

## Research on the Short Video Ecosystem from the Perspective of Communication Studies: A Case Study of Douyin (Postprint)

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### Abstract

Currently, short-video platforms represented by Douyin are developing rapidly. Deconstructing the reasons from a communication studies perspective reveals four key factors: first, algorithmic recommendations based on big data provide strong technical support for the popularity of short-video platforms; second, content that aligns with user preferences satisfies various needs such as social interaction, entertainment, and consumption, and under the psychology of uses and gratifications, users continuously deepen their dependence on platforms like Douyin; third, decentralization under the UGC model grants each user dominant control over content production, ensuring the continuous emergence of original videos; fourth, localization strategies targeted at overseas regions. Concurrently, amid this rapid development, precise recommendations based on algorithmic technology can easily create information cocoons, disrupting the balance of personal information structures; it is difficult to precisely gatekeep massive amounts of content, resulting in uneven video quality; symbols in some videos guide undesirable values, and there exists a phenomenon of spiritual anesthesia under mass revelry. Facing these challenges, the author proposes four countermeasures: optimizing algorithmic models to improve content quality; shifting from the UGC model toward the PUGC model; awakening users' "anti-connection" awareness to jointly work with platforms on "anti-addiction" measures; and globalized development as the future goal for short-video platforms.

### Full Text

#### A Study on the Short Video Ecosystem from the Perspective of Communication Studies: A Case Study of Douyin

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## Abstract

The rapid development of short video platforms, exemplified by Douyin, can be deconstructed from a communication studies perspective through four key factors. First, algorithmic recommendation based on big data provides robust technical support for the platforms' popularity. Second, content tailored to user preferences satisfies diverse needs for social interaction, entertainment, and consumption, fostering deepening user dependency through the psychology of uses and gratifications. Third, decentralization under the UGC model grants every user dominant authority in content production, ensuring a continuous emergence of original videos. Fourth, localized strategies target overseas markets. However, alongside this rapid growth, challenges emerge: algorithm-driven precision recommendation easily creates information cocoons that disrupt the balance of personal information structures; the difficulty of precisely gatekeeping massive content leads to uneven video quality; symbols in some videos promote undesirable values; and mass carnivalesque induces spiritual paralysis. To address these challenges, the author proposes four responses: optimizing algorithmic models to improve content quality; shifting from UGC to PUGC models; awakening users' "anti-connection" consciousness to collaborate with platforms on anti-addiction measures; and pursuing global development as the future objective for short video platforms.

**Keywords:** Douyin; short video; algorithm; video socialization; community communication; media convergence

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With the rapid development of the internet, particularly mobile internet, short video platforms have gained massive popularity among the public due to their fragmented, entertaining, and democratized characteristics. According to the 43rd CNNIC Statistical Report on China's Internet Development, by December 2018, short video users reached 648 million, accounting for 78.2% of all internet users. Among these platforms, Douyin, a creative social short video platform under ByteDance, has demonstrated particularly outstanding performance. Data shows that by December 2018, Douyin's domestic daily active users exceeded 250 million, while monthly active users surpassed 500 million, establishing itself as a national-level short video product. Simultaneously, Douyin's international influence continues to grow. Douyin operates two overseas versions: one is Musical.ly, a popular American short video platform acquired by ByteDance that primarily covers Europe and America; the other is TikTok, which is widely used in Japan, South Korea, India, Indonesia, and other countries. Combined, these two products cover approximately 150 countries and regions worldwide, with APP downloads ranking first in over 40 countries globally. Douyin's popularity

is no accidental phenomenon; it signifies that short video platforms, represented by Douyin, have rapidly risen to occupy a significant position. However, accompanying this growth are issues such as vulgar content that seriously affects users, particularly adolescents, in terms of their physical and mental health. This paper analyzes the reasons behind the popularity of short video platforms from a communication studies perspective, examines current problems, and finally proposes solutions that also represent future development directions.

## 1. The Popularity of Short Video Platforms from a Communication Studies Perspective

Undoubtedly, algorithmic recommendation based on big data provides robust technical support for the popularity of short video platforms, while content aligned with user preferences significantly enhances user stickiness, enabling platforms like Douyin to maintain enduring popularity. More importantly, decentralization under the UGC model grants every user dominant authority in content production. Meanwhile, the emergence of short videos satisfies fragmented usage behaviors and covers various user needs including social interaction, entertainment, and even consumption. Under the psychology of uses and gratifications, users continuously deepen their dependence on short video platforms. The following sections elaborate on the reasons for the popularity of short video platforms from four specific aspects.

### 1.1 Algorithmic Recommendation Meets Personalized Needs

Algorithmic recommendation technology based on big data has been implemented in numerous mobile applications. Platforms collect data on user behavior and content preferences, organize and analyze this data to create unique user profiles with tags for each individual. On this basis, they push content that users are highly likely to find interesting, triggering further clicks, imitation, and creation. In an environment of internet information overload, algorithmic recommendation greatly saves users' time costs in searching for information, allowing them to find resonant content within a short period, which aligns with fragmented usage behaviors. On the other hand, algorithmically recommended content provides more exposure opportunities for grassroots creators, highlighting the importance of content itself.

### 1.2 Video-Based Social Interaction Meets Community Needs

A community refers to a group relationship where individuals with common interests and needs gather within a certain spatial scope through specific means to exchange values. According to Maslow's hierarchy of needs, an individual's need for social integration emerges after physiological and safety needs are satisfied. Communities satisfy different groups' demands for social needs, enabling humans to find like-minded groups and establish relationships through community formation. Short video platforms represented by Douyin gather

users with common interests, particularly through popular videos featuring humor, skill displays, and other mass-appeal content that resonates with many users, triggering sharing, liking, and commenting behaviors. Through community communication, users transmit values to others. According to Professor Yu Guoming of Beijing Normal University, consumption structure determines industrial structure. Because users have community-based needs, there is an industry trend where emotional content traffic exceeds informational content traffic. Social platforms combine both emotional and informational content, and video-based social platforms allow emotional content to be fully expressed, making them an inevitable trend.

### 1.3 Decentralization Under UGC

Short video platforms represented by Douyin have long departed from the traditional PGC production model, shifting to user-generated content (UGC) to achieve decentralization. Original content is the lifeblood of short videos, and the UGC model ensures a rich, continuously updated supply of original content on these platforms. It allows every user to create and share their lives, providing a platform for more talented grassroots individuals to showcase themselves. User-generated content covers various aspects including tourist attractions, traditional culture, life tips, and diverse entertainment. Simultaneously, Douyin highlights individuals' desire for self-expression. Through interactions such as likes, comments, and follows, it enhances the internal innovation drive of video creators, drives fan communities through ultra-high-frequency interaction, and ensures that the decentralized UGC model makes every user an important node in the dissemination network. Through continuous sharing by users and fan groups, content achieves explosive dissemination.

### 1.4 Localized Development Strategies

Douyin began its internationalization journey in 2017 and achieved excellent results, which is inseparable from its localized operational approaches. Before entering overseas markets, Douyin conducted research on local consumer preferences and developed localized communication and marketing strategies based on these insights. Douyin's overseas version, TikTok, employs local talent to operate the APP, which to some extent reduces cultural differences and effectively improves market docking efficiency. In Malaysia, TikTok's special effects stickers incorporate Malaysian cultural elements such as national flags and twin towers, greatly catering to user psychology and achieving 35,000 uses within four weeks of launch. Compared to text and images, video carries more information and cultural connotations, making localization strategies crucial for video platforms expanding overseas.

## 2. Challenges Facing Short Video Platforms

During the period of rapid development, short video platforms have exposed several problems. Algorithmic recommendation creates information cocoons for users, content quality is uneven, symbols in videos guide users' values, and mass carnivalesque induces spiritual paralysis.

### 2.1 Algorithmic Recommendation Creates Information Cocoons

Cass Sunstein' s concept of the information cocoon points out that in information dissemination, because the public is more concerned with self-selected information and areas that bring them pleasure, their information needs are not comprehensive. Over time, this imprisons them in an information "cocoon" like a silkworm. Although algorithmic recommendation based on user preference analysis saves users time in searching for interesting content, users who immerse themselves in their areas of interest for extended periods form an "interaction" with algorithmic technology, making it difficult to access information outside the "cocoon." This may cause imbalances in personal information structures and even affect users' cognitive and behavioral patterns.

### 2.2 Lack of Gatekeeping Leads to Uneven Content Quality

The UGC model provides a continuous stream of original videos on Douyin, but users' varying qualities and tastes make it difficult to guarantee content quality. Short video platforms represented by Douyin generally lack gatekeeping in content quality, which represents a pain point for these platforms. Both domestically and internationally, Douyin has been interviewed by relevant authorities multiple times regarding content issues and required to rectify problems. Although Douyin has strengthened content review efforts, supervision remains weak compared to the massive number of users participating in content creation.

### 2.3 Spiritual Paralysis Under Mass Carnavalesque

Bakhtin' s "carnival" theory primarily demonstrates two dimensions: first, all individuals are equal and free participants; second, a utopian form full of banter that is completely inverted from the traditional world. In this context, various social strata in real society break traditional identity recognition and briefly achieve equal and free dialogue opportunities. The virtual world of cyberspace bears high similarity to the "second world" metaphor in Bakhtin' s carnival theory. The internet grants everyone the right to speak, and the UGC model in Douyin provides users with an equal, free carnival square. Douyin has created a media spectacle with universal participation and tremendous influence, which has rapidly transformed our familiar life patterns. Although the carnival in Douyin satisfies public entertainment and relaxation needs to some extent, these superficial, low-dimensional contents easily immerse people. Users wrapped in simple information for long periods may gradually lose their ability for deep thinking and deep reading, lack critical thinking on social issues, and experience

spiritual paralysis. This affects adolescents, whose cognitive abilities are still developing, even more severely. Data shows that from March to May 2018, users aged 25 and under accounted for 52% of Douyin's user base, and these young people use Douyin with high frequency and duration daily. As Neil Postman described, future people's addiction to entertainment social media like Douyin will make their infiltration into daily life pervasive, and the public will gradually become accustomed to this entertaining media contact, becoming a group that amuses itself to death.

#### **2.4 Symbols in Videos Guide Negative Values**

“Symbols” are used in specific contexts to describe specific things or express specific meanings. Text, language, objects, or scenes can all be defined as symbols. In Douyin, any element in videos can be called a “symbol,” and each symbol can express certain meanings. However, Douyin is filled with video symbols of wealth-flaunting behaviors and petty bourgeois sentiments that promote money-worshipping values and receive enthusiastic popularity. Some users harm themselves to gain attention, attracting imitation by many minors. For a period, teenage mothers became popular on Douyin. One beautiful girl posted a video showing she had become a mother before turning 18 and could make money through Douyin, attracting many girls to follow suit. Some minors even stated, “If I can make money on Douyin, why do I need to go to school?” Such erroneous values are widely disseminated on short video platforms like Douyin, seriously affecting the healthy development of adolescent groups.

### **3. The Future Path for Short Video Platforms**

No development proceeds smoothly, and it is inevitable that short video platforms encounter various challenges during their development process. Only by facing these challenges directly can they achieve sustainable development. In the future, short video platforms must continuously optimize technology, rely on artificial intelligence to gatekeep video content, and increase content review efforts—these are the priorities. Simultaneously, while addressing weaknesses, they must leverage their strengths to push their brands globally. For user groups, the awakening of “anti-connection” consciousness and behavioral changes, improved network media literacy, and a shift from UGC to PUGC models will enhance content quality in multiple ways.

#### **3.1 Optimizing Algorithmic Models and Improving Content Quality**

The state's emphasis on content quality for video platforms is gradually increasing. Short video platforms with active users bear certain responsibility in guiding correct values, which is also a key factor for their domestic and international development. Future content control will depend not only on increased state supervision but more importantly on platform management itself. Further improving algorithms and artificial intelligence technology to enable machines

to conduct high-precision content quality review and gatekeeping can replace most manual labor and achieve higher-precision pre-publication gatekeeping of UGC content. In addition to relying on technology, supervision among users is a powerful method for post-publication gatekeeping. Users create content and users supervise content, forming a virtuous cycle centered on users. In the internet era, media development has two major tasks: content innovation and channel reconstruction. Social dissemination and algorithmic distribution have become mainstream forms of media communication. For short video platforms represented by Douyin, besides controlling and innovating content quality, maintaining the platform's social attributes is equally important.

Short videos represent an important entertainment and social method that aligns with contemporary mass groups' fragmented and mobile lifestyles. The international social short video platform YouTube has long been popular globally, and domestic short video platforms have also begun their globalization journey. Douyin announced its overseas expansion in August 2017 and currently covers over 150 countries and regions, becoming the most popular short video App in Japan, Thailand, and other regions. According to data from the international application market research company Sensor Tower, by March 2018, Douyin's overseas version TikTok had approximately 46 million global downloads, surpassing social software like Facebook, Instagram, and YouTube to become the most downloaded mobile application of the quarter. Short video platforms expanding overseas must follow localization principles more closely, an area where Douyin is already leading. Overall, the entertaining, social, and interactive characteristics of short video platforms satisfy contemporary mass consumption behaviors and habits. However, current problems cannot be underestimated, particularly regarding spiritual paralysis and erroneous value induction among the public, which require strict governance. In the future, for long-term development, short video platforms must continuously optimize technology, improve content quality, set higher standards for themselves, and assume greater social responsibility.

### 3.2 Shifting from UGC to PUGC Models

“PUGC” (Professional User Generated Content) represents a fusion of PGC and UGC, where user-generated content approaches professionally produced content. This model was proposed at the 2015 Global Internet Conference, initially in the radio industry such as Qingting FM, and later extended to other industries. Professor Hu Yong of Peking University believes PUGC represents amateur professionalism. On one hand, self-improvement by amateur users is a major source of PUGC. Douyin's daily active users have exceeded 200 million, with over 50% of this group under 26 years old. These groups are digital natives with high familiarity and skills in using the internet. This massive user group is both audience and communicator. In terms of shooting techniques and content editing, short videos created by some head users have already approached PGC levels, and more grassroots users will join in the future. On the other hand,

promotion by professional institutions has also enabled greater development of the PUGC model, with numerous professional institutions currently emerging to incubate grassroots stars. The PUGC model guarantees users' equal rights to create and participate, aligns with social media attributes, and simultaneously ensures the output of high-quality content, continuously attracting and retaining more users.

### 3.3 Users' "Anti-Connection" Awareness Awakening and Joint "Anti-Addiction" Efforts with Platforms

"Connecting everything" is the law of the internet, but excessive connection has already caused problems, making reduced connection a new form of network literacy. Douyin addiction has become a relatively common phenomenon among both adolescents and adults. Many users have realized that excessive connection on social platforms greatly occupies their private space and time, dispersing their attention, and "anti-connection" consciousness has begun to awaken. In terms of anti-connection, deliberately reducing platform usage time is the most direct manifestation, but this requires platforms to extract more concise and high-quality content, enhance users' information value density, and maximize the efficiency of users' limited "connection."

Although user activity and retention enable better profitability for enterprises, as users' "anti-connection" consciousness awakens, corresponding usage behaviors will inevitably change. Healthily and reasonably using platforms to meet their own needs is users' ultimate goal. Therefore, platforms cannot stand by idly regarding user addiction, as this is also a social responsibility that major enterprises should undertake. Douyin's already-launched anti-addiction system can serve to remind users, but true "anti-addiction" requires users to further improve their network media literacy. The combination of users' "anti-connection" consciousness and behavior with platforms' "anti-addiction" measures can significantly improve the "Douyin addiction" phenomenon.

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*Note: Figure translations are in progress. See original paper for figures.*

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