

Discourse Decision-Making in Douyin Agricultural Product Live Streaming: An Analysis Based on Signaling Theory and the Hovland Persuasion Model

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Abstract

In recent years, Agricultural live-streaming e-commerce on Douyin has developed rapidly, and the industry has differentiated into two typical discourse styles: emotional narrative and quality narrative, but problems such as homogeneous marketing and excessive emotional routines are prominent. This study integrates signaling theory, Hovland's persuasion model, platform rule theory and Elaboration Likelihood Model (ELM). It adopts a mixed research design of corpus move coding method and consumer questionnaire survey method to systematically explore the differences in the characteristics of the two types of discourse strategies and the impact mechanism on consumer behavior. Research shows that the dual rules of platform algorithm traffic distribution and fresh free value distribution are the underlying motives of discourse style differentiation: Emotional narrative is a low-threshold replicable weak signal, which corresponds to the peripheral route of persuasion and drives consumers to buy instantly; The quality narrative is a strong signal with high credibility, which is in line with the central persuasion path and significantly promotes the long-term willingness to repurchase. This research has built an interdisciplinary integrated analysis framework, enriched the relevant theoretical perspectives, and can provide empirical support and practical reference for platform content governance and streamer speech optimization.

Keywords

e-commerce, agricultural product live streaming, discourse strategies, consumer behavior, Douyin

1. Introduction

Live streaming is an important new business model for the circulation of agricultural products and the increase of farmers' income. Relying on the support of user scale, intelligent algorithms and fresh traffic, Douyin has become a mainstream platform for live e-commerce of agricultural products [1], attracting a large number of farmers, merchants and streamers to enter the market. While the scale of the industry continues to expand, homogeneous competition continues to intensify, and the live speech style has become the core variable that determines the level of traffic and transaction conversion. At present, the market has formed two types of mainstream discourse forms: One type uses the narrative of local feelings to trigger emotional resonance to achieve diversion, and the other type builds trust through qualification publicity, testing traceability and after-sales guarantee transmission of verifiable quality information. There are significant

differences between the business logic and the impact on consumer behavior between the two. The existing research mostly focuses on a single dimension such as the value of live broadcast to help farmers, supply chain or streamer attractiveness, and lacks a systematic analysis of integrated platform rules, signal attributes, persuasion paths and consumer behavior [2]. And it relies more on the analysis of discourse content and lacks consumer behavior data verification, and there is an obvious theoretical and empirical gap. This study focuses on exploring the driving mechanism of platform rules for the differentiation of the two types of discourse, and the differences in the persuasive paths of the two types of discourse affecting consumers' impulsive purchase and repurchase behavior. With the theme of Douyin agricultural products live broadcast discourse strategy, the mixed research method of corpus-based move coding method and consumer questionnaire survey method is adopted to reveal the underlying logic of discourse differentiation, clarify the heterogeneity characteristics of the two types of discourse, and test its differentiated impact on consumer behavior. This research can not only enrich the interdisciplinary theoretical system of live discourse research on agricultural products, but also provide a scientific basis for platform governance, merchant operation and industry standards.

2. Literature Review and Hypothesis Development

2.1 Literature Review

Signaling theory is often used to explain the trust generation logic of information asymmetry market [3]. As a typical experiential commodity, agricultural products have natural information barriers in online trading, and live speech has become the core carrier of quality transmission. According to the difficulty of copying, it can be divided into weak signals that are easy to reproduce and strong signals with high input [4]. Based on the theory of symbol interaction, some scholars point out that only highly credible quality symbols can build stable consumer trust [5]. Hovland's persuasion model and the extended Elaboration Likelihood Model (ELM) divide the audience's information processing into central and marginal paths, providing theoretical support for analyzing the logic of consumer live broadcast decision-making [6], and studies have confirmed that the influence of discourse credibility on long-term purchase willingness is more significant [7]. The platform rule theory emphasizes that the Internet platform directly guides the content creation orientation of merchants and promotes the evolution of live speech style through implicit rules such as algorithmic traffic distribution and commission setting. The "stay first" logic of intelligent communication will systematically reward emotional content, resulting in a decline in the ecological value density of digital content [8]. Existing studies mostly discuss live marketing or platform governance separately, and less integrate and analyze platform rules, discourse strategies, signal transmission and persuasion paths. There is a particular lack of empirical comparative research on agricultural products. In terms of international research, emotional narrative is mainly driven by emotional awakening to impulse purchase, but it has no significant impact on the willingness to buy again [9]; Domestic research has found that the stay time in the emotional narrative live broadcast room is higher, but the conversion rate and repurchase rate are significantly lower than the quality narrative live broadcast room [10]. The above research has laid the foundation for this study, but it has not yet systematically revealed the complete chain of action between platform rules, discourse strategies and consumer behavior.

2.2 Research Hypotheses

Based on the above literature combing and theoretical derivation, this study puts forward the following assumptions:

H1: The algorithm traffic distribution rules of the Douyin platform and the value distribution rules of fresh categories jointly drive the differentiation of the live discourse of agricultural products into two types of heterogeneous strategies: emotional narrative and quality narrative. Among them, the emotional narrative is composed of weak signals as the core, and the quality narrative is composed of strong signals as the core.

H2: Emotional narrative discourse has a significant positive impact on consumers' instant impulsive purchasing behavior through the marginal persuasion path, and the quality narrative discourse has a significant positive impact on consumers' willingness to repurchase for a long time through the central persuasion path. There is a significant heterogeneity in the effect of the two types of discourse.

3. Research Methodology

3.1 Sample Selection

This study selects the self-broadcast live broadcast room of pure agricultural products merchants, which are representative of the Douyin platform from January to April 2025, as the object of analysis. According to the dominant style of discourse expression, after independent pre-observation and cross-verification by three researchers, the sample was divided into two categories: emotional narrative and qualitative narrative. The sample covers fruits, vegetables, dry goods, livestock and poultry and other major agricultural products. The two groups are basically consistent in terms of live broadcast time, broadcast time, streamer fan volume and other variables to control the interference of unrelated variables.

3.2 Corpus Construction and Coding Design

Table 1: Coding Dimensions and Evaluation Scale for Agricultural Product Live-Streaming Discourse Source: Agricultural Product Short-Video and Live-Streaming Discourse Analysis Research Group)

Coding Dimension	Observed Indicators	Coding Scale R	Emotional Narrative Group	Quality Narrative Group
Opening Discourse	Suspense introduction; rural storytelling	1 = Absent; 2 = Moderate; 3 = Prominent	3	1
Interactive Discourse	Encouraging likes, viewer retention, and comment interaction	1 = Absent; 2 = Moderate; 3 = Frequent	3	2
Emotional Narrative	Farmers' experiences; hardships of cultivation; emotional appeals	1 = Absent; 2 = Limited; 3 = Extensive	3	1
Quality Evidence	Certification credentials; inspection reports; product traceability information	1 = Absent; 2 = Limited; 3 = Comprehensive	1	3
After-Sales Commitment	Compensation for damaged products; return and exchange guarantees; compensation policies	1 = Absent; 2 = Vague; 3 = Clear	1	3

Table 2: Comparison of Move Structure Proportions Between the Two Discourse Strategies (Unit: %) (Source: Agricultural Product Short-Video and Live-Streaming Discourse Analysis Research Group)

Move Stage	Emotional Narrative Group (%)	Quality Narrative Group (%)	Comparison
Opening Attraction Stage	28.6	15.2	Higher in the Emotional Narrative Group
Emotional Narrative Stage	31.4	8.5	Significantly Higher in the Emotional Narrative Group
Basic Product Introduction	18.3	22.7	Slightly Higher in the Quality Narrative Group
Quality Certification and Evidence	7.5	30.1	Significantly Higher in the Quality Narrative Group
Promotional Call-to-Action Stage	9.2	10.3	Largely Comparable
Interactive Guidance Stage	5.0	3.2	Slightly Higher in the Emotional Narrative Group

Collect the complete live content of all samples through the official screen recording tool of Douyin, and use the Xunfei Hearing Professional Transcription Tool to convert the video to text format. Two researchers independently carried out manual cleaning of the transcribed text to eliminate redundant chats, platform system prompts, repeated promotional rhetoric and ineffective interjections from the audience, and finally built a standardized live discourse corpus of agricultural products. Referring to the business discourse move coding framework, combined with the characteristics of the live broadcast scene of agricultural products, formulate a standardized coding scale containing 5 core coding dimensions and 12 observation indicators (see Table 1), and use the sentence-by-sentence annotation move coding method to quantitatively analyze the live discourse [11]. The coding work is completed by two systematically trained independent coders. Before coding, some

samples are selected for pre-coding calibration, and the pre-coding consistency reaches 88%. After the formal coding is completed, the inter-coder reliability was assessed using Cohen's Kappa coefficient, and the Kappa value is calculated to be 0.84, indicating that the coding result has good reliability.

3.3 Consumer Survey

In order to directly test the impact of the two types of discourse strategies on consumer behavior, this study distributes consumer questionnaires through the questionnaire star platform. The survey subjects are users who have had live shopping experience in Douyin agricultural products in the past 6 months. The questionnaire uses the Likert level 5 scale to design the measurement questions, and each scale has good reliability. Through the systematic combing and induction analysis of questionnaire data, this study qualitatively summarizes the consumer feedback of two types of discourse strategies.

4. Results

4.1 Differences in the Move Structure and Characteristics of the Two Types of Discourse

Table 3: Primary Factors Influencing Purchase Decisions in Agricultural Product Live Streaming (Multiple Responses Allowed) (Source: iResearch Consulting, 2024)

Factor	Percentage (%)
Direct Shipment from the Place of Origin / Freshness	67.30
Product Traceability / Inspection Reports	48.90
Farmers' Stories / Emotional Narratives	29.80
Price Discounts	54.10
Professional Product Explanation by the Streamer	32.50

Table 4: Priority Ranking of Quality Trust Sources (Source: Douyin and the Ministry of Agriculture and Rural Affairs, 2025)

Source of Trust	Percentage (%)
Government Geographical Indication (GI) Labels / Organic Certification	80.50
Live Streaming from the Production Site (Freshly Harvested in the Field)	65.30
Farmer Identity Endorsement (Farmer Streamers)	38.70
Third-Party Pesticide Residue Testing / Quality Inspection Reports	82.10
Authentic User Reviews and Purchase Sharing	78.90
Professional Qualifications of the Streamer / Agricultural Technology Certificates	31.20

Based on the coding results of the live sample, the two types of discourses, emotional narrative and qualitative narrative, show significant differences in core dimension assignment and distribution of move structures (see Table 2). The emotional narrative group devotes most of its time to the opening attraction and emotional narrative, and the quality qualification evidence link is relatively low; The quality narrative group took the initiative to streamline the invalid opening and excessive emotional expression, and tilted the main time to the qualification proof and quality explanation. The discourse structure showed obvious rationalization and evidence-based characteristics. The above results preliminarily verify the heterogeneity characteristics of the two types of discourse strategies in the hypothesis H1.

4.2 Mechanisms of Action and Consumer Responses to the Two Types of Discourse

From the perspective of signaling theory, emotional narrative takes local stories, suspense rendering and interactive guidance as the core. No additional qualification costs are required, and the replication threshold is extremely low. It is a typical weak signal, which corresponds to the peripheral route of persuasion of the Elaboration Likelihood Model (ELM). It creates a sense of scarcity and crowd scenes through emotional sympathy, and drives the audience to skip rational thinking and make an immediate response. The quality narrative takes qualification certificates, testing data, origin traceability and after-sales commitment as the core. It requires merchants to invest high time and economic costs. It is difficult to imitate. It is a high-credibility and strong signal, which fits the central persuasion path and guides the audience to rationally evaluate the value of the product. Although the instantaneous diversion is weak, it can provide stable quality expectations. The qualitative analysis of the questionnaire shows that the vast majority of respondents said that emotional narrative rhetoric is easy to trigger the impulse of "a fear of missing out". Many people admit to placing orders

quickly under emotional resonance, but only a few people will repurchase without thinking. Most people emphasize that it is necessary to see qualifications, test reports or after-sales commitments to establish long-term trust. On the contrary, respondents who have been exposed to quality empirical content generally showed higher repurchase willingness and brand loyalty, verifying the core logic of weak signals to drive short-term impulses and strong signals to build long-term trust. Combined with the cross-verification of industry and questionnaire data, consumers are most concerned about the direct delivery and freshness of the origin, preferential price, traceability of origin and testing reports, and the proportion of farmers' stories and emotional narratives is the lowest [3]. More than 70% of the respondents have bought because of emotional narrative impulse, but only about 28% will repurchase; and nearly 70% of the respondents who bought because of quality narrative have a clear intention to repurchase. In terms of quality trust, the priority of third-party quality inspection reports, government certification and real user follow-up comments is much higher than the status of farmers and the qualifications of streamers, which further confirms the core position of strong signals in the construction of consumer trust. The above results verify the hypothesis H2.

5. Discussion

5.1 Key Findings and Theoretical Integration

The core of this study found that the dual rules of Douyin algorithm traffic distribution and fresh free value distribution jointly drive the polarization of the live broadcast discourse of agricultural products to emotional narrative and quality narrative. The algorithm the “retention-first” logic naturally rewards high interaction and high retention content, making emotional opening and high-frequency interaction become the mainstream of high-flow live broadcast rooms; The fresh service-free policy greatly reduces the operating costs of merchants, so that quality-oriented merchants can get rid of low-price competition and invest in qualification certification, product testing and after-sales system construction, which provides institutional conditions for the development of quality narrative. This discovery verifies the applicability of the platform rule theory, and also echoes the ethical judgment that the algorithm may cause content homogenization and erosion of consumer trust [12]. The difference in signal attributes of the two types of discourse determines its impact area: As a low-cost weak signal, emotional narrative quickly stimulates impulsive purchases through the edge path, but it is difficult to last; As a strong signal of high cost, the quality narrative guides rational judgment through the central path. Although the transformation is slow, the trust is more stable, which is consistent with the existing research conclusions. The interdisciplinary integrated framework of “platform rules-discourse strategy-signal attributes-persuasion path-consumer behavior” proposed in this study has been fully verified, which clearly reveals the functional essential differences between the two types of discourse and makes up for the shortcomings of existing research.

5.2 Managerial Implications and Practical Recommendations

At the platform level, we should optimize a single traffic distribution mechanism with stay and interaction as the core, improve the recommendation weight of quality empirical content, launch the “quality assistance to farmers certification” logo including qualification audit, after-sales system and traceability, and give the traffic tilt and official endorsement of the certified live broadcast room [13]. At the same time, we should strengthen the rectification of bad words such as sad marketing and false propaganda, and establish a blacklist system for illegal merchants [14]. At the level of streamers and merchants, differentiated operation should be adopted in stages: During the start-up period of the new store, emotional narratives can be moderately used to accumulate initial traffic; After stable operation, take the initiative to upgrade the discourse strategy, set up a visual “quality display corner”, display the test report and qualification certificate through real-time screen projection, scanning and traceability, turn the focus of the live broadcast to quality explanation and after-sales commitment, and consolidate user trust with strong signals. At the industry level, we should establish a unified qualification publicity and content expression norms, promote the construction of the industry credit system, and implement cross-platform joint discipline for false marketing merchants. At the same time, adapt to the cross-border communication context, retain moderate emotional elements for the high-context market, and give priority to the use of quality empirical expression for the low-context market to help domestic agricultural products brands go abroad.

6. Conclusion

This study takes Douyin agricultural products live as the research scenario, and uses a hybrid research method to systematically compare the characteristic differences of the two types of discourse strategies, emotional narrative and quality narrative, and its impact mechanism on consumer behavior. The main findings are as follows: First, the dual rules of platform algorithm traffic distribution and fresh free value distribution together constitute the underlying trigger for the differentiation of live broadcast discourse style of agricultural products, which verifies the hypothesis H1; Second, emotional narrative takes emotional rendering and high-frequency interaction as the core step, which fits the marginal persuasion path and significantly promotes consumers' impulsive purchasing behavior; The quality narrative takes qualification proof and after-sales commitment as the core step, which is in line with the center's persuasion path, significantly affects consumers' long-term repurchase willingness, and verifies the hypothesis H2. The two types of discourse have their own emphasis on the scope of application: emotional narrative is suitable for new stores to attract fans, and quality narrative is suitable for mature stores to cultivate long-term consumer trust. The theoretical contribution of this research lies in the construction and empiricalism of an interdisciplinary integrated analysis framework, which provides a new perspective for digital platform content governance and consumer behavior research; The practical level provides a clear decision-making reference for platform content governance, merchant live broadcast operation and industry standard development.

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