to, or even replacing, traditional physical displays. This emerging form of exhibition is rapidly popularizing within GLAMS (Galleries, Libraries, Archives, Museums, and Science centers). According to David

Howes' theory of sensory museology, museum exhibitions are shifting from 'object gaze' to 'embodied participation', leading to a large number of studies on immersive exhibitions [2].

However, most of these studies revolve around the technological effects introduced by exhibitions, the emotional awakening of audiences by these exhibitions, and the educational significance. Very little questioning a key issue: whether and how this enhanced sense of participation and pleasure transforms into audience behavior. Especially with the development of the Internet, where audiences' information sources are no longer traditional media like television or newspapers, and with the rise of social media, where everyone can be a source of information, can it influence audiences' proactive dissemination behaviors on social media? For example, the study by Lyu et al. deeply explored how immersive experiences affect viewers' internal psychological states (O - Organism), thereby influencing their loyalty to cultural and tourism brands [3]. The research by Packer, J., & Ballantyne, R., focused on the key factors influencing audience experience (including cognitive, emotional, and behavioral dimensions), emphasizing deconstructing the experience itself without mentioning the behavioral transformation resulting from it [4]. Meanwhile, although some studies have begun to pay attention to the relationship between exhibitions and social media, discussing the motivations or patterns of audience sharing within museums, these studies often fail to systematically differentiate and compare the potential differences in inducing social media behavior between the distinct forms of traditional exhibitions and immersive exhibitions [5]. Therefore, there is a significant research gap in the link of 'how different exhibition formats (especially immersive exhibitions versus traditional exhibitions) specifically affect audience social media dissemination behavior'.

This research aims to fill the research gap by comparing whether different forms of exhibitions, as a medium of communication, have an impact on the social media behavior of audiences. In the context of the rapid development of the internet and changing communication media, it provides a new perspective for understanding the reasons behind the rapid growth of immersive exhibitions and how to expand exhibition reach by understanding audience emotion.

2. Method

2.1. Theoretical basis

For a long time, traditional exhibitions have been centered around static physical displays, emphasizing vision as the sole sensory engagement, leaving the audience in a passive observation state [6]. Although this form has scientific and educational value, its extremely low interactivity limits the depth of audience engagement [4]. In stark contrast, immersive exhibitions create multi-sensory interactive environments through digital technology, transforming the audience from 'viewers' to 'participants' and facilitating embodied interactions between the body and the exhibition narrative [1]. While existing research has confirmed that immersive technology can significantly enhance audience emotional investment, there has been little inquiry into whether the differences in exhibition forms persist in the audience's social media behavior after the experience concludes [3].

This study argues that traditional and immersive exhibitions serve as different 'stimuli' (S) that trigger differentiated communication 'responses' (R) through the psychological state of the 'organism' (O). Following this logic, this study uses the Stimulus-Organism-Response (SOR) model as its theoretical framework to explore how different exhibition formats (stimuli) influence the audience's internal psychological states (organisms) and, in turn, affect their social media communication behaviors (responses). The SOR model emphasizes that external environmental stimuli impact an individual's cognitive and emotional states, leading to specific behavioral

responses, and this model has been validated for explaining audience behavior in immersive environments [6,7].

In this study, 'stimulus' (S) refers to the format of the exhibition, which is divided into immersive exhibitions and traditional exhibitions; 'organism' (O) includes two core mediating variables: immersion and pleasure. Immersion is reflected in the audience's sense of spatial presence and level of attention concentration in the exhibition, and the sense of enjoyment refers to the level of positive emotions triggered by the exhibition experience [8,9]. Research shows that the multi-sensory characteristics of immersive exhibitions are more conducive to eliciting deep immersion and intense pleasure, which means that these two psychological states have been confirmed to be closely related to the motivation to share and the degree of behavioral immersion [3]. "Reaction" refers to the audience's behavior of sharing on social media, including browsing related content, posting content, interaction frequency, likes, and recommendations [5].

Based on the above theoretical foundation, this study proposes the following hypotheses:

H1 (Main Effect): Immersive exhibitions are more likely to trigger social media behavior among audiences compared to traditional exhibitions.

H2 (Mediating Effect): The sense of immersion and enjoyment mediates the effect of exhibition format on audience social media behavior, and the higher the sense of immersion and pleasure, the more likely it is to trigger audience social media behavior.

2.2. Study design

Based on this research, this study uses a questionnaire survey method to collect data through non-probability sampling (convenience sampling and snowball sampling). The research subjects are audiences who have attended exhibitions in the past six months.

The questionnaire is divided into three parts. The first part is basic information, including gender, age, type of exhibition, companions, sources of exhibition information, and reasons for attending the exhibition. The second part measures the psychological state of audiences, including the sense of immersion (7 questions) and the sense of pleasure (6 questions). This part employs a 5-point Likert scale for analysis. The sense of immersion scale refers to the immersion measurement items covering dimensions such as focused attention, environmental integration, and the disappearance of the sense of time [8,10]. The sense of enjoyment uses the positive emotion dimension from the PANAS scale, including positive emotions such as excitement, relaxation, surprise, and shock. The third part measures social media behavior, covering 9 items such as publishing willingness, publishing behavior, content format, willingness to browse related topics, and interaction frequency, also using a 5-point Likert scale [5].

The final effective sample size is 149 people, with 77 in the immersive exhibition group and 72 in the traditional exhibition group.

3. Result

3.1. Validity and reliability testing

This study conducted reliability and validity tests on the core scale of the questionnaire. The results showed that the Cronbach's α coefficients of each variable were all greater than the threshold standard of 0.7 (Perceived Enjoyment $\alpha=0.782$, Perceived Immersion $\alpha=0.838$, Social Media Behavior $\alpha=0.821$), indicating that the scale has good internal consistency reliability. In terms of

validity, the KMO test value was 0.877 ($p < 0.001$), indicating that the sample data is suitable for factor analysis and that the structural validity is good.

3.2. Basic statistical information

A total of 149 valid questionnaires were collected in this study. The demographic characteristics of the sample are as follows: female respondents accounted for a higher proportion (67.11%), and the sample's age predominantly concentrated in the 18-25 age group (61.07%). In terms of exhibition types, the immersive exhibition group (77 people) and the traditional exhibition group (72 people) have a nearly equal sample size.

3.3. Main effect

The exhibition format was treated as an independent variable (immersive exhibition = 1, traditional exhibition = 2), while social media behavior was regarded as a dependent variable for linear regression analysis. After analysis, it was found that exhibition format as an independent variable has a significant negative predictive effect on the audience's social media behavior ($\beta = -0.341$, $t = -2.906$, $p = 0.004 < 0.01$). This statistical result means that when taking traditional exhibitions as a reference baseline, immersive exhibitions can significantly enhance the audience's level of social media behavior.

Further verification through an independent samples t-test revealed that the audience group of immersive exhibitions ($M = 3.63$, $SD = 0.65$) performed significantly better in social media behavior than the audience group of traditional exhibitions ($M = 3.29$, $SD = 0.78$), and this difference reached a statistically significant level ($t = 2.906$, $p = 0.004$). This indicates that visitors to immersive exhibitions not only show a stronger inclination to share in intention but also engage more actively in content posting, interaction, and dissemination on social media. In other words, immersive exhibitions, as a new medium that emphasizes experience and audience participation, indeed constitute a stronger 'stimulus' that can directly provoke a more active 'response' from the audience in terms of dissemination.

These data results collectively support the core hypothesis of this study, that the differences in exhibition formats significantly influence the audience's social media behavior. Moreover, compared to traditional exhibitions, immersive exhibitions can more effectively stimulate the audience's social media dissemination behavior.

3.4. Mediating effect

This study examined the mediating effects of the sense of immersion and the sense of enjoyment by establishing a series of regression models. The results of the regression analysis showed that the regression coefficient of exhibition format on immersion was -0.181 ($p = 0.027$), indicating that immersive exhibitions can significantly enhance the audience's experience of immersion. Immersion had a significant positive impact on social media behavior ($\beta = 0.548$, $p < 0.001$). After including immersion in the hierarchical regression, the direct effect of exhibition format on social media behavior ($\beta = -0.113$) became insignificant ($p = 0.053$). This indicates that immersion plays a complete mediating role between exhibition format and social media behavior. The regression coefficient of exhibition format on enjoyment was -0.106 ($p = 0.198 > 0.01$), suggesting that different exhibition formats do not significantly affect enjoyment directly. However, enjoyment itself

has a significant positive impact on social media behavior ($\beta = 0.198$, $p = 0.014$). Therefore, the mediating pathway of enjoyment in this context is not significant.

Further collinearity diagnosis on the two variables of immersion and enjoyment shows that the VIF values for both immersion and enjoyment in the model are 1.527 (<5), and the tolerance is 0.655 (>0.1), indicating no multicollinearity problem between the two mediating variables, making the regression model results stable and reliable. Correlation analysis between the two variables shows a high positive correlation between immersion and enjoyment ($r = 0.699$, $p < 0.01$). This indicates that immersion has a significant positive impact on enjoyment.

This finding suggests that immersive exhibitions do not make audiences 'happier' directly compared to traditional exhibitions, which prompts them to share. Instead, it creates an 'immersive' space that fully engages the audience, makes them forget the time, and makes them feel one with the space, ultimately triggering the sharing behavior. This deep immersive experience itself evokes strong emotional resonance and enjoyment (immersion experience and enjoyment emotions are highly correlated), and it is this complex psychological experience of 'being immersed leads to enjoyment' that constitutes the core motivation for the audience to want to record, share, and express.

Overall, immersion is the fundamental reason that prompts audiences to pick up their phones and share, while pleasure serves as the driving force behind the motivation to share and generate content. Immersive exhibitions effectively drive social media dissemination behaviors by creating an experience that transcends space and reality. The examination of mediation effects partially supports the research framework based on the SOR model. The type of exhibition influences how visitors behave by affecting their mental and emotional state. The sense of Immersion plays a key mediating role, helping explain why immersive formats lead to more sharing. Although the sense of enjoyment itself is not a direct mediator, it is still important, both as a result of immersion and as a motivating factor. When exhibition type, immersion, and enjoyment are considered together, the model explains 53.1% of social media sharing behavior. This is significantly more than the 5.4% explained only by the exhibition format, highlighting the value of incorporating psychological factors in understanding visitor behavior.

4. Discussion

4.1. Cause analysis

This study deeply analyzes the impact of different exhibition formats on audience behavior. The research found that immersive exhibitions can attract audiences more effectively because they completely transform the traditional model of 'viewing exhibits' into a new approach centered on 'audience experience' [1]. By leveraging panoramic visuals, interactive storylines, digital technology, and multi-sensory stimulation, these exhibitions allow audiences to shift from passive 'viewers' to active 'participants', and even have the opportunity to become 'co-creators' of content. This firsthand participative experience not only enhances the uniqueness and personal immersion of exhibition visits but also more easily triggers emotional resonance, thus inherently possessing sharing potential. Data confirms that this strong sense of immersion is a key psychological factor driving audiences to share their personal experiences on social platforms. In contrast, while traditional static exhibitions have significant educational and popular science functions, their effectiveness in stimulating immediate sharing intentions among audiences is relatively weak.

The study highlights a shift in how people engage with cultural activities. Over 57% of visitors now learn about exhibitions through social media, indicating that many prefer to check reviews or

recommendations before deciding to attend. When visiting exhibitions, people are no longer focused solely on learning or art appreciation—many also actively look for content to share and discuss online, which acts as a form of social currency [9]. There is increasing interest in experiences that are unique, photogenic, and suitable for building one's online persona. Immersive exhibitions meet these needs well: they use interactive and sensory-rich design to create visually compelling settings that encourage photographing and sharing. The absorbing and enjoyable qualities of these experiences also naturally motivate people to share them with others. This trend signals a broader change in what audiences value: less emphasis on what they simply see, and more on what they experience and how they can share those experiences with others. As a result, exhibitions now serve not only educational or aesthetic purposes, but also function as platforms for social exchange and communication.

4.2. Suggestion

In an age where social media shapes how people allocate their attention, exhibition design must evolve accordingly. A key priority is to increase the shareability of the visitor experience. Curators should create intentional settings that are visually compelling and encourage interaction—making them naturally attractive for photography and social sharing. Importantly, these elements should not feel like added gimmicks; they need to be meaningfully embedded into the story and educational content of the exhibition. When sharing opportunities are integrated into interactive and learning-driven environments, they become a natural part of the experience—not an interruption—and support rather than distract from the overall message.

Secondly, focus on the balance between immersion and content depth. Technology is a means, not an end. An extreme sense of immersion, without solid content and cultural connotations to support it, will result in sharing behavior that is fleeting and lacking vitality. Future immersive exhibitions need to consider how to transform deep content into tangible experiences, avoiding becoming hollow showcases of technology or trendy spots for social media.

Third, proactively guiding and empowering dissemination. During the research process, it was found that the audience is more inclined to share and publish content related to official topics, official brochures, venue photos, etc. Venues and curators can lower the sharing cost for the audience and gather individual spontaneous shares into a collective brand voice by designing official hashtags, providing high-quality shared materials (offline interactive check-in points, online check-in templates), and encouraging user-generated content (UGC). This will create a positive cycle of online feedback to offline.

5. Conclusion

In summary, this study empirically reveals the communication advantages and underlying psychological mechanisms of immersive exhibitions. The results indicate that, compared to traditional exhibitions, immersive exhibitions significantly enhance the audience's sense of immersion by constructing a multi-sensory and highly interactive experiential environment, thereby more effectively stimulating their sharing and dissemination behaviors on social media. In this mechanism, the sense of immersion serves as a complete mediator, while the sense of enjoyment, although positively correlated with dissemination behavior, did not exhibit a significant mediating effect, instead influencing behavioral intentions as an emotional outcome of the immersive experience.

The findings of this study indicate that successful contemporary exhibitions are no longer merely static content display spaces; they have gradually evolved into powerful sources of communicative content and mediums for content dissemination. By creating an experiential environment characterized by high participation and emotional involvement, they actively embed the audience's social behaviors and processes of digital identity construction. This also suggests that cultural institutions capable of keenly capturing the dual needs of the audience for emotional experiences and social sharing, and conducting curatorial design and communication innovations based on this, will gain significant advantages in the increasingly competitive cultural consumption market.

This study's sample is concentrated on the youth demographic; future research could expand to include more diverse audience types. Furthermore, the measurement of variables primarily relied on self-report scales, so future studies could incorporate objective behavioral data (such as likes and shares) for cross-validation. It is recommended that future research introduce longitudinal tracking or experimental intervention methods to further examine the specific paths and boundary conditions for the formation of immersion.

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