

The Emergence of New Communication Models in Digital Platform Comment Sections: From Linear Propagation to Interactive Network Approaches—Taking Weibo and TikTok as Examples

Ayan Maheshati

*School of Journalism, Al-Farabi Kazakh National University, Almaty, Kazakhstan
13565869794@163.com*

Abstract. Against the backdrop of the rapid evolution of digital media and the deep embedding of social platforms into social life, the contemporary communication system is undergoing structural restructuring. The information environment driven by digitalization and algorithms has strengthened the decentralized and multi-node characteristics of the communication process, enhanced users' subjectivity in information production and circulation, and shifted the communication model from the traditional linear paradigm of "center-masses" to a structure centered on network interaction and dynamic feedback. Based on this, this paper uses a literature review to trace the evolution of communication models from the classic linear model to interactive and network models, comparing classic models such as Lasswell, Shannon-Weaver, and Schramm with interactive communication theories in the context of new media. Using case studies such as Weibo, TikTok comment sections, and news interaction mechanisms, the study points out that digital media facilitates the redistribution of communication power from "center-masses" to "network-users," while also bringing problems such as information overload and algorithmic bias, posing new challenges to the explanatory framework of traditional communication theories.

Keywords: Communication model, Social media, Network society, Interactive communication

1. Introduction

The evolution of communication models reflects profound changes in media technology and social structure. From the early linear communication models that emphasized "one-way transmission" (such as the Lasswell formula and the Shannon Weaver model) to the interactive communication models that emphasized feedback and meaning construction (such as the Schramm and Gberner models), communication theory has undergone a paradigm shift from information transmission to symbolic interaction. In the digital and social media era, the communication environment has undergone fundamental changes - users are no longer passive audiences but have become producers

and disseminators of content. Scholars such as Castells and Jenkins pointed out that the power of communication is shifting from centralized media organizations to networked user nodes [1-3].

Based on this premise, this paper focuses on the information dissemination mechanism and interaction structure in the comment sections of digital platforms, emphasizing the transformation characteristics of communication models in the context of new media. In terms of research methods, it primarily employs literature analysis and case studies, comparing and contrasting classic communication models with contemporary interactive communication theories, and conducting specific examinations based on the actual situations in comment sections of platforms such as Weibo and Douyin.

Through the analysis of comment section interaction forms, user participation methods, and algorithmic intervention mechanisms, this paper reveals the process of reorganization of communication power and discourse structure in digital platforms. This research can help enrich the theoretical perspective of communication model research in the context of digital communication, provide a reference for understanding the generation of public opinion and information flow mechanisms in social platform comment sections, and also provide theoretical support for the expansion and revision of traditional communication theories in the new media environment.

2. Classic communication models and the theoretical foundation of digital communication

2.1. Core characteristics of classic communication models

Lasswell's model of communication is one of the first and most influential models of communication. It was initially published by Harold Lasswell in 1948 and analyzes communication in terms of five basic questions: "Who?", "Says What?", "In What Channel?", "To Whom?", and "With What Effect?" (see Figure 1).

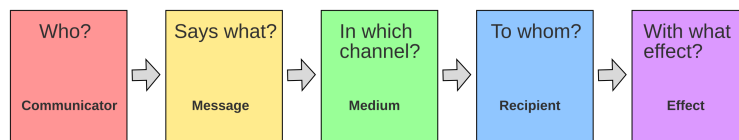


Figure 1. Classic communication models

This model regards communication as an information projection process from a single communication subject to the audience group, highlighting the measurable and controllable characteristics of communication effects and presenting relatively large unidirectionality and centralization features [4]. Within such a framework, the audience is mainly regarded as passive information receivers, and their feedback is not included in the core part of the communication process.

The contribution of this model lies in its emphasis on the criticality of encoding and decoding, enabling communication research to analyze the efficiency and accuracy of information transmission [5]. However, its theoretical assumptions are still based on the logic of one-way transmission, with the feedback mechanism placed outside the communication process. As a result, the social significance and interactive dimensions of communication have relatively weakened.

2.2. The shift in communication models in the digital media environment

With the wide popularity of Internet technology and social media platforms, the previous linear communication model centered on media organizations is gradually being replaced by multi-node and networked interactive communication forms. In the digital media environment, communication does not proceed in a single direction. Instead, it presents the characteristics of centralization, fragmentation, and high interactivity [6]. Ordinary users participate in content creation and dissemination through social platforms and become key nodes in the communication network. The "participatory culture" theory proposed by Jenkins indicates that digital platforms have lowered the threshold for content production and dissemination, transforming users from passive audiences to active participants and collaborators. In this process, the significance of communication is not determined by a single subject, but is constantly reconstructed through interaction, comment, and re-creation [7].

2.3. Theoretical significance of the comment section as a new type of communication space

In digital platforms, the emergence and institutionalized development of comment sections have created a highly representative analytical scenario for communication research. Different from the limited and delayed feedback forms in the traditional media environment, comment sections integrate feedback mechanisms into the communication process, making interaction a regular part of communication [8]. Users can respond to the content immediately. One can also participate in multi-level interactions by replying, liking, sharing and other means, forming a complex communication network.

3. The interactive dissemination mechanism in the comment sections of digital platforms

3.1. Overview of platform structure and comment section mechanism

In the digital communication environment, the technical architecture and interaction rules of various platforms have a profound impact on the operational logic and dissemination paths of comment sections. Weibo and TikTok, as representative social media platforms, respectively exhibit the characteristics of "topic-oriented public discussion spaces" and "algorithm-driven immersive interactive spaces." They have obvious differences in the sorting mechanism of the comment section, interaction methods, and information visibility, shaping different interactive dissemination models.

Weibo adopts a "priority display of hot comments" approach, allowing some comments to gain more dissemination influence than the original content. To a certain extent, it has formed a communication structure where "comments dominate public opinion." In contrast, the comment section of TikTok is more deeply integrated into the algorithmic recommendation system [9]. The visibility of comments not only depends on the number of likes and replies, but is also closely related to user profiles, interaction frequency, and content matching. This mechanism makes the comment section exhibit high-density, fast-paced and highly emotional interaction characteristics.

3.2. Analysis of interactive communication characteristics in the comment section

In the comment sections of digital platforms, communication is no longer a process where a single subject merely outputs information to the audience. Instead, it has gradually evolved into an interactive communication network involving multiple subjects and continuously providing

feedback. The existence of comment sections makes information dissemination exhibit a significant multi-directional characteristic: users will respond to the original content and also build a horizontally diffused interactive chain through mutual replies, quotations, and emotional expressions. The dissemination process thus shifts from "content release" to "interactive generation."

From the perspective of the dissemination path, the comment section often becomes a key place for reconstructing the meaning of the content. After receiving a large number of likes and replies, some comments lose their original subordinate status and become new focuses of attention, and can even dominate users' understanding of the original content. This phenomenon is particularly prominent in hot events, public issues and emotional content. Comments are no longer merely a response to the content but have become a form of "secondary content production", playing an independent role in the dissemination network (see Table 1).

Table 1. Interactive diffusion path in comment sections & participation shares

Stage	Observable behaviour	Share of users who perform the action (%)
Content exposure	View or like the post	100
Primary feedback	Leave a comment	18
Interaction deepening	Reply to another comment	11
Hot-comment formation	Clustered likes/replies on one thread	6
Secondary diffusion	Screenshot, re-post, or remix	3

3.3. Discourse competition and opinion formation in the comment section

On digital platforms, "hot comments" often play a role similar to that of "agenda prompts" in traditional media. Their ranking and visibility give them a priority position in users' cognition. When users browse content, they usually encounter hot comments first and then trace back to the original information. Form an understanding approach of "comment first, then content" [9]. This phenomenon has, to a certain extent, altered the logical sequence of "information precedes evaluation" in traditional communication. The influence of ordinary users' words in the comment section is not entirely random, but is jointly affected by the number of interactions, the intensity of emotional expression, and the platform's algorithm mechanism. Data analysis shows that comments with distinct emotional overtones and clear stances are more likely to receive likes and replies, thus gaining an advantage in the competition of words. This mechanism makes the comment section tend to show a tendency of emotional amplification and viewpoint polarization in certain situations (see Table 2).

Table 2. Comment type vs. interaction performance

Comment category	Mean likes	Mean replies	Probability of becoming a "hot" comment
Emotion-driven	420	95	38 %
Clear-cut stance	360	88	31 %
Rational analysis	150	42	14 %
Neutral description	80	20	6 %

4. Power redistribution and model transformation in the digital communication environment

4.1. Power transfer from the media center to user nodes

In the traditional mass communication system, the power of communication was highly concentrated in professional media organizations. The audience was in a relatively passive position in the communication structure. However, in the digital communication environment, this power structure centered on media organizations is gradually being broken. Social media platforms, by leveraging their technical architectures and interactive mechanisms, have partially delegated the power of content production and dissemination to ordinary users, transforming the dissemination structure from a "center-edge" model to a "multi-node-networked" model.

The widespread presence of comment sections is a key manifestation of this power transfer. In specific situations, highly interactive comments can even exceed the original content itself and become the main basis for users to understand events. This phenomenon has turned some ordinary users into influential "opinion nodes" on the communication network, and their say is no longer completely dependent on traditional media or official accounts.

4.2. The reshaping of propagation patterns by algorithmic mechanisms

Although digital dissemination exhibits certain decentralized characteristics, this process cannot be completely free from the control of power. Instead, it builds new structural constraints under the influence of platform algorithms. Recommendation algorithms, by continuously analyzing user behavior data, determine the visible scope of content and comments, and gradually shape the dissemination path and public opinion structure. The power of dissemination has thus shifted from the "editorial oversight" of traditional media to the "algorithmic oversight" led by platforms.

In the comment section, the algorithm directly affects the presentation order and exposure degree of different viewpoints based on the sorting rules. When users browse the comment section, they generally come into contact with comments with higher rankings first, forming a preliminary judgment of the event in the early stage. This mechanism enables the algorithm to actually participate in the process of discourse screening and issue reinforcement.

4.3. Theoretical reflections and challenges of new communication models

While the digital communication model enhances interactivity and participation, it also brings about a series of new theoretical and practical issues. The lowering of the threshold for information production has led to a rapid increase in the volume of content, and users are facing severe information overload and competition for attention. In the comment section, a large amount of repetitive, emotional and fragmented information exists simultaneously. This has squeezed the space for rational discussion. The effectiveness of communication is no longer solely determined by the quality of information, but rather relies more on the intensity of emotions and the efficiency of interaction. Algorithmic mechanisms may exacerbate the trend of public opinion polarization, as recommendation systems often push content that aligns with users' existing preferences. The distribution of viewpoints in the comment section is prone to forming an "echo chamber effect," increasing the difficulty of dialogue between different positions. Users reinforce their own positions in a highly homogeneous information environment, which weakens the openness and diversity of public discussion. The explanation of the information flow in evolving media conditions under consideration of various theories of communication would require the comparison of their

explanatory strengths in major dimensions of modern communication. Older models have been created with the main purpose of transmitting messages linearly, and the newer models represent more interaction and algorithmic mediation. Table 3 provides a comparative overview of classic and digital communication models in terms of the explanatory powers in these dimensions.

Table 3. Comparative explanatory power of classic vs. digital communication models

Theoretical Model	Explanatory Power for Linear Transmission	Explanatory Power for Interactive Feedback	Explanatory Power for Algorithmic Influence
Lasswell's Model	High	Low	Negligible
Shannon–Weaver Model	Medium	Low	Negligible
Schramm's Model	Medium	Medium	Low
Networked Interactive Communication Model	Low	High	Medium–High

5. Conclusion

This article takes the classic communication model and modern digital communication theory as the theoretical starting point, combines the specific communication field of Weibo and TikTok comment sections, and conducts a systematic analysis of the transformation of communication models and the change of power structure in the digital communication environment. The results show that with the wide application of digital media and social platforms, the communication process has transformed from the traditional linear transmission mode to a new communication mode characterized by multi-agent interaction, continuous feedback and networked structure. The comment section is no longer merely an auxiliary feedback mechanism for information dissemination, but has transformed into a key space for meaning generation, public opinion formation, and discourse competition, bringing about a very prominent change to the operational logic of communication. However, this study still has certain limitations. In terms of research methods, it mainly relies on literature review and qualitative case analysis, lacking large-scale empirical data and quantitative analysis to further verify the universality of the conclusions. Future research could incorporate mixed research methods, such as big data analysis, social network analysis, and cross-platform comparative studies, to more comprehensively examine the evolution of digital communication models and their broader social impacts.

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