

INTEREST-GROUP VS. PEER PRESSURE: A CIRCLE-EMBEDDED SOR MODEL OF SOCIAL MEDIA EFFECTS ON MUSEUM VISIT INTENTIONS AMONG CHINESE UNIVERSITY STUDENTS

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Abstract: This study aims to explore the impact mechanism of social media on the willingness of Chinese university students to visit museums, and construct a "circle embedded SOR" model that integrates social circle theory. The innovation of the research lies in using emotional identity as the core mediating variable and subdividing social pressure into two dimensions - interest circle normative pressure and peer social pressure, in order to reveal the social psychological mechanisms behind cultural participation behavior in the digital age. The study used a cross-sectional survey method to collect 892 valid questionnaires, and conducted empirical tests using correlation analysis, regression analysis, and structural equation modeling. Research has found that: (1) Social media content can effectively enhance the emotional identification of college students and directly promote their willingness to visit; (2) Emotional identification plays a partial mediating role between social media content and willingness to visit, where content indirectly influences visit decisions by stimulating emotional identification; (3) The normative pressure of interest circles and peer social pressure both have a positive moderating effect on the path of "emotional identification → willingness to visit", but the former has a significantly stronger impact than the latter. The above conclusion indicates that interest oriented social circles play a dominant role in transforming online activities into offline visitation behavior. On a theoretical level, this study expands the explanatory boundaries of the SOR model in the context of social media; On a practical level, it provides a decision-making reference for museums to develop digital participation strategies for young people that are "segmented and precise".

Keywords: Social media; Museum visit intention; Emotional identification; Social pressure; University students; Cultural consumption

1 INTRODUCTION

Although these institutions undertake the mission of education, research shows that the number of young people participating in cultural activities is significantly reduced, which raises questions about the sustainability of these institutions in the digital era[1]. These platforms are recognized because of their great potential to shape consumer behavior and decision-making process [2]. However, the specific impact of social media on cultural participation has not been fully explored, especially the willingness of college students to visit museums[3]. As an important way of cultural transmission, museums shoulder the responsibility of rich public cultural literacy and art appreciation. Despite the museum's commitment to education, it still faces great challenges in attracting young audiences. According to the research, the proportion of young people participating in traditional cultural activities has declined[1]. This trend leads to important thinking problems about the relevance and sustainability of cultural institutions in the digital era. In view of the significant impact of social media on young people, how to use these platforms to stimulate students' interest in museums and other cultural institutions is very important. Although the existing studies recognize the general impact of social media on consumer behavior, there is little attention in the literature on how social media shape cultural participation, especially the museum visiting mechanism[4]. This study aims to make up for this problem by exploring the mediating role of emotional identity and the role of social pressure in the influence of social media on College Students' willingness to visit museums. The importance of this research is that it provides practical insights for museums to attract young audiences through social media platforms. By understanding the motivation of college students to visit museums, cultural institutions can develop marketing strategies for students' emotions and social dynamics.

2 THEORETICAL BASIS

The study's theoretical framework integrates social circle theory and the stimulus-organism-response (SOR) model[5], providing a lens to analyze the relationships between social media content, emotional identification, and visit intentions[6]. These theories provide a comprehensive perspective for studying the complex dynamic relationships among university students' communication contents on social media, emotional identification, and museum visit intentions.

Social circle theory posits that individuals' behaviors and emotional identifications are shaped by distinct social strata, which we categorize into interest-group circles (based on shared cultural or thematic affinities) and peer social circles (rooted in interpersonal and generalized social relationships) [7]. In this study, social circles include virtual communities formed on social media platforms. These platforms are not only information channels, but also venues for simulating and communicating cultural and social activities that shape user behavior and decision-making[8]. This theory underscores the need to distinguish between interest-group normative pressure—stemming from identity and behavioral expectations within thematic online communities—and peer social pressure—arising from broader social comparisons and expectations among peers. Both shape emotional identification and subsequent behavioral intentions[9-10].

The SOR (stimulus-organism-response) model extends this understanding by providing a structured approach to analyze the relationship between external stimuli, internal mechanisms, and behavioral responses[5]. This model has been successfully applied to understand consumer behavior in digital environments[11-13], which is particularly relevant for the present study as it offers a clear opportunity to illustrate: We hypothesized and examined the mediating role of emotional identification and the moderating role of social pressure in the relationship between social media and museum visit intentions.

Existing research has showed that interacting and sharing content on social media platforms can significantly increase individuals' awareness of and interest in cultural institutions[14], providing a theoretical foundation and empirical support for this study. Emotional identification, defined as the degree to which a person forms an emotional connection with a culture, place or subject, is central to the study of culture and tourism[15-16]. The mediating role of emotional identification in travel decisions was also confirmed. For instance, Hao et al. investigated the relationship between emotional identification and museum visiting experience and pointed out the importance of emotional identification in museum participation[17]. People tend to share their personal feelings on social media, cultivating emotional empathy and intimacy, leading to deeper exploration and learning during museum visits[18]. Social pressure refers to the stress and expectations that individuals bear in the social environment. It has both positive and negative effects. Social media can increase social capital, but plays a mediating role in mobile social media addiction, and excessive use can lead to loneliness and psychological distress[19]. Due to the brevity of information on social media, certain emotions may be oversimplified or misunderstood, raising concerns about the authenticity of emotional expressions[20]. This aligns with the findings of Uslu and Tosun[21], who demonstrated that the use of social media increases social pressure of communication, subsequently affecting individuals' willingness to continue using these platforms, thus emphasizing the impact of social pressure within social media contexts.

Although previous studies have highlighted the role of social media in cultural communication, there remains a lack of research on the specific strategies and mechanisms by which museums can engage the younger generation through social media. Especially the interaction between emotional identification and social pressure has been fully explored. Therefore, subsequent empirical analysis will apply these theoretical insights to explore how social media specifically affects college students' visit intentions, aiming to fill this research question.

3 MODEL FRAMEWORK

The model framework (Figure 1) incorporates the variables discussed in the theoretical basis, positioning them within the SOR model context. Here, social media content is depicted as the external stimulus, emotional identification as the mediating mechanism, social pressure as the moderating factor, and visit intention as the ultimate behavioral response.

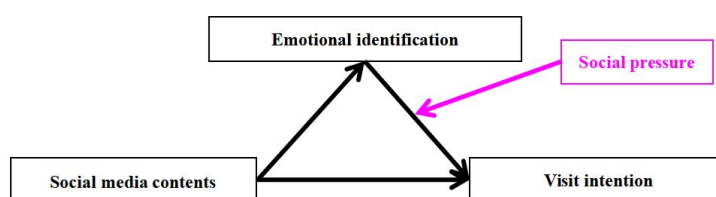


Figure 1 SOR Model Framework for Social Media Influence on Museum Visit Intention

The study's lies in its integration of Social Circle Theory with the Stimulus-Organism-Response (S-O-R) framework. We position social media content (informational and interactive features) as the "Stimulus (S)". This stimulus influences the individual's internal state, the "Organism (O)", which we conceptualize through the lens of Social Circle Theory as the psychological process of emotional identification driven by the desire for affiliation and recognition within one's social circles. Ultimately, this internal state predicts the behavioral "Response (R)"—visit intentions. This integration provides a unique insight by elucidating howbroad social media exposure is psychologically internalized as a socially-grounded emotional driver, which then translates into specific cultural behavioral intentions, a mechanism that neither theory fully explains alone.

External Stimuli: Social Media Content, including the dissemination methods and interactive elements that attract the attention of university students.

Internal mechanisms: Internal factors include individual cognition, emotions, and social circles. In the case of emotional identity as a mediating variable, capturing the emotional connection formed between individuals and museums through social media interaction, and using social pressure as a moderating variable, reflecting the influence of social norms and the desire for social recognition on individuals' decisions to visit museums.

Behavioral response: The confirmation of visiting intention is the result of personal interest, representing the decision-making process influenced by the interaction of the above factors.

3.1 Theoretical Integration: Construction of the Layered SOR Model

Although the SOR model provides a foundational analytical framework for this study, its depiction of the “black box” process among the “stimulus-organism-response” triad remains relatively static and individualized, failing to adequately explain the differentiated transmission mechanisms of social media influence within complex social networks. To address this limitation and respond to the social reality that college students' group behaviors are profoundly influenced by peers and communities, this study introduces social circle theory to contextualize and deepen the classic SOR model, constructing a “Circularized SOR Model.”

The core argument of this “Circularized SOR Model” is that social media influence is embedded within two primary social strata: interest-group circles (content-specific, identity-based communities) and peer social circles (generalized social networks). Social pressure is thus conceptualized as dual-dimensional, moderating the emotional identification → intention pathway differently depending on its source. These strata encompass both concrete “peer circles” based on strong ties and relatively generalized “cultural circles” or “interest circles” founded on shared interests or identities. Together, they form the “circular environment” that shapes individual cognition and decision-making. Under this perspective, each model element gains new significance: Social media content, as a “stimulus,” often has its communicative efficacy and symbolic meaning amplified or reshaped through interactions within specific circles, transforming into a “circular stimulus”; Emotional identification, representing the internal state of the “organism,” arises and intensifies not only from personal emotional resonance with content but is also shaped and regulated by dual social pressures: interest-group normative expectations and peer social expectations; Ultimately, the “response” of visitation intent can thus be viewed as a “socialized behavioral expression” shaped by the interplay of individual motivation and circle affiliation. It embodies personal interest while partially fulfilling the social function of maintaining circle identity and meeting circle expectations.

Thus, the group-based SOR model delineates a more nuanced pathway: social media content serves as the initial stimulus, triggering emotional resonance through group-based dissemination networks. The efficacy of converting this emotional resonance into behavioral intent is critically modulated by dual social pressures—macro-level group norms and micro-level peer relationships. This integrated model not only continues the SOR model's focus on psychological progression mechanisms but also reveals the complex socio-psychological processes between media exposure and concrete behavioral decisions by incorporating social structural variables. It provides a more dynamic theoretical lens for understanding the cultural mobilization mechanisms of social media within specific groups (Figure 2).

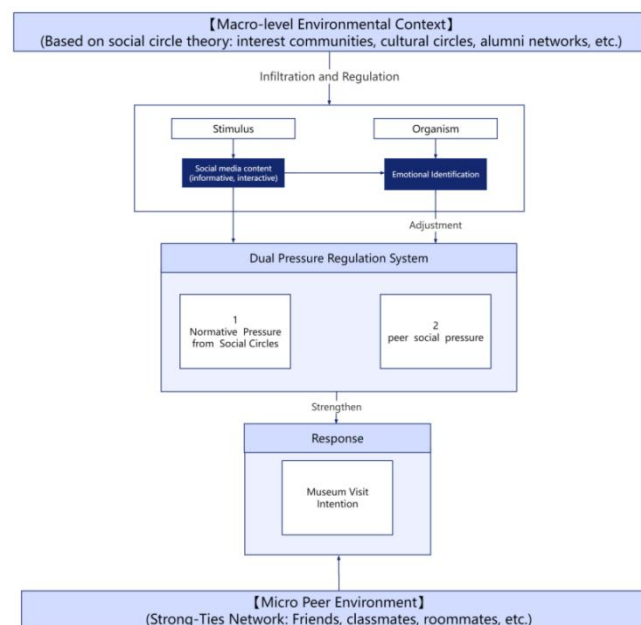


Figure 2 Circularization SOR Theoretical Model

This visual presentation aims to provide a comprehensive and easy to understand overview of the theoretical foundations of research, promoting a deeper understanding of research relationships. The clarity of the model framework is crucial for understanding research hypotheses:

- H1: Social media content will have a direct effect on the intention to visit museums.
- H2: Emotional identification will mediate the relationship between social media content and the intention to visit museums.
- H3: Social pressure positively moderates the relationship between emotional identification and museum visit intention, such that the relationship is stronger when social pressure is high.

4 RESEARCH METHODS

This study employs a cross-sectional design to investigate the influence of social media on the intention of university students to visit museums. The target population of this study consists of university students enrolled in various academic programs across China. The following sections detail the research design, sample selection, data collection, measurement instruments, and data analysis procedures.

4.1 Research Design

This study adopts a cross-sectional design to examine the relationship between key variables at a single time point.

4.2 Sample Selection

The sample used in this study adopts a stratified random sampling method to ensure coverage of different types of universities and academic levels, including associate degree, undergraduate, master's, and doctoral programs. The sample size was determined through research analysis, and the results showed that at least 800 participants were needed to detect the moderate scale effect, with a final test power of 0.80.

4.3 Data Collection

The data is sent and collected online survey information through social media platforms and school email lists. The survey is open for four weeks, with reminders sent every two weeks to improve response rates. A total of 906 responses were received, and after excluding incomplete answers, 892 valid questionnaires were retained for analysis.

4.4 Measurement Instruments

The questionnaire was developed based on established scales and modified to suit the context of this study. It consisted of four main sections:

- Social Media Content: Measured using a 7-point scale adapted from prior research on social media engagement to assess the dissemination of museum-related information and marketing content (the myriad of posts, videos, photos, and articles people share) across social media platforms[15-22].
- Emotional Identification: Evaluated using a 5-point scale, taking into account participants' emotional experience and the level of emotional connection to the museum content on social media[17,22].
- Social Pressure: A 5-point scale that assesses perceived social impact, including social stressors, response styles, and emotional experiences associated with social media interactions[19,21].
- Visit Intention: Measured on a 4-point scale, reflecting interest and desire to visit museums in the near future[23-24].

All items are rated on a 5-point Likert scale, with higher scores indicating greater agreement or stronger intention. All scales demonstrated good reliability and validity in previous studies, which was confirmed by our pilot test and main study analysis.

4.5 Data Analysis

Data analysis was performed using SPSS 26 and AMOS 26.0 for structural equation modelling. Descriptive statistics were calculated to summarize the sample characteristics. The relationship between variables was tested thorough correlation and regression analysis. Structural equation modelling follows a two-step approach. The measurement model is evaluated first, and then the structural model is estimated to test the hypotheses.

4.6 Ethical Considerations

This study was conducted in accordance with ethical standards and informed consent was obtained from all participants. Confidentiality and anonymity were guaranteed and participation was voluntary.

5 DATA ANALYSIS AND RESULTS

This section presents the results of the data analysis and describes the process and results of the statistical tests conducted to examine the relationship between social media content, emotional identification, social pressure, and museum visit intentions among university students.

5.1 Overview of the Sample

The sample is more balanced in gender distribution, with 50.22% of females and 49.78% of males. 66.93% of the respondents were aged 18 to 25. All the participants selected in this study are college students, and now have a bachelor's degree accounting for 57.62%. The sample distribution is relatively uniform, ensuring that the data is representative.

In the digital age, young people basically use social software, and most of the respondents use social media for between one and five hours. 58.18% of the respondents visited the Museum 1 to 3 times a year. The interviewees also used social media to find or share museum information, highlighting the important role of social media in influencing the visit of cultural institutions. These characteristics provide necessary background conditions for understanding the potential impact of social media on the group's museum visit intention.

5.2 Descriptive Statistics

Descriptive statistics showed that there were slight differences between the dimensions, and the overall score was positive ($M = 4.15$, standard deviation = 0.87). The interviewees generally believe that the propaganda content about Museum activities on social media is attractive to them, and the average score in this regard is 4.4. The data distribution is generally normal distribution, and the skewness value is close to 147. The data distribution is symmetrical and there is no significant deviation. The kurtosis value is also in the acceptable range, which indicates that the data is neither excessive peak nor flat.

The research found that although the content related to museums on social media has differences in content quality, it can't be denied that it is also attractive, and the interviewees hold a positive view. The production quality of social posts including texts, pictures and videos improved the respondents' views on the museum. Interviewees recognized the effectiveness of social media as a museum marketing tool. Viewing Museum experiences, photos and social media updates shared by others can enhance their own willingness to visit. The social media content and comments related to museums greatly influenced their decisions. In general, the respondents showed a positive trend in whether social media had an impact on their intention to visit the museum, and believed that social media is an important tool to enhance the attraction of museums and information collection. These findings provide a solid foundation for understanding how social media affects the attendance of cultural institutions.

5.3 Reliability and Validity Assessment

Reliability and validity analyzes demonstrated a high degree of internal consistency for all questionnaire factors. The Cronbach's alpha coefficients of social media content, visit intention, emotional identification, and social pressure are 0.918, 0.852, 0.903, and 0.860 respectively, and the overall reliability is 0.922. This strong internal consistency supports the use of these measures to further examine the impact of social media on museum visit intentions. Structural validity was also confirmed. The KMO coefficient of Bartlett's spherical test is 0.946, and the significance level is below 0.05, indicating that there is a significant linear relationship between the measured value and the focus of the study. These results confirmed the accuracy and reliability of the questionnaire and ensured the credibility and trustworthiness of the research results.

5.4 Factor Analysis

Factor analysis identified four different factors with eigenvalues greater than 1, indicating that they play an important role in explaining the variability in the data set. These four factors accounted for 39.110%, 14.355%, 9.239% and 5.518% of the variance before rotation respectively. After rotation, these factors accounted for 68.222% of the variance, indicating that the extracted factors successfully captured the variability of most of the data, showing a high degree of information extraction ability.

The factor loading coefficients (Table 1) indicate significant correlations between the research items and the respective factors. Specifically:

Factor 1 pertains to the attractiveness and quality of museum content shared on social media, reflecting how well such content engages audiences.

Factor 2 encompasses respondents' visit intentions and their social media usage behaviors, highlighting how these elements interact in the context of museum visits.

Factor 3 addresses the impact of emotional identification, triggered by interactive sharing and experiences on social media, on the visit intentions, emphasizing the role of personal emotional connections.

Factor 4 examines the effect of social pressure, derived from others' expectations and evaluations on social media, on the visit intentions, illustrating the influence of external social factors.

These findings provide a detailed understanding of how social media can affect all aspects of museum visit intention. The results of factor analysis confirmed the effectiveness of the tool used in this study and supported its reliability in capturing the expected structure.

Table 1 Factor Loading Coefficients

Name	Factor Loading Coefficients				Commonality (Common Factor Variance)
	Factor 1	Factor 2	Factor 3	Factor 4	
1.The content posted on social media about events organized by the museum appeals to me	0.811	0.141	0.130	0.106	0.706
2.The content of beautiful pictures, text and videos posted on social media is valuable to search and browse museum information	0.773	0.101	0.097	0.115	0.630

3.The ways of experiencing and interacting with museums on social media are limited	0.812	0.082	0.094	0.118	0.689
4.The quality level of content about museums on social media varies	0.787	0.071	0.117	0.166	0.665
5.The higher the level of production of text, images, and videos about a museum on social media, the more likely it is to make me feel favorably about the museum	0.807	0.122	0.178	0.156	0.722
6.The content of social media marketing allows me to avoid visiting museums that aren't worthwhile	0.786	0.095	0.087	0.111	0.646
7.I recognize the use of social media to market museums	0.778	0.148	0.050	0.175	0.659
8.I find museums to be unique places and I am interested in exploring different types of exhibits and cultural experiences	0.200	0.171	0.239	0.760	0.704
9.Sharing likes and comments on social media with those who share their experience of visiting with other museum visitors is one of the ways I express my visit intention	0.200	0.181	0.237	0.741	0.679
10. I actively seek out information and events about the museum through social media to ensure I do not miss any opportunities to visit	0.222	0.201	0.294	0.723	0.699
11.I believe that word-of-mouth referrals on social media help to improve my understanding and make me more willing to visit museums	0.208	0.187	0.263	0.736	0.690
12.I share my museum visit experiences through social media to express my emotions and love of art	0.102	0.815	0.179	0.141	0.727
13.I would be more inclined to go to a museum because of wanting to share my museum visit experiences on social media	0.094	0.818	0.195	0.110	0.727
14.I think sharing emotions and experiences with other museum visitors on social media is a way to increase identity	0.142	0.794	0.178	0.166	0.709
15.Sharing museum visits on social media has helped me create an emotional connection with other museum enthusiasts	0.167	0.810	0.148	0.139	0.726
16. My sharing of museum visits on social media usually sparks the interest of other people and makes them want to visit as well	0.138	0.800	0.177	0.180	0.722
17.After seeing other people share their museum visits on social media, I feel that I should go too	0.141	0.146	0.752	0.210	0.651
18.I am afraid that what I share on social media about my museum visit will not be liked or commented on by others	0.081	0.185	0.705	0.265	0.608
19.When considering whether to go to a museum or not, I am concerned that the expectations of my friends or followers on social media may interfere with my visit	0.110	0.174	0.745	0.221	0.646
20.I share my plans for a museum visit on social media, but am concerned about how it will affect my social profile	0.141	0.178	0.757	0.141	0.644
21.I am concerned about the attention of others on social media who are sharing my visit experience, which can affect how active I am in my social media use	0.137	0.194	0.771	0.165	0.678

Extraction method: Principal Component Analysis (PCA),

Rotation method: Kaiser Normalized Maximum Variance (KNMV)

Note: If the numbers in the table are in green, it means that the absolute value of the loading coefficient is greater than 0.4.

5.4.1 Re-examining the dimensions of the social pressure construct

The exploratory factor analysis identified social pressure as a single factor (Factor 4). However, a theoretical examination combining the specific content of the questionnaire items (items 17-21) with “social circle theory” reveals that it internally encompasses pressure dimensions from different sources. Specifically, Item 17—“After seeing other people share their museum visits on social media, I feel that I should go too”—and Item 18—“I am afraid that what I share on social media about my museum visit will not be liked or commented on by others”—primarily reflect individuals' perceptions of behavioral norms and identity expectations within their interest circles. This can be summarized as “Interest Circle Normative Pressure.” This stems from the individual's need to maintain their image and membership status within a specific interest group. Conversely, items 19 to 21 (such as concerns about friends' or followers' expectations, or attention to others' views on shared content) more directly point to comparison, evaluation, and expectations from peer groups in real or generalized social relationships, which can be summarized as “peer social pressure.” Although these items loaded onto a single factor in the preliminary factor analysis of this study, their distinct conceptual dimensions offer new perspectives for understanding the mechanisms of social pressure. Subsequent sections will explore the moderating effects of pressure by integrating this theoretical distinction.

5.5 Correlation Analysis

Based on the results of Pearson correlation analysis (Table 2), the key findings of this study are as follows:

(1) Social media content and access intention: there was a significant positive correlation between the content shared on social media and access intention ($r = 0.457$, Sig. = 0.01). It shows that museum related content on social media can effectively enhance students' interest in visiting museums.

(2) Emotional Identification and Visit Intention: The analysis shows a significant positive correlation between emotional identification and the visit intentions ($r = 0.467$, Sig. = 0.01). This suggests that when university students resonate with the cultural and artistic content displayed in museums through social media interactions, it strengthens their emotional connection with the museum, thereby enhancing their intention to visit.

(3) Social Pressure and Visit Intention: There is also a significant positive correlation between social pressure and the visit intentions ($r = 0.596$, Sig. = 0.01). This finding highlights that the expectations and evaluations of others on social media can significantly increase an individual's motivation to visit museums.

These results collectively emphasize the positive role of social media content in shaping the intention to visit museums and lay the groundwork for examining the nuanced moderating roles of different social pressure sources. In addition, they also reflect that emotional identity and social pressure are two main factors related to the increase of cultural institution desire.

Table 2 Correlation Analysis

	Mean	Standard Deviation		visit intention	Social Media Content	Emotional Identification	Social Pressure
Visit Intention	3.699	0.937	Pearson correlation	1			
			Sig.(two-tailed)				
Social Media Content	4.038	0.871	Pearson correlation	0.457**	1		
			Sig.(two-tailed)	0			
Emotional Identification	3.623	0.996	Pearson correlation	0.467**	0.328**	1	
			Sig.(two-tailed)	0	0		
Social Pressure	3.913	0.845	Pearson correlation	0.596**	0.339**	0.467**	1
			Sig.(two-tailed)	0.000	0.000	0.000	

** Significant at the 0.01 level (two-tailed).

* Significant at the 0.05 level (two-tailed).

5.6 Regression Analysis

A linear regression analysis was conducted to examine the relationships between social media content, emotional identification, and visit intentions (Table 3).

The results indicate:

(1) Social media content. The content of social media has a significant positive impact on the visit intention ($\beta = 0.367$, $p < 0.01$). It can be seen that the platform with rich content on social media platform is easier to stimulate users to visit the museum.

(2) Emotional identity: emotional identity also had a significant positive effect on interview intention ($\beta = 0.334$, $P < 0.01$). That is to say, if college students have established emotional ties with museums and online communities, they will be more inclined to use social media and go to museums more easily.

The adjusted R square value of the model is 0.320, indicating that social media content and emotional identity account for 32% of the difference in the visit intention of college students. In addition, this paper also conducts a diagnostic test to test whether the model is effective

(1) Multiple colinearity test: the variance expansion factor (VIF) of each variable in the regression is within the statistical standard, and there is no multiple colinearity problem.

(2) Autocorrelation test: the Durbin-Watson statistics are closer to 2, indicating that there is no autocorrelation between the residuals.

F-test showed that at least one independent variable -- social media content or emotional identity on social media -- significantly affected the visit intention. These results emphasize that active participation in social media content and strong emotional identity on social media play an important role in the willingness of college students to visit museums.

Table 3 Linear Regression Analysis (n=892)

	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	<i>p</i>	<i>VIF</i>	<i>R-squared</i>	<i>Adjusted R-Squared</i>	<i>F</i>
	<i>B</i>	Standard errors	<i>Beta</i>						
Constant	1.008	0.136		7.420	0.000		0.322	0.320	F(2,892)=210.712, p=0.000
Social media content	0.367	0.031	0.341	11.669	0.000	1.120			
Emotional identification	0.334	0.027	0.355	12.133	0.000	1.120			

a Dependent variable: Visit intention

D-W value: 1.859

5.7 Mediating Effect Analysis

the results of the intermediary role test (Table 4) show that: the content of social media directly has a significant impact on the willingness to visit ($B = 0.493$, $P < 0.01$), that is to say, the content shared on social media explains the independent impact of significant differences in the willingness to visit, and the adjusted R^2 is 20.8%. At the same time, emotional identity plays a partial mediating role in the relationship between social media content and access intention. Specifically, social media content also has a positive impact on emotional identity ($B = 0.376$, $p < 0.01$), and emotional identity in turn has a positive impact on the willingness to visit ($B = 0.175$, $p < 0.01$). The product of mediation effect ($a*b$) was 0.066, and 95%BCI excluded 0, indicating the existence of mediation effect. This shows that the impact of social media content on access intention is multiple. On one hand, social media content directly enhances the visit intention. On the other hand, it indirectly increases this willingness by strengthening emotional identification. The presence of partial mediation underscores the idea that while social media content has a direct impact, emotional identification is a crucial intermediary that further explains how social media content influences the intention to visit museums.

Table 4 Mediating Effect Test Results (* $p < 0.05$ ** $p < 0.01$)

Item	c	a	b	a*b	a*b	a*b	c'	Test Conclusion
	Total effect			Mediating effect value	(Boot SE)	(95% BootCI)	Direct effect	
Social media content=>emotional identification=>visit intention	0.493**	0.376**	0.175**	0.066**	0.024	0.123~0.216	0.273**	Partially mediated

5.8 Moderating Effect Analysis

To explore the moderating role of social pressure on the relationship between emotional identification and the visit intentions, a regression model was constructed, incorporating social media content, emotional identification, social pressure, and an interaction term (social pressure * emotional identification).

he results (Table 5) show that online content helps to improve the visit intention. Although the emotional identity in the museum will not have a negative impact on the visit intention, social pressure is a significant positive factor, indicating that social pressure can activate the individual's willingness to visit the museum. In addition, the interaction between social pressure and emotional identity also leads to the improvement of visit intention, which proves that social pressure can regulate the impact of emotional identity, and proves hypothesis 3.

Further analysis (Table 6-7) shows that the mediating effect of emotional identity on visit intention is also significantly different under different degrees of social pressure. Emotional identification served as a mediator under conditions of high, average, and low social pressure, with the impact of social pressure on the visit intention increasing in tandem with higher levels of emotional identification. This suggests that the stronger an individual's emotional connection to the museum content, the more potent the influence of social pressure on their decision to visit.

Table 5 Linear Regression Analysis Results ($X \Rightarrow Y$)($n=892$)

	Unstandardized Coefficients	Standardized Coefficients	<i>t</i>	<i>p</i>	<i>VIF</i>	<i>R-squared</i>	<i>Adjusted R-Squared</i>	<i>F</i>	Unstandardized Coefficients
	<i>B</i>	Standard errors	<i>Beta</i>						
Constant	1.116	0.311		3.594	0.000				
Social media content	0.277	0.029	0.257	9.607	0.000	1.181			
Emotional identification	-0.150	0.096	-	-	0.117	17.035	0.463	0.460	F(4,892)=191.047,p=0.000
Social pressure	0.188	0.086	0.169	2.191	0.029	9.884			
pressure*Emotional identification	0.087	0.025	0.521	3.539	0.000	35.835			

a Dependent variable: visit intention

D-W value: 1.993

Table 6 Conditional Indirect Effects Results

Mediating variables	Level	Level value	Effect	BootSE	BootLLCI	BootULCI
Emotional Identification	High level (+1SD)	4.758	0.100	0.018	0.066	0.138
	Mean level	3.913	0.072	0.014	0.045	0.099
	Low level (-1SD)	3.068	0.044	0.014	0.016	0.071

Table 7 Moderated Mediator Index

Moderated variable	Mediated variable	Index	BootSE	BootLLCI	BootULCI
Social pressure	Emotional identification	0.033	0.010	0.014	0.056

5.8.1 Exploring regulatory pathways based on stress sources

To examine the role of social pressures from different sources within the model more precisely, this study conducted exploratory analyses by dividing the social pressure scale items into two subsets based on theoretical distinctions: (1) Interest-Group Normative Pressure (INP), comprising items 17 and 18; (2) Peer Social Pressure (PSP), comprising items 19–21. The mean values of each subset served as the observed values for their respective pressure dimensions.

First, correlation analysis revealed (see Table 2) that Interest-Group Normative Pressure (INP) showed a slightly higher correlation with Visit Intention (VI) ($r = 0.58$, $p < 0.01$) than Peer Social Pressure (PSP) ($r = 0.54$, $p < 0.01$). Both dimensions were significantly positively correlated with Emotional Identification (EI), suggesting they may both exert moderating effects, though the intensity of these effects may differ.

Second, we separately incorporated INP and PSP as moderator variables into the original moderation effect model for testing. The results from both analyses supported the positive moderating effect of social pressure, consistent with the main analysis findings. However, comparing the standardized regression coefficients across the two models reveals that the interaction term between interest group pressure (INP) and affective identification exhibits a slightly stronger predictive effect on visit intention ($\beta = 0.09$, $p < 0.001$) than the interaction term involving peer social pressure (PSP) ($\beta = 0.07$, $p < 0.01$). This exploratory finding suggests that while both types of pressure amplify the driving effect of affective identification on visit intention, the moderating effect of normative pressure originating from specific interest groups and directly related to cultural consumption content may be more pronounced. This may stem from the higher content relevance and identity consistency between interest group pressure and museum visit behavior itself, thereby generating stronger behavioral guidance.

5.9 Structural Equation Modeling Analysis

To more clearly elucidate the complex relationships between social media content, emotional identification, social pressure, and the visit intentions, a structural equation model (SEM) was constructed. This model includes 16 observed variables corresponding to 3 latent variables: social media content, emotional identification, and visit intention.

The data collected from the questionnaire were analyzed using AMOS 26.0 software. The model was fitted using the maximum likelihood estimation method, and the resulting parameters are illustrated in Figure 3.

Before conducting the path analysis, the model's fit was first assessed. you can see from Table 8, CMIN/DF=1.163, It is far lower than the upper limit of 3, indicating a good fit; The RMSEA is 0.014, which is less than the acceptable upper limit value of 0.08, which supports the sufficiency of the above fitting. GFI=0.984, It is over the recommended minimum value of 0.9. In addition, NFI, RFI, IFI, TLI, CFI, etc. are greater than 0.9, which indicates that the model is suitable for fitting data. Based on these fitting indicators, we can carry out relevant path analysis and hypothesis test on our own variables.

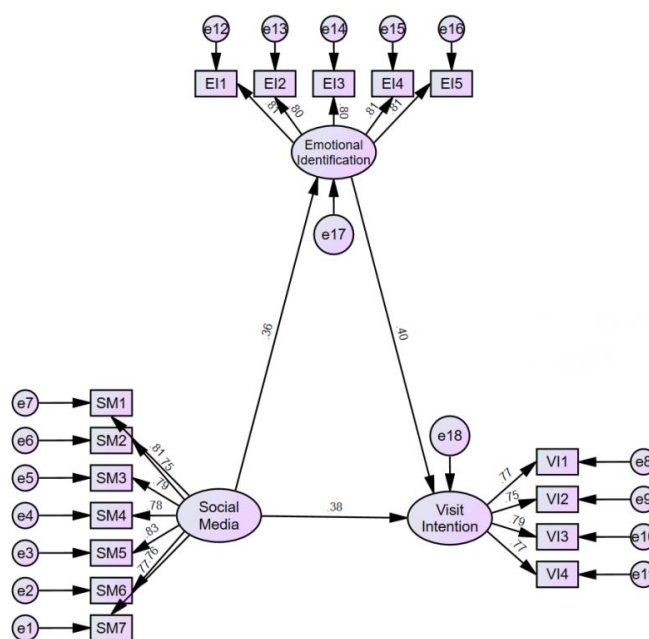


Figure 3 Structured Equation Modelling

Note: SM=Social Media Content, EI=Emotional Identification, VI=Visit Intention

Table 8 Model Fit Indicators

Comm-only	χ^2	df	p	CMIN/DF	GFI	RMSEA	RMR	CFI	NFI	IFI	RFI	TLI
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Judge-ment value	-	-	>0.05	<3	>0.9	<0.08	<0.08	>0.9	>0.9	>0.9	>0.9	>0.9
	117.462	101	0.126	1.163	0.984	0.014	0.024	0.998	0.986	0.998	0.983	0.998

Following the validation of the structural equation model through fit metrics analysis, the model paths were examined to provide a more comprehensive understanding of the relationships among the factors. This analysis allowed for a deeper exploration of the complex interactions between social media content, emotional identification, and the visit intentions. AMOS 26.0 software was used to test the hypothesized relationships in the research model. The results are shown in Table 9.

Table 9 Model Path Analysis

	Path		Estimate	Standardized factor loadings	S.E.	C.R.	P
	EI <--- SM		0.426	0.362	0.044	9.772	***
	VI <--- EI		0.342	0.396	0.032	10.692	***
	VI <--- SM		0.381	0.375	0.037	10.198	***
	SM7 <--- SM		1	0.774			
	SM6 <--- SM		1.019	0.761	0.043	23.984	***
	SM5 <--- SM		1.042	0.828	0.039	26.556	***
	SM4 <--- SM		1.031	0.778	0.042	24.626	***
	SM3 <--- SM		1.028	0.792	0.041	25.171	***
	SM2 <--- SM		1.019	0.749	0.043	23.515	***
	SM1 <--- SM		1.036	0.811	0.04	25.909	***
	VI1 <--- VI		1	0.771			
	VI2 <--- VI		1.054	0.748	0.048	21.832	***
	VI3 <--- VI		1.068	0.787	0.046	22.975	***
	VI4 <--- VI		1.065	0.771	0.047	22.537	***
	EI1 <--- EI		1	0.809			
	EI2 <--- EI		0.996	0.804	0.037	26.66	***
	EI3 <--- EI		0.987	0.8	0.037	26.449	***
	EI4 <--- EI		0.999	0.809	0.037	26.867	***
	EI5 <--- EI		0.965	0.813	0.036	27.023	***

Note1: *** p<0.001, **p<0.01, *p<0.05

Note2: SM=Social Media Content, EI=Emotional Identification, VI=Visit Intention

The results of the impact of social media content (SM) on emotional identification (EI) and visit intention (VI), showing that social media content (including engaging posts about museum activities, visually appealing images, and interactive features) has a significant positive effect on individuals' emotional identification with the museum, with a path coefficient of 0.426. This finding underscores the positive role social media plays in promoting emotional connections with museums. The impact of emotional identification (EI) on visit intention (VI) has also been confirmed, with a path coefficient of 0.342. It has been proven that the stronger an individual's emotional identification with a museum, the greater their visit intention. This positive association highlights the important role of emotional identification in promoting visit intentions. In addition to this indirect effect, social media content also has a direct, positive impact on visit intention (VI), with a path coefficient of 0.381. This suggests that social media content can not only increase intention to visit through emotional identification, but can also directly motivate people to visit museums.

The analysis examined autoregressive paths as well, such as the effect of SM7 on SM and the effect of EI1 on EI. The autoregressive path coefficient of SM7 on SM is 1, indicating that SM7 is completely positive related to previous social media content. This finding shows that the consistency of social media content has a significant impact on visitors' emotional identification and visit intention. Thus museums should focus on maintaining consistency in their social media strategy while improving the quality of text, images, and videos to create a unique and engaging style. Similarly, the autoregressive path coefficient of EI1 on EI is 1, reflecting the stability and continuity of emotional identification over time. This suggests that individuals' emotional connections to museums are not fleeting, but rather have a degree of stability, influenced by their accumulated experiences and previously acquired information. Respondents strongly agreed with statements such as *'I share my museum visit experiences through social media to express my emotions and love of art'*, *'Sharing museum visits on social media has helped me create an emotional connection with other museum enthusiasts'* and *'My sharing of museum visits on social media usually sparks the interest of other people and makes them want to visit as well'*. This highlights the importance of cultural organizations such as museums developing long-term strategies to cultivate and sustain emotional identification. The path coefficient of VI1 on VI is 1, indicating that previous visit intention directly and completely affects the current visit intention, reflecting the inertia and stability of the intention. This shows that an individual's attitude and visit intention are relatively consistent. Respondents expressed strong agreement with the statement, *'I actively seek out information and events about the museum through social media to ensure I do not miss any opportunities to visit'*. These findings contribute to understanding the persistence and development of individual's intention to visit and highlight the potential influence of past experiences and emotions in shaping current and future museum visiting behavior.

6 DISCUSSION AND CONCLUSION

6.1 Interpretation of Findings

The research results are the implications of social media on the willingness of college students to visit museums. The conclusion that the content of social media has a significant direct impact on the visit intention is basically consistent with the premise that external stimulation can directly affect the behavioral response in the SOR model[5,25]. This emphasizes the important role of the network as a powerful media channel to participate in cultural communication, and is also in the same line with the research on the impact of social media on consumer behavior[2,13]. This conclusion is also consistent with previous studies that emphasized the persuasiveness of social media to consumer behavior[12-13]. The intermediary role of emotional identity reveals the key role of emotional connection in promoting visit intention, which is consistent with the emotional input[26] mentioned in the customer based brand equity (CBBE) theory. Compared with previous studies, this paper also expanded our understanding of the role of social media in culture and leisure to some extent. Not only have many previous studies related to the relationship between social media and consumer behavior, we also pay attention to the museum industry which is relatively lack of research. Social pressure positively moderates the emotional identification $\rightarrow$ visit intention link, with interest-group normative pressure exhibiting a stronger moderating effect than peer social pressure. This highlights the role of content-specific social circles in amplifying emotional drivers of cultural consumption.

A central highlight and contribution of this study lies in its theoretical and empirical deconstruction of social pressure into two distinct types based on an analysis of Chinese university students: interest-group normative pressure and peer social pressure. While both dimensions positively moderate the relationship between emotional identification and visit intention, interest-group normative pressure demonstrates a significantly stronger moderating effect. This key finding indicates that, in the context of cultural consumption, sensitivity to norms and recognition within specific, vertical interest circles outweighs the influence of generalized expectations from broader peer networks. It provides direct empirical evidence for how “circle-based” socialization on digital platforms fundamentally reshapes the psychological pathway from media exposure to behavioral intention. Although the initial model treated social pressure as a single variable, a theory-driven re-examination of the measurement items revealed that it may encompass two distinct dimensions: interest group normative pressure and peer social pressure. Exploratory analyses indicate that both dimensions exert positive moderating effects on the “emotional identification $\rightarrow$ visit intention” pathway, consistent with the primary hypothesis H3. This collectively confirms the pivotal role of social circles in bridging online emotional engagement with offline behavioral outcomes. Notably, interest-group normative pressure exhibits a slightly stronger moderating effect than peer social pressure. This is empirically supported by our exploratory analysis (Section 5.8.1), which showed that the moderating effect of interest-group normative pressure ($\beta = 0.09$, $p < 0.001$) was slightly stronger than that of peer social pressure ($\beta = 0.07$, $p < 0.01$), underscoring the greater behavioral guidance exerted by content-aligned social circles.

This prominence of “circle-specific pressure” directly reflects community fragmentation and the rise of vertical interest circles in the digital age, providing theoretical grounding for cultural institutions to conduct precise community marketing and circle-based operations. The two types of pressure did not show significant conflict in this study's sample; instead, they exhibited synergistic effects. This may be because the interest circles and daily social circles of the college student group overlap significantly, and their cultural consumption behaviors simultaneously satisfy the dual needs of internal circle identification and external social display.

6.2 Implications of the Results

The findings have practical implications for museums and cultural institutions. By creating engaging, emotionally and social dynamic social media content, these organizations can increase their appeal to younger audiences. This study suggests that museums should consider developing targeted campaigns that tap into university students' emotions to increase potential engagement in museum visits.

6.2.1 Optimizing content dissemination to stimulate emotional identification

This study identifies content elements that resonate emotionally with university students. Attractive content, visually appealing images, and interaction methods have a positive impact emotional identification and visit intention. Personalizing content is particularly effective at increasing user engagement. Content delivery should incorporate sentiment computing techniques, such as sentiment analysis tools, to assess and optimize the emotional appeal of content. Personalized recommendation algorithm based on users' historical behaviors and preferences can also help improve the content relevance and attractiveness. The introduction of AI (such as Natural Language Processing to analyze user feedback) into content recommendation algorithm can improve the accuracy and relevance of content. The museum can even create a special social media account for college students, and the content is only for those topics they are interested in or new users like. These themes can include museum history, unique collections and cultural resources, and museums support students to understand and appreciate the great mission of museums. The new interactive technology of AR and VR can be used to provide a more immersive and fascinating experience.

6.2.2 Leveraging viral marketing to create social pressure

Museums should leverage interest-group platforms (e.g., thematic forums, niche social media) to cultivate normative pressure, while also encouraging sharing within peer networks to create generalized social proof on platforms such as social media feeds. This can make visiting museums a social trend and increase university students' social and cultural value. Combining online and offline activities, such as awarding customized online badges, medals or even avatars to

museum visitors, can improve social interaction and cultural engagement. Museums can also partner with key opinion leaders (KOLs) who are popular among university students to serve as ambassadors or spokespersons for museum activities. This regular scheduled event helps cultivate the culture of the museum community and makes museum visits the norm for university students.

6.2.3 Regular feedback collection and continuous optimization

By regularly collecting and analyzing university students' feedback, a closed feedback mechanism is established to ensure that content delivery is continuously optimized. This mechanism can not only adjust in time, but also track and respond to the changing needs of the user group. Using data analytic and machine learning techniques to extract valuable insights from feedback data can support continuous improvements of content and communications strategies.

6.3 Conclusion

This study aims to explore the impact of social media on university students' willingness to visit museums, with special attention to the mediating role of emotional identification and the moderating role of social pressure. These results provide valuable theoretical insights that can help advance understanding and practice in this field.

The analysis shows that content posted on social media has a direct and significant impact on university students' intention to visit museums. This highlights the powerful influence of digital platforms in shaping cultural engagement. We found that emotional identification mediated the relationship between social media content and museum visit intentions, highlighting the importance of emotional connections in cultural engagement. Third, and most innovatively, this study moves beyond treating social pressure as a unitary construct. By theoretically distinguishing and empirically validating two sources of pressure—interest-group normative pressure versus peer social pressure—we reveal their differential roles. The data consistently show that both act as positive moderators, but the moderating effect of interest-group normative pressure is markedly stronger. This implies that for university students, the internal norms and identity expectations stemming from specific cultural interest circles (e.g., museum enthusiast communities, art-focused groups) are more effective than generalized comparisons and evaluations from broader peer networks (e.g., friends, classmates) in converting emotionally-driven resonance from social media content into actual visitation motivation. This conclusion not only deepens the understanding of the mechanism of social pressure within the SOR model but also clearly suggests that targeted engagement with “interest circles” is more effective than merely cultivating a generalized “social trend” in promoting cultural participation among young audiences.

Theoretically, this study extends the application of the (SOR) model to the context of social media and cultural engagement. It provides empirical evidence for the role of emotional identification as a mediator of the effects of social media on behavioral intentions, a concept that has rarely been examined in the context of museum visits. Additionally, this study deepens our understanding of social pressure as a moderator and provides new insights into how social media can be used to promote cultural engagement.

In fact, these results provide useful information for museums and cultural institutions to attract young audiences. These institutions can increase visitation by creating engaging social media content that resonates with university students. The findings suggest that museums should strategically cultivate interest-group communities to harness normative pressure, alongside leveraging peer social networks for broader dissemination. Targeted content and KOL partnerships within niche circles can enhance emotional identification and convert it into visit intention more effectively.

This study reinforces the critical role of social media in influencing the cultural engagement of university students. It specifically shows that it affects the cultural participation of college students, in the case of museum visits. China is the most populous developing country. The popularity of social media shows that it is a powerful and important tool for cultural institutions. The popularity of social media in China and the diversity of groups provide an amazing perspective for cultural institutions in the world. Similarly, case studies in other countries also show the potential of digital platforms to span between online communication and offline cultural participation. At the same time, museums and cultural institutions in the world are facing the challenge of attracting young audiences. For China's approach, the strategy with Chinese background may also become a good example of success.

This study focuses on how social media can change the landscape of cultural places, especially in improving the role of college students in museum visits. With the power of social media and taking some small measures, cultural sites will have an advantage in attracting young people, ensuring that their cultural heritage is relevant and interesting even in the digital era of the twenty-first Century. These discussions are not only practical for China's cultural venues, but also provide guidance for the planning of global culture and cultural participation in the world dominated by social media.

7 RESEARCH LIMITATIONS AND OUTLOOK

These results are really exciting, but it needs critical thinking. The cross-sectional nature of the study excludes the formation of causality. The samples are uneven, but only Chinese college students may weaken the promotion of the results. However, the self-reported data may have some deviation. In the future, there will be more samples to visit more types and international samples. Longitudinal research can provide information about the long-term impact of the "interaction" of social media on Museum behavior (the result of behavior). Future studies could also employ longitudinal designs and more nuanced measures to separately model the long-term and interactive effects of interest-group normative pressure and peer social pressure, further validating their distinct roles in digital cultural engagement.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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