

Research on the Mechanism of the Impact of the "Pseudo-intimate Performance" of Live-streamers on Consumer Interaction and Participation from the Perspective of Consumers

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ABSTRACT

This paper focuses on the live-streaming e-commerce scenario. Based on the dramaturgical theory, the theory of pseudo-intimate relationship, and the general human behavior model of SOR, through the empirical analysis of 183 valid questionnaires, it explores the mechanism of the "pseudo-intimate performance" of the live-streamer on consumers' interactive participation. The results show that performance construction has a positive impact on interactive participation (direct effect) and pseudo-intimate perception; pseudo-intimate perception has a positive impact on interactive participation and plays a partial mediating role between performance construction and interactive participation; pseudo-intimate perception has a "double-edged sword" effect, and the performance intensity needs to be moderate. This study provides a basis for the optimization of emotional marketing in live-streaming e-commerce and helps the industry shift from "traffic-driven" to "trust-driven".

KEYWORDS

Live-streaming e-commerce; Pseudo-Intimacy; Interactive participation; Dramaturgical theory; SOR theoretical model

1 Introduction

1.1 Research background

In recent years, the explosive growth of the live-streaming e-commerce industry has made it an important part of the digital economy. According to the "High-Quality Development Report on Live-Streaming E-commerce 2024", China has remained the world's largest online retail market for 12 consecutive years. In 2024, the national online retail sales increased by 7.2% (physical goods increased by 6.5%, accounting for 26.8% of the total retail sales of consumer goods), with significant growth in live-streaming e-commerce. The differentiated competition among leading platforms (such as Kuaishou's "Trust E-commerce" and Douyin's "Interest E-commerce") has driven the industry towards "refined operation". Live-streaming e-commerce builds an interactive trust model through technology, which not only changes consumers' purchasing psychology but also provides a way for merchants to optimize their marketing ^[1]. However, the widespread existence of "pseudo-intimate performance" by live-streamers and the impact mechanism on consumer interaction and participation remain unclear, requiring further research.

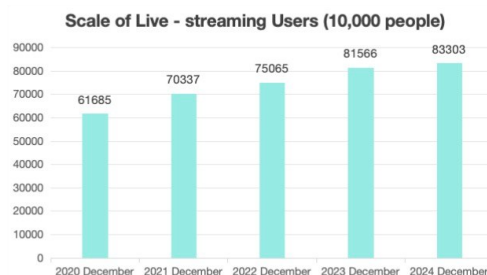


Figure 1 Scale of live streaming users from 2020 to 2024 (data source: statistical report on the development of China's internet).

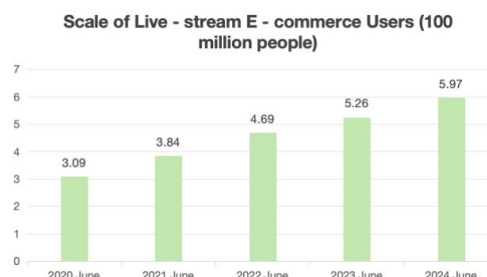


Figure 2 User scale of online e-commerce from 2020 to 2024 (data source: statistical report on the development of China's internet).

1.2 Research objectives and significance

This study aims to reveal the effect path of "performance construction → perception of pseudo-intimacy → interaction participation", clarify the direct and indirect effects among the three, and provide a framework for understanding the emotional interaction mechanism of live streaming ^[5-6]. Practically, it can offer strategies for optimizing the hosts' language and enhancing consumers' genuine interaction, thereby promoting live-streaming e-commerce and achieving a win-win situation for all parties ^[7].

2 Theoretical preparation

2.1 Definition of core concepts

2.1.1 Performance construction (independent variable)

Based on Goffman's dramaturgical theory, the host designs emotions, language styles, etc. on the live streaming "front stage" according to consumers' expectations, shaping a corresponding "intimate" image, which is the basis of "pseudo-intimate performance" ^[3-4].

2.1.2 Pseudo-intimate perception (mediating variable)

A manifestation of the alienation of intimate relationships in digital social interactions, it stems from parasocial interaction, referring to the unidirectional "parasocial relationship" formed by consumers towards the host, perceiving superficial intimacy but lacking genuine two-way communication ^[4-5].

2.1.3 Interactive participation (dependent variable)

A key link in how "pseudo-intimate performance" influences consumer behavior, it refers to consumers' behaviors such as commenting, liking, and viewing products during live streaming, driven by the host's emotional labor and emotional resonance ^[6-8].

2.2 Integration of theoretical foundations

2.2.1 Dramaturgical theory

Analyzes the host's "front stage" performance strategies, supporting the logic of "performance construction" ^[3-4].

2.2.2 Pseudo-Intimacy theory

Defines the "seemingly warm but essentially utilitarian" interaction characteristics in live streaming, providing a conceptual basis for "pseudo-intimate perception" ^[10-11].

2.2.3 SOR model

Constructs the logical chain of "performance construction (S) → pseudo-intimate perception (O) → interactive participation (R)", integrating the relationships among core variables ^[5-6].

2.3 Research hypotheses

Based on the above theories and concept definitions, this study proposes the following hypotheses:

H1: Performance construction positively influences interactive participation (direct effect) ^[12].

H2: Performance construction positively influences pseudo-intimate perception ^[13].

H3: Pseudo-intimate perception positively influences interactive participation ^[14].

H4: Pseudo-intimate perception plays a mediating role between performance construction and interactive participation ^[15].

3 Scheme design (survey scheme)

3.1 Variable operationalization

3.1.1 Performance construction

Based on the research of scholars such as Zhang Huo ^[2] and Fang Han ^[3], the average score of 5 items (items 6-10) is used to measure. The higher the score, the more obvious the performance behavior.

3.1.2 False intimacy perception

According to the research of scholars such as Zhang Zhonglei ^[5] and Li Zhen ^[6], the average score of 5 items (items 11-15) is used to measure. The higher the score, the stronger the perception of shallow emotional connection.

3.1.3 Interactive participation

Drawing on the research of scholars such as Zhang Yongjun ^[7] and Chen Li ^[8], the average score of 5 items (items 16-20) is used to measure. The higher the score, the more frequent the interaction.

3.2 Analytical methods

Table 1 Analytical methods

Analysis Objective	Method	Tool
Sample Feature Description	Frequency Analysis, Cross-Tabulation Analysis	SPSS
Scale Reliability Test	Cronbach's α Coefficient Test, KMO Test, Bartlett's Test of Sphericity	SPSS
Hypothesis Testing	Regression Analysis	SPSS

3.3 Test results of reliability and validity

The Cronbach's α coefficient of the total scale is 0.908 (>0.7), indicating excellent internal consistency. The KMO value is 0.92 (>0.8), and the Bartlett's test of sphericity is significant ($P<0.001$), suggesting that the data are suitable for factor analysis. The reliability and validity of the scale have been met.

Table 2 Statistical data on reliability

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
0.908	0.888	20

Table 3 Data on KMO and bartlett tests

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.920
Bartlett's Test of Sphericity	Approx. Chi-Square	1772.012
	df	190.000
	sig.	0.000

4 Empirical investigation (data collection)

4.1 Sample structure

A total of 183 valid questionnaires were collected. In terms of gender, 55.19% were female and 44.81% were male; in terms of consumption capacity, the 101-500 yuan range accounted for the highest proportion (40.44%), those above 1000 yuan accounted for 26.78%, and those without consumption accounted for 5.46%. The sample had stable live-streaming consumption capacity.

4.2 Key phenomenon description

59.56% of the respondents believed that the hosts frequently used intimate terms such as "baby" and "family members", and their performance behaviors were widespread. 71.58% of the respondents agreed that "the hosts and fans seem to be close but lack genuine trust", and 62.3% perceived "a distance between closeness", and Pseudo-Intimacy were widely present.

5 Data analysis (empirical analysis)

5.1 Descriptive statistics

The core consumer group aged 18-35 accounted for 93.44% (18-22 years old: 42.08%, 23-27 years old: 21.31%, 28-35 years old: 30.05%); 56.83% of the respondents watched live shopping broadcasts several times per week. The sample conforms to the main user profile of live e-commerce.

Table 4 Descriptive statistics situation-age group

Category	Specific Item	Frequency (Unit: Person-time)	Percentage (Unit: %)	Valid Percentage (Unit: %)
Age Group	18-22 years old	76	41.8	\
	23-27 years old	39	21.4	
	28-35 years old	55	30.2	
	Above 36 years old	12	6.6	

Table 4 Descriptive statistics situation-gender

Category	Specific Item	Frequency (Unit: Person-time)	Percentage (Unit: %)	Valid Percentage (Unit: %)
Gender	Male	82	45.10	45.1
	Female	100	54.90	54.9

Table 5 Descriptive statistics situation-frequency of watching live streaming commerce

Category	Specific Item	Frequency (Unit: Person- time)	Percentage (Unit: %)	Valid Percentage (Unit: %)
Frequency of Watching Live Streaming Commerce	Almost every day	25	13.70	13.7
	Several times a week	104	57.10	57.1
	Several times a month	29	15.90	15.9
	Seldom watch	24	13.20	13.2

5.2 Correlation analysis

The Pearson correlation coefficient was used to test the relationships among the three core variables. The results are presented in the following table:

Table 6 Test of relationships among core variables

Variable	Performance Construction	Perceived Pseudo-Intimacy	Interactive Participation
Performance Construction	1	0.647**	0.723**
Perceived Pseudo- Intimacy	0.647**	1	0.531**
Interactive Participation	0.723**	0.531**	1

** indicates $p < 0.01$

The performance construction was significantly positively correlated with the perception of pseudo-intimacy ($r=0.647$, $p < 0.01$), meaning that the more frequently the host performed, the stronger the consumers' perception of pseudo-intimacy; performance construction was also significantly positively correlated with interactive participation ($r=0.723$, $p < 0.01$), indicating that the performance could directly promote interaction; the perception of pseudo-intimacy was also significantly positively correlated with interactive participation ($r=0.531$, $p < 0.01$), providing preliminary evidence for the mediation effect test.

5.3 Verification of hypotheses through regression analysis

5.3.1 Direct effect test (H1, H2, H3)

(1) Results of the direct effect test for H1

The performance construction has a significant positive impact on interaction participation ($\beta=0.728$, $p < 0.001$), with $R^2=0.523$. The hypothesis is confirmed.

Table 7 Regression analysis results of performance construction on perceived pseudo-intimacy

Model		Unstandardized Coefficients		Standardized Coefficient	t	Significance	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.668	0.137		4.876	0.000		
	Perceived Pseudo-Intimacy	0.807	0.038	0.847	21.42	0.000	1	1

a Dependent variable: Perceived Pseudo-Intimacy

(2) The direct test results of H2

The performance construction had a significantly positive impact on the perception of pseudo-intimacy ($\beta=0.847$, $p < 0.001$), with $R^2=0.72$. The hypothesis was confirmed.

Table 8 Regression analysis results of perceived pseudo-intimacy and interactive participation

Model		Unstandardized Coefficients		Standardized Coefficient	t	Significance	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.069	0.183		5.841	0		
	Interactive Participation	0.749	0.054	0.717	13.809	0	1	1

a Dependent variable: Interactive Participation

(3) The direct test results of H3

The perception of pseudo-intimacy has a significant positive impact on interaction participation ($\beta=0.69$, $p<0.05$), with $R^2=0.51$. The hypothesis is confirmed.

Table 9 Regression analysis results of performance construction and interactive participation

Model		Unstandardized Coefficients		Standardized Coefficient	t	Significance	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.147	0.171		6.692	0		
	Interactive Participation	0.723	0.051	0.728	14.233	0	1	1

a Dependent variable: Interactive Participation

5.3.2 Mediation effect test (H4)

The Baron and Kenny three-step method was adopted:

Step 1: The direct effect of performance construction on interactive participation was significant (H1 has been verified).

Step 2: The effect of performance construction on the perception of false intimacy was significant (H2 has been verified).

Step 3: By including both, the coefficient of the perception of false intimacy was significant ($\beta=0.5482$, $p<0.001$), and the coefficient of performance construction decreased from 0.7323 to 0.2513. The R^2 of the model increased from 0.5295 to 0.6872, indicating a partial mediation effect, and H4 is thus established.

Table 10 Results of mediation test for performance construction and interactive participation

		B	Standard Error	Beta		
1	(Constant)	0.668	0.137		4.876	0
	Perceived Pseudo-Intimacy	0.807	0.038	0.847	21.42	0
2	(Constant)	0.465	0.137		3.389	0.001
	Perceived Pseudo-Intimacy	0.638	0.051	0.67	12.447	0
	Interactive Participation	0.245	0.054	0.247	4.581	0

a dependent variable: performance construction

6 Model validation (result discussion)

6.1 Summary of hypothesis testing

This study conducted a systematic examination of the four proposed hypotheses through regression analysis and structural equation modeling. The results are presented in the table below:

Table 11 Results of tests for each hypothetical system

Hypothesis	Test Result	Significance
H1: Performance construction positively affects interactive participation (direct effect)	Supported	$p<0.001$
H2: Performance construction positively affects perceived pseudo-intimacy	Supported	$p<0.001$
H3: Perceived pseudo-intimacy positively affects interactive participation	Supported	$p<0.05$
H4: Perceived pseudo-intimacy plays a mediating role between performance construction and interactive participation	Supported (partial mediation)	The effect accounts for 28.7%

6.2 Key findings

The performance intensity should be moderate. The use of tone and expressions to create a friendly atmosphere ($\beta=0.324$) directly promotes interaction significantly. Exaggerating emotions to attract attention ($\beta=0.541$) can temporarily enhance interaction but will weaken the willingness in the long run. When the performance score exceeds 3.8 points (on a 5-point scale), the positive effect of false intimacy perception on interaction turns negative. At the same time, false intimacy perception has a "double-edged sword" effect. Taking advantage of it can enhance interaction (path coefficient 0.33), but excessive use will weaken trust, resulting in interaction remaining superficial (such as clicking on the shopping cart without purchasing).

7 Conclusion and recommendations

7.1 Research findings

First, the perception of pseudo-intimacy exhibits a "double-edged sword" effect. Light performance can enhance interaction, but excessive performance will lead to estrangement. Second, age plays a moderating role. People aged 18-22 respond more positively to performance, while those aged 28-35 have a stronger perception of pseudo-intimacy and are more rational.

7.2 Practical recommendations

At the practical level, live-streamers should reduce exaggerated emotional performances such as "excited screams" and increase real-life sharing to enhance the persistence of interaction. For the platform, it is necessary to focus on monitoring "phrases like 'only XX items left in stock'" that convey "false urgency", and limit frequent false statements through a combination of algorithm and manual review. Consumers should enhance their ability to identify pseudo-intimacy and make rational consumption decisions based on their own actual needs.

The above conclusions not only provide a reference for academic research in the field of live-streaming e-commerce, but also offer scientific basis for balancing emotional marketing and consumer experience in industry practice, which is conducive to promoting the live-streaming e-commerce industry to develop in a healthier and sustainable direction.

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