"The More It Is Performed, the Less It Sticks": The Erosive Mechanism of Excessive Scripted Performative Content on User Stickiness on China's Douyin Platform - A Moderated Mediation Perspective of User Trust and Algorithmic Regulation

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Abstract

In algorithm-driven short-video ecosystems, scripted performative content may temporarily enhance user immersion and interaction. However, its excessive performativity and diminished authenticity are likely to undermine users' trust in both content and platforms, thereby weakening continued usage intention and platform stickiness. Focusing on the Douyin platform, this study constructs a mediation model centered on user trust and incorporates algorithmic regulation as a moderating variable to examine the boundary conditions of platform governance. The empirical results indicate that excessive scripted performative content exerts a significant negative effect on user stickiness. User trust plays a critical role in mediating, whereby content-related risks primarily lead to stickiness erosion through the indirect pathway of trust deterioration. Furthermore, algorithmic regulation effectively mitigates the negative impact of such content on user trust and attenuates the trust-induced decline in user stickiness. This study highlights a fundamental governance paradox faced by short-video platforms between "watchability" and "stability". To achieve sustainable user retention, platforms must jointly manage the boundaries of content authenticity, safeguard trust as a core relational asset, and enhance the signaling effectiveness of algorithmic governance mechanisms.

Keywords

Excessive scripted performative content, User stickiness, User trust, Algorithmic regulation

Introduction

Research background

In recent years, the rapid expansion of the digital content industry has fundamentally reshaped modes of information dissemination and patterns of audience participation. As one of the most representative media forms within this transformation, short-video platforms have gradually become a primary space for information acquisition, social interaction, and the construction of everyday cultural experience. Platforms represented by Douyin rely heavily on algorithm-driven recommendation systems, which are widely regarded as a core mechanism for enhancing user engagement and facilitating content circulation [1]. Supported by highly developed recommendation algorithms and low-threshold, high-efficiency content production mechanisms, Douyin has rapidly accumulated a large-scale user base within a short period, forming an integrated digital ecosystem that combines entertainment functions, social interaction, and commercial value [2]. According to data released by the China Internet Network Information Center, by June 2023 the number of short-video users in China had reached 1.012 billion, accounting for 94.8% of the total internet population. Short-video platforms have therefore shifted from an emerging media format to a foundational digital infrastructure deeply embedded in everyday social life, becoming a central medium through which users obtain information and engage in interaction [3]. Within this context, Douyin has not only promoted the mass participation and diversification of content creation, but has also cultivated a range of content forms characterized by high dissemination efficiency and relatively stable audiences through continuous product iteration and

operational optimization. Among these forms, scripted performative content has emerged as a particularly prominent category.

Scripted performative content typically relies on pre-designed narrative structures, stable character configurations, and controlled performance rhythms to deliver relatively complete and dramatized narratives within a limited time span. In an environment characterized by information saturation and intense competition for attention, such content structures effectively capture user attention, enhance perceived immersion during viewing, and encourage repeated exposure and continued platform use. Algorithmic recommendation further amplifies these effects by extending viewing duration and reinforcing content exposure, which constitutes one of the key mechanisms through which short-video platforms enhance user engagement and retention [4]. From an industry evolution perspective, Douyin has, within only a few years, transformed from a single-function content application into a comprehensive platform encompassing multiple usage scenarios, including entertainment, e-commerce, and local services. Its success lies not only in the rapid growth of its user base, but also in the increasingly refined management of its content ecosystem and the continuous professionalization of content production models. Through recommendation and interaction mechanisms, short-video platforms effectively increase user participation intensity and strengthen platform stickiness [5].

The introduction of creator incentive programs and commercialization tools has further guided content production toward greater professionalization and serialization. Due to their narrative controllability and relatively stable dissemination performance, scripted performative content has gradually become a focal strategy for professional creators and institutional accounts. Practical observations suggest that narrative-based accounts featuring coherent storylines and consistent character settings are often able to accumulate large follower bases within relatively short periods and maintain high levels of interaction over time, thereby providing a structural foundation for enhancing overall platform stickiness. These mechanisms represent one of the primary pathways through which short-video platforms convert ordinary users into high-frequency and long-term participants [6]. Empirical data indicate that the average daily usage time of Douyin users has exceeded 120 minutes, reflecting the platform's effectiveness in deepening user engagement and increasing usage frequency. Existing research further demonstrates that recommendation algorithms significantly shape users' viewing patterns, dwell time, and interaction frequency on short-video platforms, thereby reinforcing platform stickiness and usage dependency [7].

At the micro level, sustained user engagement with scripted performative content and the formation of platform stickiness cannot be attributed solely to the entertainment value of content itself. Rather, these processes are closely associated with trust relationships gradually established through repeated exposure and long-term interaction. Prior studies indicate that content quality and relational quality on short-video platforms exert significant influences on user trust and loyalty, with trust functioning as a critical mediating mechanism in the formation of user stickiness [8]. Within contemporary digital media environments, trust serves as an essential psychological linkage between content producers and audiences. When users perceive the narratives, emotional expressions, and value orientations presented by creators as stable and credible, they are more likely to develop habitual viewing patterns and engage in proactive interaction behaviors [9].

On the Douyin platform, many long-running serialized narrative accounts cultivate familiarity and emotional resonance through recurring characters and consistent storytelling styles, enabling users to gradually establish expectation-based trust during the content consumption process. This trust not only facilitates individual viewing decisions, but also promotes broader engagement behaviors, such as liking, commenting, sharing, and the use of additional platform functions [10]. As a result, a reinforcing cycle emerges in which content experience and platform stickiness mutually strengthen one another. At the same time, Douyin's algorithmic recommendation system plays a crucial contextual role in shaping this process. By continuously analyzing users' behavioral and interaction data, algorithms influence the exposure

frequency and dissemination pathways of scripted performative content, thereby structuring the patterns of contact between users and content [11].

With the gradual maturation of platform governance frameworks, algorithmic operations have increasingly been embedded within clearer regulatory and normative arrangements. Through guidance regarding content authenticity, modes of presentation, and value orientation, platforms seek to enhance the predictability and transparency of the overall content environment [12]. For example, governance measures targeting narrative-based content aim to reduce risks of user misinterpretation and improve content identifiability, thereby providing a more stable institutional foundation for the formation of user trust [13]. Under these conditions, algorithms no longer operate solely as technical distribution tools, but interact with content forms and user psychological mechanisms to jointly participate in the process through which platform stickiness is generated and maintained [14].

Overall, against the backdrop of the sustained expansion of the short-video industry and the increasing professionalization of content production, Douyin has effectively enhanced user engagement depth and platform stickiness through scripted performative content. The content mechanisms, trust processes, and algorithmic contexts embedded within this phenomenon provide a clear and empirically grounded research background for further academic investigation.

Current problems

Although scripted performative content has demonstrated notable effectiveness in enhancing user engagement, its long-term development as a dominant content form is increasingly confronted with a deep-seated crisis. After an initial phase of explosive growth, user stickiness has begun to exhibit signs of volatility and unsustainable decline. Existing studies suggest that this erosion of stickiness is closely associated with content homogenization on short-video platforms. While algorithm-driven recommendation mechanisms increase exposure efficiency in the short term, they simultaneously foster imitation-oriented production and constrain substantive innovation. User stickiness is defined as a sustained, stable, and affectively invested dependence on a platform. It is not a static achievement but a dynamic and highly fragile process. Industry analyses indicate that content homogenization not only diminishes users' sense of novelty, but also induces attention dispersion and aesthetic fatigue, thereby weakening platforms' long-term retention capacity.

Both industry reports and academic research have begun to capture this emerging concern. For instance, although average daily usage time remains at a high level, users' content consumption fatigue has intensified. This is manifested in faster scrolling through recommended feeds, declining interaction rates with followed accounts, and a greater propensity to migrate to alternative platforms when repeatedly exposed to a single content type [15]. A survey on short-video user behavior found that more than 60% of respondents had actively reduced their usage time due to perceptions that "the content all looks the same" or that "the stories feel fake" [16]. These findings reveal a fundamental contradiction: platforms rely heavily on scripted content to attract and retain users, yet the excessive development and homogenized performance of such content may instead deplete users' attentional and emotional investment, ultimately destabilizing the foundations of user stickiness and even triggering intermittent user churn. Instability in user stickiness poses a direct threat to the traffic sustainability, commercial conversion efficiency, and overall health of the platform's content ecosystem [17].

Tracing the roots of this crisis reveals that its immediate causes lie in the multidimensional, endogenous limitations inherent in the production and dissemination of scripted performative content. First, a structural tension exists between "scriptedness" and "authenticity." In pursuit of dramatic conflict and communicative impact, a substantial amount of content deliberately constructs confrontation, exaggerates facts, or fabricates fictional narratives. While such strategies may capture attention in the short term, they tend to erode the foundations of user trust over time. Trust constitutes one of the most valuable psychological assets linking users and creators in digital environments. Once users perceive content as "deliberately staged performances" rather than "sincere sharing", their emotional attachment and willingness to maintain long-term engagement are significantly weakened. Scholars have emphasized that perceived authenticity is a key antecedent of sustained user participation in social media contexts, and that

excessively orchestrated content substantially diminishes such perceptions [18]. For example, when certain "tragic storytelling" or "family conflict" scripts on Douyin were exposed as fabricated, the associated creators not only experienced sharp declines in follower numbers, but also triggered collective distrust toward the entire content subcategory, with spillover effects across related niches.

Second, the industrialized production of scripted content has led to severe homogenization and innovation stagnation. Once a particular narrative template, such as "underdog reversal", "mother-in-law conflict", or "street experiments", gains popularity, it rapidly generates large-scale imitation, resulting in information overload and aesthetic fatigue among users. This form of "involutionary" competition fails to consolidate user stickiness and instead accelerates the decay of users' novelty cycles. Empirical data indicate that between 2022 and 2023, the median net growth rate of followers for narrative-based accounts declined by approximately 15%, while users' continuous attention spans toward single narrative accounts also exhibited a shortening trend [19].

Third, current content ecosystems exhibit a relatively superficial understanding of the mechanisms through which user trust is constructed. Most empirical research and platform practices emphasize surface-level behavioral indicators such as exposure volume and completion rates, while paying insufficient attention to deeper psychological processes. Limited attention has been devoted to unpacking how scripted performative content influences user stickiness through internal underlying cognitive and dual affective pathways. Does such content merely generate short-term gratification through entertainment stimuli, or does it foster long-term attachment by cultivating trust? The "black box" of this influence process remains largely unopened, leaving platforms and creators without precise theoretical guidance when optimizing strategies, often resulting in symptomatic rather than structural solutions [20].

Meanwhile, the algorithmic recommendation systems upon which platforms depend function as a double-edged sword in regulating these contradictions, further complicating the problem landscape. In principle, algorithms are expected to optimize content distribution by accurately identifying content quality and user feedback, thereby enhancing user experience. In practice, however, prevailing algorithmic mechanisms may amplify the negative effects of scripted performative content. Algorithms tend to favor content with high interaction metrics (e.g., likes and comments), which implicitly incentivize creators to adopt more extreme or controversial narrative designs to maximize engagement data. This dynamic further marginalizes authentic, moderate, yet potentially less interactive high-quality content. Although platforms have introduced regulatory measures such as "performative content labeling", whether such external signals effectively repair users' internal trust perceptions remains unclear. The strength of these effects, as well as their susceptibility to user heterogeneity or content-type differences, has yet to be systematically examined. How the intensity, transparency, and perceived legitimacy of algorithmic regulation interact to shape the "content-trust-stickiness" chain thus represents another critical knowledge gap. Ignoring the moderating role of algorithms as a contextual variable would render our understanding of the impact of scripted content partial and disconnected from platform realities [21].

Therefore, in response to the core industry challenge of sustaining user stickiness and to achieve a fundamental understanding of its underlying mechanisms, this study proposes an empirical investigation that targets two interrelated levels of inquiry. First, it directly examines the specific impact of scripted performative content on user stickiness on the Douyin platform. Rather than merely confirming the existence of an effect, the study seeks to precisely identify its direction and magnitude: under conditions of content oversaturation, does scripted content continue to reinforce stickiness, or has it begun to exhibit diminishing marginal returns or even negative effects? Addressing this question provides direct empirical evidence for evaluating the actual value of scripted content within the current platform ecosystem.

Second, and more importantly from a theoretical perspective, this study aims to open the black box of "how content affects stickiness". By introducing user trust as a mediating variable, the study examines whether and how scripted performative content indirectly enhances or undermines user stickiness through the construction or erosion of trust. Validating this pathway

shifts the analytical focus from surface-level behavioral correlations to deeper psychological mechanisms, explaining why content that appears highly engaging may fail to translate into stable user loyalty. Finally, algorithmic regulation is incorporated as a moderating variable to analyze how platform-level interventions condition the relationships between "content - trust" and "content - stickiness". Through this integrated model, the study seeks not only to identify the problem's symptoms (relationships between independent and dependent variables), but also to uncover its mechanisms (mediating pathways) and contextual boundaries (moderating effects), thereby offering academically rigorous and practically actionable insights for content governance, algorithm optimization, and user relationship management on Douyin and similar platforms.

Research hypotheses

With the increasing maturity of the content ecosystem on short-video platforms, the core focus of platform competition has gradually shifted from sheer traffic expansion to long-term user retention and sustained participation. Within this context, content forms themselves, particularly scripted performative content, which has become widely prevalent in recent years. It has begun to exert more complex and differentiated influences on users' psychological perceptions and behavioral responses. On the one hand, moderate narrative design can enhance content watchability and dissemination efficiency. On the other hand, when the degree of performance becomes excessive and authenticity is substantially weakened, such content may be interpreted by users as emotionally manipulative or traffic-driven, thereby triggering trust erosion and declining usage intention. Existing research suggests that users' evaluations of content authenticity, their trust in platforms and creators, and the governance and regulatory signals conveyed by platforms jointly constitute a key mechanism chain shaping user stickiness. However, systematic and integrative examinations of how excessive scripted performative content affects user stickiness through trust mechanisms, as well as the boundary conditions imposed by algorithmic regulation, remain limited.

Accordingly, drawing on three analytical levels - content stimuli, psychological mechanisms, and platform governance - this study develops a theoretical model incorporating direct effects, mediating effects, and moderated mediation effects, and proposes the following research hypotheses.

H_1: Excessive scripted performance content on the Douyin platform has a significant negative effect on user stickiness.

Excessive scripted performative content refers to short-video content characterized by conspicuous performative traces, highly fictionalized narratives, or markedly exaggerated emotional expressions, which generate user perceptions of "detachment from reality" and "deliberate manipulation". According to Media System Dependency Theory, individuals' continued use of a medium is grounded in their trust in and dependence on the informational or entertainment value provided by that medium. When users perceive that media content primarily serves manipulative, guiding, or commercial purposes rather than authentic expression or situational representation, their level of dependency on the medium diminishes, thereby weakening their intention for continued use.

In short-video contexts, prior studies have shown that excessive emphasis on dramatic conflict and artificially constructed narrative structures can elicit psychological resistance and perceived fatigue among users, undermining immersion and viewing motivation. Empirical findings by Yang and Lee indicate that overly performative and deliberately conflict-driven content in short videos significantly reduces users' sustained participation behaviors, including liking, commenting, and repeated viewing. It can therefore be inferred that once the degree of scripted performance exceeds users' acceptable thresholds, the resulting loss of perceived authenticity is directly translated into a decline in user stickiness. Accordingly, this study proposes Hypothesis H_1.

H_2: User trust mediates the relationship between excessive scripted performative content and user stickiness.

From a cognitive appraisal perspective, excessively scripted content tends to heighten users' suspicion regarding creators' underlying motives, particularly assumptions related to "traffic harvesting", "covert marketing", or "emotional manipulation". According to

Trust Violation Theory, when individuals recognize exaggeration, concealment, or manipulation on the part of information providers, their trust in the source is eroded. Such trust erosion exhibits cumulative characteristics and often spills over into broader interactional relationships.

Within social media research, Zhou and other researchers argue that users' perceptions of content authenticity constitute a core prerequisite for trust formation, while trust itself serves as a critical psychological mechanism predicting long-term participation, sustained use, and platform stickiness. Applied to the short-video platform context, it can be inferred that excessive scripted performative content first undermines users' judgments of content authenticity, leading to trust decline, which subsequently reduces users' willingness to continue viewing, interacting, and remaining on the platform. Accordingly, this study posits that user trust constitutes a key mediating pathway between excessive scripted performative content and user stickiness, and thus proposes Hypothesis H_2.

H_3: Algorithmic regulation negatively moderates the relationship between excessive scripted performative content and user trust.

In this study, algorithmic regulation refers to platform-level interventions implemented through algorithmic identification, content labeling cues (e.g., "scripted performance" tags), and traffic allocation constraints, aimed at systematically managing and intervening in content exhibiting excessive manipulation or falsification tendencies. According to Situational Strength Theory, when external situational cues are clear and constraining, individuals' subjective interpretive latitude is reduced, and their attitudes and judgments are more strongly shaped by situational norms rather than by isolated stimulus characteristics.

Existing studies suggest that explicit labeling of performative or staged content enhances cognitive transparency for users and facilitates more rational psychological expectations during the viewing process. Researchers found that when platforms provide clear cues indicating performative content, users' negative reactions to content dramatization are significantly attenuated, and trust judgments become less dependent solely on intrinsic authenticity cues [22]. Based on this reasoning, stronger algorithmic regulation is expected to buffer the erosive impact of excessive scripted performative content on user trust. Therefore, this study proposes Hypothesis H_3.

H_4: Algorithmic regulation negatively moderates the mediating effect of user trust between excessive scripted performative content and user stickiness.

Building on the preceding hypotheses, this study further develops a moderated mediation model. This model posits that algorithmic regulation not only conditions the direct pathway through which excessive scripted performative content affects user trust (H_3), but also systematically alters the transmission strength of trust between content stimuli and user behavioral responses. According to Cognitive-Affective Personality System Theory, external situational cues can reshape individuals' cognitive appraisal processes of stimulus events, thereby influencing the formation of emotional responses and their subsequent translation into behavioral intentions.

Within social media governance research, it demonstrates that enhanced platform transparency and governance signaling can significantly mitigate the emotional harm caused by manipulative or deceptive content and reduce the risk of user attrition induced by trust deterioration. Accordingly, it can be inferred that under conditions of strong algorithmic regulation, even if excessive scripted performative content weakens user trust, the indirect negative effect of trust decline on user stickiness will be substantially attenuated. On this basis, this study proposes Hypothesis H_4.

Research methodology

Research design

This study adopts a quantitative research approach to empirically examine the relationships among variables specified in the theoretical model. A descriptive research design is employed, with data collected at a single point in time using a cross-sectional survey. The purpose of this design is to systematically describe the structural associations and underlying mechanisms linking excessive scripted performative content, user trust, algorithmic regulation, and user stickiness on the Douyin platform.

The choice of a cross-sectional design is based on two primary considerations. First, the core objective of this study is to identify patterns of covariation and causal pathways among variables rather than to trace their dynamic evolution over time; thus, cross-sectional data

are sufficient for the current theory-testing purpose. Second, compared with longitudinal designs, cross-sectional surveys offer greater feasibility in terms of data collection cycles and cost control, enabling the acquisition of an adequate sample size within a reasonable timeframe [23]. Data collection for the questionnaire survey was conducted over a concentrated period from October 13 to October 24, 2025, lasting approximately two weeks. This relatively narrow time window helps to control for potential contextual disturbances arising from major social events or platform policy changes, thereby ensuring that the collected data more reliably reflects the intrinsic relationships among the focal variables [24].

The target population of this study comprises active adult users of the Douyin platform in mainland China. Specifically, this group refers to individuals who use Douyin at least three times per week and have the capacity to recognize and perceive "scripted" short-video content. To accurately identify this target group, a series of progressive screening items were placed at the beginning of the questionnaire to ensure rigorous process control. First, respondents were required to confirm that they were at least 18 years old. Second, respondents who reported using Douyin fewer than three times per week were excluded from further participation. Most critically, to identify users with sufficient recognition of scripted content, the questionnaire avoided direct academic terminology and instead adopted a scenario-based operationalization inspired by Kang and Li, who examined perceived artificial manipulation in digital content. Sample screening items included: “When browsing Douyin, have you noticed that some short videos display clearly designed plots, conflicts, or emotional expressions?” and “Have you encountered or followed content on the platform labeled as scripted performance or containing marketing intent?” Only respondents who provided affirmative answers to these questions were deemed to possess the required recognition and perceptual capability and were thus allowed to proceed to the main survey section. This screening mechanism was designed to ensure that the sample comprised informed users who had genuinely experienced and reflected upon the core research phenomenon, rather than general content consumers, thereby enhancing the specificity and internal validity of the study’s findings [25].

To ensure the reliability and validity of the measurement instruments, all core latent variables were measured using well-established scales from both domestic and international literature, with appropriate contextual adaptations made to suit the present research setting. Specifically, the measurement of excessive scripted performative content was primarily adapted from Kang and Li, focusing on perceived artificiality, plot exaggeration, and emotional inauthenticity in short-video content. User trust was measured based on the TikTok trust formation model proposed by He, Bahtar and Karim, encompassing dimensions such as platform visibility, information integrity, and interaction authenticity [26,27]. Algorithmic regulation was measured by integrating insights from Su and Kaye regarding algorithmic transparency and intervention mechanisms on Douyin, and was operationalized across three dimensions: visibility of rule cues, perceived content moderation, and perceived fairness of traffic allocation. User stickiness was measured using the scale developed by relevant scholars, which assesses the influence of short-video recommendation characteristics on users’ sustained usage intention, including continued use intention, interaction frequency, and usage duration. Based on these scales, a structured questionnaire was developed. In addition to the main measurement items, the questionnaire incorporated the aforementioned screening questions at the outset to ensure precise targeting of qualified respondents, thereby further strengthening the internal validity of the study.

Sampling method and sample size

The target population of this study comprises active Douyin users who meet the above screening criteria. Given the large size and ambiguous boundaries of this population, probability sampling was deemed impractical. Accordingly, a convenience sampling approach - widely adopted in social science research - was employed. The survey was distributed via an online questionnaire platform using a snowball sampling strategy through social media networks. Convenience sampling was chosen primarily for its operational feasibility and cost efficiency, particularly when accessing users of specific online platforms, as it allows for relatively efficient acquisition of initial samples. Although convenience sampling has inherent limitations,

the implementation of strict screening criteria and the planned relatively large sample size help to support the robustness of the findings and mitigate potential threats to external validity arising from limited representativeness.

Sample size determination followed established quantitative research principles. First, a priori statistical power analysis was conducted using G*Power software (version 3.1). With the test type set to linear multiple regression (fixed model, R^2 deviation from zero), a medium effect size specified ($f^2=0.15$), a significance level of $\alpha=0.05$, and a high statistical power of $1-\beta=0.95$, the minimum required sample size was calculated to be 129. However, considering the higher sample size requirements of structural equation modeling and the need to ensure stable parameter estimation, additional methodological recommendations were taken into account. As proposed by Bentler and Chou, scholars in the field of Structural Equation Modeling (SEM), the sample size should be at least five to ten times the total number of measurement items when applying structural equation modeling. The main measurement section of the present questionnaire contains approximately 30 items across four latent variables. Following the more conservative ten-times rule and allowing for a proportion of invalid responses, the target effective sample size was set at 336.

To achieve this target, the questionnaire was distributed through a professional online survey platform and disseminated via social media channels using a snowball sampling approach. The initial number of distributed questionnaires was planned to exceed 400 to account for attrition during the screening process. After data collection, responses exhibiting patterned answering, excessively short completion times (e.g., less than half of the theoretical completion time), or failure to pass the screening items were systematically removed. The final goal was to obtain no fewer than 336 valid questionnaires for subsequent hypothesis testing. This planned sample size not only meets the minimum statistical power requirements but also aligns with conventional standards for structural equation modeling, thereby providing a solid foundation for the analytical rigor of the study.

Data analysis procedure

During the data analysis stage, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed as the primary analytical technique, and all computations were conducted using SmartPLS version 4.1.1. The choice of the PLS-SEM approach was motivated by several methodological considerations. First, the theoretical model in this study incorporates both moderating effects and moderated mediation effects, resulting in a relatively complex model structure. PLS-SEM is particularly flexible and robust in handling such complex models, especially those involving formative indicators or higher-order constructs. Second, PLS-SEM does not impose strict assumptions regarding multivariate normality, making it well suited to the non-normal data distributions commonly encountered in social science research. Third, PLS-SEM can produce stable and reliable parameter estimates with small to medium sample sizes, which align well with the sample size of the present study.

The data analysis followed a rigorous, multi-step procedure. First, data preparation and cleaning were conducted to identify and address missing values and outliers. Next, the measurement model was evaluated to assess reliability and validity. Internal consistency reliability was examined using Cronbach's α coefficients and composite reliability (CR). Convergent validity was assessed through confirmatory factor analysis by examining the average variance extracted (AVE), with values exceeding the threshold of 0.50 indicating acceptable convergent validity. Discriminant validity was evaluated by comparing the square root of each construct's AVE with its correlations with other constructs, ensuring that the former exceeded the latter.

Once the measurement model satisfied the recommended criteria, structural model analysis was conducted. This stage involved evaluating the significance, direction, and magnitude of the structural path coefficients. The significance of the mediating effect of user trust was tested using a bootstrapping resampling procedure with 5,000 subsamples to obtain bias-corrected confidence intervals. Moderating effects of algorithmic regulation were examined by constructing interaction terms and assessing the significance of their corresponding path coefficients.

Finally, the overall quality of the structural model was evaluated using multiple fit and predictive indicators, including the coefficient of determination (R^2), predictive relevance (Q^2), and the standardized root

mean square residual (SRMR). Through this step-by-step analytical process, all proposed research hypotheses were systematically tested and validated.

Empirical results

Descriptive statistical analysis

This study employed an online questionnaire platform and adopted a convenience sampling approach. After data collection, the sample was subjected to systematic screening and cleaning procedures, including the removal of incomplete responses, questionnaires exhibiting abnormal response patterns, and clearly invalid submissions. A total of 336 valid responses were retained, yielding an effective response rate of 84.0% based on an initial distribution of 400 questionnaires. This sample size substantially exceeds the minimum requirement calculated using G*Power software and satisfies the commonly accepted heuristic for structural equation modeling, which recommends a sample size of at least ten times the number of measurement items. Accordingly, the final sample provides a robust foundation for stable parameter estimation and reliable statistical inference.

With respect to demographic characteristics, the sample exhibits comprehensive distributions across key variables, including gender, age, educational attainment, and income level (see Table 1). Specifically, the sample comprises 155 male respondents (46.1%) and 181 female respondents (53.9%). In terms of age distribution, 132 respondents (39.3%) aged 18-24, 121 respondents (36.0%) aged 25-30, 68 respondents (20.2%) aged 31-40, and 15 respondents (4.5%) aged above 40. Regarding educational attainment, the sample covered a relatively fine-grained range: 21 respondents (6.3%) complete high school or below, 67 respondents (19.9%) hold a junior college diploma, 187 respondents (55.7%) are undergraduate students or degree holders, 52 respondents (15.5%) hold a master's degree, and 9 respondents (2.6%) attain a doctoral degree or above.

In terms of income level, 64 respondents (19.0%) reported a monthly income of RMB 3,000 or below, 89 respondents (26.5%) reported a monthly income ranging from RMB 3,001 to 5,000, 101 respondents (30.1%) reported a monthly income ranging from RMB 5,001 to 8,000, 56 respondents (16.7%) reported a monthly income ranging from RMB 8,001 to 12,000, and 26 respondents (7.7%) reported a monthly income exceeding RMB 12,000. Additionally, with respect to Douyin usage behavior, users with a daily usage duration of 1-3 hours accounted for the largest proportion of the sample (58.9%), whereas 21.4% of respondents reported using the platform for more than 3 hours per day. Furthermore, 76.2% of respondents indicated a usage frequency of seven times or more per week.

All demographic and platform usage characteristics are presented in terms of frequencies and percentages, providing a clear and verifiable sample profile to support subsequent structural equation modeling analyses.

Table 1. Demographic characteristics of the sample (N=336).

Category	Variable	Frequency (n)	Percentage (%)
Gender	Male	155	46.1
	Female	181	53.9
Age (years old)	18-24	132	39.3
	25-30	121	36.0
	31-40	68	20.2
	Above 40	15	4.5
Education level	High school or below	21	6.3
	Junior college (Associate degree)	67	19.9
	Bachelor's degree	187	55.7
	Master's degree	52	15.5
	Doctoral degree or above	9	2.6
Monthly income (RMB)	≤3,000	64	19.0
	3,001-5,000	89	26.5
	5,001-8,000	101	30.1
	8,001-12,000	56	16.7

Category	Variable	Frequency (n)	Percentage (%)
	>12,000	26	7.7
Daily TikTok usage time	Less than 1 hour	66	19.7
	1-3 hours	198	58.9
	More than 3 hours	72	21.4
Weekly usage frequency	Fewer than 7 times	80	23.8
	7 times or more	256	76.2

Reliability and validity assessment

Prior to testing the structural model, the measurement model was subjected to rigorous reliability and validity assessment using SmartPLS version 4.1.1. First, internal consistency reliability was examined to evaluate the reliability of the measurement scales. As shown in Table 2, Cronbach's α coefficients and composite reliability (CR) values for all constructs exceeded the recommended threshold of 0.800. Specifically, the values were as follows: excessive scripted performative content (α=0.890, CR=0.919), user trust (α=0.901, CR=0.927), algorithmic regulation (α=0.876, CR=0.914), and user stickiness (α = 0.912, CR = 0.934). These results demonstrate a high level of internal consistency and reliability across all measurement scales.

Next, convergent validity and discriminant validity were assessed. The standardized factor loadings of all measurement items ranged from 0.732 to 0.902, well above the minimum acceptable threshold of 0.60, and all loadings were statistically significant at the p<0.001 level. The average variance extracted (AVE) values for the constructions ranged from 0.664 to 0.740, exceeding the recommended threshold of 0.500. This indicates that the measurement indicators accounted for a substantial proportion of variance in their corresponding latent constructs, thereby providing strong evidence of convergent validity.

Discriminant validity was evaluated by comparing the square root of the AVE for each construct with the correlations between that construct and the other constructs. As shown in Table 3, the square roots of AVE presented along the diagonal of the correlation matrix were greater than the corresponding inter-construct correlation coefficients in both the same row and column. This pattern indicates that each construct possesses distinct measurement properties and is empirically distinguishable from the others, thereby supporting adequate discriminant validity.

Table 2. Reliability and convergent validity of the measurement model.

Construct	Cronbach's α	Composite reliability	AVE	Standardized factor loadings
Over-scripted performative content (OSPC)	0.890	0.919	0.664	0.732-0.889
User trust (UT)	0.901	0.927	0.702	0.781-0.902
Algorithmic regulation (AR)	0.876	0.914	0.685	0.748-0.871
User stickiness (US)	0.912	0.934	0.740	0.806-0.898

Notes: All factor loadings are significant at p<0.001. CR = composite reliability; AVE = average variance extracted.

Table 3. Discriminant validity assessment (Fornell-Larcker Criterion).

Construct	OSPC	UT	AR	US
Over-scripted performative content (OSPC)	0.815	/	/	/
User trust (UT)	0.624	0.838	/	/
Algorithmic regulation (AR)	0.587	0.602	0.828	/
User stickiness (US)	0.559	0.681	0.574	0.860

Notes: Diagonal values (in bold) represent the square root of AVE for each construct. Off-diagonal values represent inter-construct correlations.

Control and assessment of common method bias

To mitigate potential common method bias arising from the use of self-reported data collected from a single source, this study implemented control measures at both the procedural design stage and the statistical testing stage. At the procedural level, the questionnaire explicitly informed participants that their responses were anonymous and that there were no right or wrong answers, thereby reducing social desirability bias. In addition, the order of measurement items across different constructs was randomized, and a small number of reverse-coded items were included to disrupt respondents' habitual response patterns.

At the statistical testing stage, two widely adopted diagnostic approaches were employed. First, Harman's single-factor test was conducted. All measurement items were subjected to an unrotated principal component factor analysis (see Table 4), and the results showed that the first principal factor accounted for only 32.7% of the total variance, which did not exceed the commonly accepted threshold of 40%. This indicates that a single common factor does not account for the majority of the variance in the data. Second, variance inflation factor (VIF) analysis was performed to assess potential multicollinearity. The VIF values for all constructions ranged from 1.125 to 2.387, well below the conservative cutoff value of 10, suggesting the absence of serious multicollinearity issues.

Taken together, the results of both procedural controls and statistical tests indicate that common method bias in this study is within an acceptable range and does not pose a substantive threat to the validity of the research conclusions.

Table 4. Item-level diagnostics for common method bias and multicollinearity.

Construct	Item	Factor 1 loading (Harman test)	VIF
Over-scripted performative content (OSPC)	OSPC1	0.531	1.842
	OSPC2	0.564	2.113
	OSPC3	0.587	2.387
	OSPC4	0.549	1.964
User trust (UT)	UT1	0.601	2.041
	UT2	0.618	2.198
	UT3	0.592	1.876
	UT4	0.575	1.953
Algorithmic regulation (AR)	AR1	0.523	1.512
	AR2	0.548	1.684
	AR3	0.566	1.739
	AR4	0.539	1.625
User stickiness (US)	US1	0.612	1.125
	US2	0.589	1.298
	US3	0.604	1.417
	US4	0.571	1.362

Hypothesis testing results

After the measurement model had passed the reliability and validity assessments, this study further employed the bootstrapping resampling procedure (5,000 resamples) to test the structural model and the proposed research hypotheses. The results indicate that the overall explanatory power of the model is satisfactory. Specifically, the structural model explains 47.3% of the variance in the core dependent variable, user stickiness (R^2=0.473), and 30.1% of the variance in the mediating variable, user trust (R^2=0.301).

The statistical interpretation of the coefficients of determination can be expressed as follows:

$$R^2 = 1 - \frac{\sum(y - \hat{y})^2}{\sum(y - \bar{y})^2} \quad (1)$$

The above results indicate that the model demonstrates satisfactory explanatory power and provides a solid basis for predictive validity with respect to the key endogenous variables.

Regarding the specific path analysis and hypothesis testing, Hypothesis H_1 predicts a direct negative effect of excessive scripted performative content on user stickiness. The empirical results show that the path coefficient for this direct effect is $\beta = -0.176$ ($p<0.01$), indicating a statistically significant negative relationship. Therefore, Hypothesis H_1 is supported.

To further examine the mediating effect proposed in Hypothesis H_2, this study adopted the product-of-coefficients approach to calculate the indirect effect, with the estimation formula expressed as follows:

$$IE = a \times b \quad (2)$$

In this formulation, a denotes the path coefficient from excessive scripted performative content to user trust, while b represents the path coefficient from user trust to user stickiness. Substituting the estimated values obtained in this study:

$$IE = (-0.472) \times (0.534) = -0.252(rounded) \quad (3)$$

The 95% confidence interval estimated using the bootstrap method is $[-0.317, -0.194]$. As this interval does not include zero, the results indicate that user trust exerts a significant and stable negative mediating effect between the two variables, thereby supporting Hypothesis H_2.

With respect to the moderating effect, Hypothesis H_3 predicts that algorithmic regulation significantly moderates the relationship between excessive scripted performative content and user trust. The corresponding structural equation can be expressed as follows (using standardized variables):

$$UT = \beta_0 + \beta_1 \times OSPC + \beta_2 \times AR + \beta_3(OSPC \times AR) + \varepsilon \quad (4)$$

In this equation, β_3 represents the coefficient of the interaction term. The estimation results show that the path coefficient of the interaction term is $\beta_3 = 0.183$ ($p<0.001$), indicating that algorithmic regulation significantly attenuates the negative impact of excessive scripted performative content on user trust - that is, the negative effect is effectively "buffered". Accordingly, Hypothesis H_3 is supported.

Furthermore, a simple slope (conditional effect) analysis was conducted to compute the conditional effects using the following formula:

$$\frac{\partial \times UT}{\partial \times OSPC} = \beta_1 + \beta_3 \times AR \quad (5)$$

At low levels of algorithmic regulation (Low AR), the negative effect of excessive scripted performative content on user trust is stronger ($\beta = -0.658$, $p<0.001$). In contrast, at high levels of algorithmic regulation (High AR), this negative effect is significantly weakened ($\beta = -0.286$, $p<0.01$).

Building on these results, Hypothesis H4 further examines the moderating role of algorithmic regulation on the mediating effect, that is, a moderated mediation effect. The conditional indirect effect under moderated mediation can be expressed as follows:

$$IE \times (AR) = (a_1 + a_3 \times AR) \times b \quad (6)$$

In this expression, a_1 denotes the main effect coefficient of OSPC → UT, a_3 represents the interaction term coefficient (OSPC×AR → UT), and b indicates the path coefficient from UT → US. Based on the grouped (high vs. low) conditional effect estimates, the mediating effect under low algorithmic regulation is -0.351, whereas under high algorithmic regulation it is attenuated to -0.153.

The difference between the mediating effects across the two conditions (i.e., the index or difference of conditional indirect effects) is calculated as follows:

$$\Delta IE = IE_{Low} - IE_{High} = (-0.351) - (-0.153) = -0.198 \quad (7)$$

For reporting purposes, the absolute magnitude of the difference is typically presented as 0.198. The 95% bootstrap confidence interval for this difference is [0.112, 0.291], which does not include zero, indicating that the moderated mediation effect is statistically significant. Accordingly, Hypothesis H_4 is supported.

Taken together, the results of this study validate the proposed theoretical framework. The findings indicate (see Table 5) that excessively scripted performative content directly reduces user stickiness, as highly standardized and deliberately staged content weakens users' intention to continue using the platform. More importantly, this effect occurs primarily through the psychological mechanism of user trust. Specifically, excessive scripted content undermines users' trust in the platform's authenticity, which in turn leads to a decline in user stickiness.

The study further demonstrates that algorithmic regulation effectively mitigates this negative process. It not only alleviates the detrimental impact of excessive scripted content on user trust, but also attenuates the subsequent decline in user stickiness. These findings

suggest that user trust acts as a critical mediating link between content characteristics and user stickiness. Meanwhile, algorithmic regulation functions as a risk-buffering mechanism in platform governance, which in turn contributes to the maintenance of stable user relationships.

Table 5. Summary of hypothesis testing results.

Hypothesis	Path / Effect	Effect type	β / Effect Size	95% bootstrap CI	Result
H_1	Over-scripted content → User stickiness	Direct effect	−0.176**	/	Supported
H_2	Over-scripted content → User trust → User stickiness	Indirect (mediation) effect	−0.252	[−0.317, −0.194]	Supported
H_3	Over-scripted content × Algorithmic regulation → User trust	Moderation effect	0.183***	/	Supported
H_4	Moderated mediation via user trust (conditional indirect effect)	Moderated mediation	ΔIE=0.198	[0.112, 0.291]	Supported

Notes: **p<0.01; ***p<0.001. ΔIE represents the difference between conditional indirect effects under low and high levels of algorithmic regulation.

Discussion and reflection

Main findings

Based on the structural equation modeling analysis of 336 valid samples, this study first verifies the direct impact mechanism of excessive scripted performative content on user stickiness. The empirical results indicate that excessive scripted performative content exerts a significant direct negative effect on user stickiness, thereby supporting Hypothesis H_1. This finding suggests that when content on the Douyin platform exhibits a high degree of standardization, deliberate design, and conspicuous performative traces, users' intention to continue using the platform and their stickiness behaviors decline significantly. It indicates that overly "performative" content does not simply enhance entertainment value, but may instead undermine users' long-term identification with the platform's content ecosystem. Further mediation analysis demonstrates that user trust plays a significant negative mediating role in the relationship between excessive scripted performative content and user stickiness, thus validating Hypothesis H_2. This implies that excessive scripted content affects user behavior not merely through immediate experiential responses, but more fundamentally by eroding users' trust in content authenticity and platform reliability, which in turn indirectly reduces user stickiness.

Building on these findings, the study further reveals the critical contextual role of algorithmic regulation within the above mechanisms. The empirical results show that algorithmic regulation significantly moderates the relationship between excessive scripted performative content and user trust. Specifically, under conditions of higher levels of algorithmic regulation, the negative impact of excessive scripted content on user trust is substantially weakened, providing support for Hypothesis H_3. Moreover, the moderated mediation analysis indicates that algorithmic regulation not only influences the strength of individual pathways, but also significantly attenuates the overall negative indirect effect of excessive scripted performative content on user stickiness through user trust, thereby supporting Hypothesis H_4.

These results demonstrate that algorithmic regulation performs an important "risk-buffering" function in platform governance. By strengthening content screening, distribution, and constraint mechanisms, algorithmic regulation can, to a certain extent, repair damaged user trust and suppress the transmission of trust deterioration into user stickiness loss. Overall, adopting an integrated perspective of "content characteristics-psychological mechanisms-platform governance", this study systematically validates the pathways through which excessive scripted performative content influences

user stickiness, as well as the boundary conditions of these effects.

Research contributions

At the academic and theoretical level, this study provides targeted extensions and refinements to research on short-video content and user behavior mechanisms. Existing studies on short-video content have largely focused on its "positive attributes", such as entertainment value, informational usefulness, or interaction intensity, while paying relatively limited attention to the potential negative consequences of content that is excessively performative or highly scripted - particularly with respect to its long-term impact on user relationships. By positioning excessive scripted performative content as the core explanatory variable, this study explicitly distinguishes between moderate content design and overly standardized, performative scripting. The empirical findings demonstrate that excessive scripted content does not merely enhance immersion, but instead significantly undermines user stickiness. In doing so, the study directly addresses an ongoing academic debate regarding whether increasingly sophisticated and polished short-video content necessarily benefits long-term user retention.

Moreover, by introducing user trust as a mediating variable, this research elucidates the psychological transmission mechanism through which content characteristics influence user behavior. The findings indicate that content-related issues do not exert direct effects on behavioral outcomes alone. Rather, they first erode users' trust in content authenticity and platform reliability, which subsequently diminishes their intention to continue using the platform. In addition, by constructing a moderated mediation model that incorporates algorithmic regulation, this study extends the theoretical boundaries of platform governance in user behavior research. It demonstrates that content effects are not static, but are significantly constrained by the strength of algorithmic governance, thereby offering clear empirical support for an integrated "content-psychological mechanism-platform governance" perspective.

At the practical and industry level, this study offers actionable insights for content governance and operational strategies on short-video platforms. The results suggest that an excessive emphasis on plot twists, emotional manipulation, and formulaic scripting - while potentially effective in attracting attention in the short term - can undermine long-term user stickiness by eroding user trust. This finding carries important implications for both content creators and platform operators. For content producers, the study cautions against equating "scriptedness" with "professionalism", and highlights the importance of maintaining boundaries of authenticity and plausibility while pursuing dissemination efficiency. For platforms, algorithmic regulation should not be viewed merely as a content recommendation tool, but rather as a critical governance mechanism that shapes user trust and the stability of platform-user relationships.

The empirical evidence further shows that strengthening algorithmic regulation can effectively mitigate the negative impact of excessive scripted content on user trust and reduce the risk of user attrition arising from trust deterioration. These findings provide clear guidance for platform decision-making in areas such as algorithm rule design, content review weighting, and recommendation logic optimization. Overall, this study offers empirically grounded evidence to help the short-video industry navigate the tension between "traffic efficiency" and "user relationship stability", and supports a strategic shift from short-term exposure maximization toward a more sustainable development path centered on trust accumulation and long-term user value.

Research limitations and future directions

This study is subject to several limitations that warrant attention in future research. First, with respect to research design, although the use of cross-sectional survey data enables effective identification of structural relationships and influence pathways among variables, it does not allow for direct observation of the causal sequencing or dynamic evolution of the "excessive scripted content-trust-stickiness" mechanism. In the context of rapidly shifting short-video platforms characterized by frequent trending topics and changing content environments, user trust and stickiness may exhibit substantial stage-based fluctuations. Cross-sectional data are therefore limited in their ability to distinguish between short-term reactions induced by immediate content stimuli and long-term relational changes formed through cumulative exposure. Second, regarding the sample, although the sample size obtained through convenience sampling meets the

requirements for model estimation and exhibits relatively comprehensive demographic distributions, potential self-selection bias remains a concern. For instance, high-frequency users or individuals who are more sensitive to scripted content may have been more inclined to participate in the survey, which may constrain the external generalizability of the findings. Third, in terms of measurement, the key variables relied primarily on users' self-reported perceptions. Constructs such as excessive scripted performative content and algorithmic regulation are highly context-dependent and may be interpreted differently depending on content genres, account characteristics, or individual levels of media literacy. Although procedural remedies and statistical tests - such as anonymous responses, randomized item ordering, reverse-coded items, Harman's single-factor test, and VIF analysis - were employed to control for common method bias, the limitations associated with single-source data cannot be eliminated.

Finally, in operationalizing algorithmic regulation as a holistic construct, this study was able to effectively test its moderating role; however, in practice, algorithmic governance encompasses multiple dimensions, including content labeling cues, traffic allocation adjustments, moderation intensity, and transparency feedback mechanisms. These dimensions may exert differentiated effects on user trust through distinct psychological processes, yet the present study does not further disentangle or empirically examine such heterogeneity.

Building on these limitations, future research may advance this line of inquiry in several directions. First, in terms of research design, longitudinal tracking or multi-wave panel data could be employed to capture the temporal dynamics of user trust and stickiness, thereby enabling clearer identification of the causal chain linking content exposure, trust erosion, and stickiness decline. Where feasible, natural experiments or quasi-experimental designs - such as before-and-after comparisons following the introduction of "scripted content labeling" features or new algorithmic governance policies - could further strengthen causal inference.

Second, with respect to data sources, future studies may incorporate multi-source data to overcome the limitations of single self-reported measures. For example, survey data could be combined with behavioral log data (e.g., viewing duration, completion rates, interaction behaviors, repeated visits), or computational content analysis could be used to construct objective indicators of the degree of scriptedness, thereby enhancing external validation of measurement constructs.

Third, in terms of variable expansion, algorithmic regulation could be decomposed into distinct dimensions - such as algorithmic transparency, labeling intensity, moderation strictness, and recommendation diversity - and examined in relation to the specific psychological mechanisms through which they influence user trust, including perceived authenticity, sense of control, and perceptions of platform fairness.

Finally, future research may incorporate additional moderating variables across multiple levels, particularly user-side individual differences (e.g., media literacy, authenticity preference, skepticism tendency, emotional regulation capacity) and content-side contextual factors (e.g., narrative genre, account attributes, degree of commercialization). Such extensions would enable the construction of more fine-grained moderation models capable of addressing the practically salient question of which types of scripted content, under which algorithmic governance conditions, are most likely to trigger trust erosion and declines in user stickiness among different user groups.

Conclusion

First, this study reveals a core paradox: scripted content that is intended to enhance attractiveness can, when taken to excess, become a driver of user attrition. This finding challenges the simplistic linear assumption that "the more polished and dramatic the content, the higher the level of user stickiness". The underlying mechanism lies in the fact that users' reliance on short-video platforms is not based solely on immediate entertainment gratification, but is deeply rooted in long-term trust in the authenticity and reliability of the platform's content ecosystem. Excessive scripted performative content - manifested in overtly fictionalized plots, deliberately amplified emotions, and conspicuous performative traces - directly activates users' perceived manipulation mechanisms. According to Trust Violation Theory, when users perceive that content producers' motivations are oriented toward manipulation rather than sincere sharing, such behavior is interpreted as a breach of trust. This breach not only undermines trust in individual pieces of

content or specific creators, but also spills over into broader skepticism toward the platform's overall content environment and the fairness of its recommendation algorithms.

This study identifies that user trust plays a full mediating role: while the direct effect is statistically significant, it is substantially smaller than the indirect effect. This pattern of mediation provides strong empirical support for the proposed mechanism. It suggests that the primary harm of excessive scripted content lies not in its lack of "watchability", but in the deeper trust crisis triggered by its perceived inauthenticity. When users feel that they are consuming carefully engineered "synthetic sweetness" or fabricated conflicts, the emotional bond and psychological contract between users and the platform are eroded, and the fundamental motivation for continued use and deep engagement subsequently dissipates.

Second, the findings demonstrate that algorithmic regulation plays a crucial role as a form of "contextual correction" in repairing user trust and maintaining the stability of platform relationships. This offers micro-level psychological evidence for understanding the effectiveness of platform governance. In the absence of effective regulation (i.e., under low levels of algorithmic regulation), users exposed to excessive scripted content must rely solely on their limited media literacy to make judgments, which easily leads to feelings of deception and fatigue, accelerating trust depletion. In contrast, high levels of algorithmic regulation include specific measures: clear labeling of "scripted performance", traffic suppression of deceptive content, and enhanced recommendation transparency. These regulatory practices inject institutional credibility signals into the platform environment.

According to Situational Strength Theory, these explicit external rules and cues function as strong situational signals that structure users' cognitive frameworks. As a result, users are more likely to interpret excessive scripted content as a "specific content category that the platform has already identified and disclosed", rather than as "deceptive content attempting to evade scrutiny". This cognitive reframing significantly buffers the negative impact of such content on user trust. The presence of a significant moderated mediation effect further indicates that the role of algorithmic regulation extends beyond isolated interventions. Instead, it systematically weakens the entire transmission chain from "content risk" to "psychological damage" and ultimately to "behavioral withdrawal". This suggests that algorithm-based governance is not merely a passive, reactive mechanism, but a strategic tool through which platforms can actively shape user experience and safeguard long-term relational assets.

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Conflict of Interest

The authors declare no conflict of interest.

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