



Short Video Marketing in the Algorithmic Era

Qiyuan Feng

College of software, Dalian University of Foreign Languages, 116044, China
qikuai10@gmail.com

Abstract. This article mainly discusses marketing methods for selling goods in the wave of short videos, especially Douyin. Driven by algorithmic technology, marketing tends to fall into the categories of content marketing, precision marketing, and interactive marketing. These marketing methods not only facilitate consumption but also reshape consumers' habits and decision-making patterns. A representative case is short-video-based marketing, which not only boosts consumption efficiency but also reshapes the decision-making rhythm and consumption structure of consumers. Especially driven by AIGC, the new structure of smart media marketing has undergone new ecological changes. The application of AIGC technology in short video marketing has also led to a continuous emergence of ethical concerns such as algorithmic bias, information authenticity, and user privacy protection. In the Internet age, it is not only necessary for platforms to optimize their structure and promote the formation of a new marketing loop, but also for them to solidify their own responsibilities, and for consumers to enhance their data literacy, address the complex problems embedded in algorithms and ultimately find a sustainable development path for short video marketing in the algorithmic age.

Keywords: Algorithmic Technology, Marketing Methods, Ethical Issues, Privacy Protection

1 Introduction

At present, the Internet has developed at an unprecedented pace, and emerging industries such as short videos are showing a trend of rapid development in terms of the scale of industry users, content production and business monetization models. Driven by the digital economy and the Internet industry, for instance, Tiktok's short video APP, with its strong compatibility and practicality, has provided audiences with a more immersive, interactive and immediate feedback experience, and has also had an impact on consumption concepts and patterns. Driven by algorithmic recommendations and traffic distribution mechanisms, Tiktok has evolved into an integrated platform that combines social and commercial functions. As a leader in domestic short-video and live-streaming e-commerce, Douyin is also continuously leading the transformation of new marketing paradigms.

In recent years, the platform's newly added "live-streaming sales function" has been deeply integrated with "short-video influencer sales" resources, thereby forming a

closed-loop marketing structure centered on content exposure, interaction feedback and conversion transactions in the algorithmic era. The platform uses user profiling and big data integration technology to precisely deliver video content with emotional and cultural value, reaching deeper into consumers' hearts. At the same time, through personalized collaborative distribution, with the professional affinity of influencers, the "Online Opinion Leaders", and the trust of fans, a bridge of communication between brands and consumers is built to increase marketing volume and significantly enhance user engagement and purchase conversion rates, thereby converting users' attention into tangible economic benefits.

This article focuses on short video marketing, for example, how does Tiktok's algorithm subtly influence consumers' purchasing decisions and trust in live streaming sales? At the same time, more attention should be paid to the exploration of new marketing paradigms in the algorithmic era in terms of "newness" and "change", the degree of integration of digital technology and platform ecosystems, and whether there are hidden ethical privacy issues under algorithms? This issue is used as an entry point to gradually focus on specific cases. Specifically, Tiktok is constantly changing consumers' consumption decisions and trust in its marketing approach by reshaping consumption paths, enhancing contextualized stimulation, and reducing decision-making costs. By building immersive marketing scenarios, researchers are constantly getting closer to consumer psychology.

The current popular AIGC has brought about a structural change in the way short video content is produced in the context of Web3.0. On the one hand, it provides short video content creators with new creative tools, and on the other hand, it broadens the space for cultural imagination. It is a tool that can empower creativity, but lacks human thinking. Advertisers' marketing videos created using AIGC technology also lack authenticity, losing the "spirit" in advertising creativity. At the same time, the current high research and development costs of this technology will also lead businesses to cut costs, resulting in a high degree of homogeneity in the video content they create. The short-term novelty is not enough to sustain a business or product's sustained exposure and future rebates.

2 Literature Review

With the rapid development of the Internet industry and the digital economy, short-video platforms like Tiktok have penetrated many aspect of daily life, and users' consumption habits and lifestyles have changed. Existing literature explores the changes in digital media marketing in terms of content marketing, precision marketing, and interactive marketing from multiple perspectives.

From the perspective of content marketing, today's short video content is driven by algorithmic technologies, such as using big data algorithm platforms to simulate user profiles and integrate user preference data. With these technologies, Users' daily experiences can be more effectively integrated into real social environments for personalized collaborative distribution. Peng, Lan 's research shows that today's communication

is more of the value of network communication content based on interpersonal relationships, gradually extending to the level of social relationship construction and social capital accumulation, that is, having the value of social capital.

From the perspective of precision marketing, taking Tiktok short videos as an example, product recommendation-oriented videos are increasingly prevalent, driving the transformation of the C2B business model. A study by Zhang, Jing and Wang, J.D shows that platforms take advantage of users' attention to precisely target throughout the marketing process. The interesting and practical content posted on Tiktok can build a channel between the selling points of its marketing promotion brand and the pain points of customers, demonstrating the platform's ability to understand user needs based on data analysis

From the perspective of interactive marketing, it is about transforming consumers from "bystanders" to "consumers", and shifting from linear marketing to a chain of interactive, feedback and repush marketing. Two-way interactive communication is the essence constitutes the core of this marketing approach, driving the sentiment of netizens' consumption. According to Guo, Q.Z, there are over 900 million Internet users in China, with 99.3% of them accessing the Internet via mobile phones and 710 million online shoppers. With the rapid development of the Internet, the number of online shopping users in China is huge, and the number of short video users is growing rapidly. The short-video dividend has cultivated a new market for live-streaming e-commerce.

The above literature has studied content marketing, precision marketing, and interactive marketing, and summarized the marketing closed-loop characteristics of short-video platforms. However, most of these studies are based on the short video ecosystem centered on human creators and have limited understanding of the new structure of content generation subjects and trust mechanisms in AIGC-driven smart media marketing. There is a lack of attention to stronger algorithmic technologies, such as whether AIGC will reshape short video marketing, virtual human sales, and AI script generation, and whether this new form will raise ethical issues. While affirming marketing, necessary regulatory restrictions should be imposed to avoid phenomena such as false advertising and malicious monopolies that affect social stability. Also because of the rapid development of technology, in the future people should also stand under the concept of human machine collaboration, promote the development of technology for good, and adapt to the transformation of integrated marketing under smart media.

3 Short Video Marketing Paradigm in the Algorithmic Era

3.1 Fragmented Entertainment Scenarios, General Daily Marketing

In the era of information explosion, the amount of information users are exposed to every day is growing geometrically. Against this backdrop, enterprises have found that : attention has become an increasingly scarce resource. If the resource of attention can be effectively transformed, relatively high returns can be achieved at comparatively low costs. As a result, various social media short video platforms have to move away from holistic coverage marketing to users and instead build general daily entertainment scenarios with short and high frequency video content, and precisely market through

general daily means to reach consumers' psychology. That is, in a fragmented information environment, through algorithmic data-driven and technology empowerment, to achieve precise identification, precise push and precise conversion of target users. Short video platforms have also seized on the fast-paced lifestyle of modern people. 15-second videos or several minute videos are no longer exclusive to short video apps and have been widely adopted by various social software, more consistent with contemporary media consumption trends[1]. Combined with the new concept of "data network effect", it also explains the use of algorithmic AI to transform into a competitive advantage, accurately predict and understand users' psychological needs, and provide emotional support [2] Its fragmented video dissemination model is more in line with existing demands compared to long videos. Gradually, short video platforms have developed into an important part of people's lives, and the number of their consumers has been increasing year by year.

3.2 Short Video Marketing Strategies with Tiktok as the Research Subject

From the perspective of marketing strategies, the current consumer market is gradually becoming decentralized, focusing on user engagement and social diffusion, and paying more attention to the C2B model centered on consumer services. Douyin uses big data algorithms to simulate user profiles, infer user preferences through daily gestures such as likes, comments, and shares, and use these data for precise content distribution. Unconsciously, algorithms have permeated consumers' daily lives, and such personalized collaborative distribution methods have reduced costs for merchants while improving platform monetization efficiency. At the same time, the platform has noticed that today's consumers will also need more emotional value, as well as social capital value between social interpersonal communication networks, which is different from the general commodity value and is dependent on the attached value, such as brand effect, celebrity effect, which gives the commodity itself brand aura, and supplementary after-sales service. The better experience that these elements bring can enhance consumer stickiness and shift the commodity economy to the symbolic economy. When creating short video scripts, businesses will combine fun and practical content to build a channel between marketing brand selling points and consumer pain points[3]. This is also about studying the psychology of consumer needs and integrating usage and satisfaction into marketing strategies, demonstrating the strong insight of precision marketing.

4 Frequent Ethical Issues of Algorithms

4.1 Algorithmic Bias: Hidden Discrimination Behind Technological Convenience

Algorithmic discrimination exists in the systematic, non-repeatable unfair treatment of specific groups and is essentially the externalization of bias in automated decision-making. For example, price discrimination, where the price of some goods is seen by old users to be less than the high discount for new users, consumers perceive it as "unfair"

[4]. Such inherent biases in algorithms arise from certain design flaws and data loopholes in the algorithms. The design of the algorithm and the subjective factors of the developer are algorithmic biases that arise when the developer intentionally or unintentionally incorporates their own values, perceptions, and experiences into the development process. In marketing, this bias is mainly reflected in product recommendations, which are based on the user's historical behavior. For example, based on user data, it can be inferred that users prefer outdoor activities such as cycling and mountain climbing, corresponding products will be recommended. But this creates a kind of cocoon-like problem, where the goods accessible to the user become limited, and the algorithm based on this recommendation ignores the consumer's greater consumption potential, thus confining marketing strategies within a limited space. The products in the live stream are cheap and discounted, but some of them are not part of the daily needs or are already in stock. Consumers may fall into the dilemma of buying or not buying, and hoarding like "squirrels in winter" and impulse buying are not recommended consumption patterns. The brain's "warning system" and the dopamine-triggered hoarding mentality, that is, the lack of resistance to cheap daily necessities like toilet paper and laundry detergent, is because your brain is preparing for your future survival. At the same time, consumers will show two kinds of behaviors under such a pattern. One is not satisfied with the goods recommended by the platform and gives up spending on it; The other is to be trapped in the consumption concept that the platform has shaped for them. The rigid placement of advertisement by the platform is very likely to cause users' aversion, forming a fixed consumption concept with a certain tendency, while ignoring the original personalized special manifestation [5].

4.2 Algorithmic black box: The Fictional Boundaries behind Opaque Roles

This black box effect of the algorithm is gradually eroding the transparency of the platform and undermining the trust foundation of the consumer-first platform. Especially the logical black box nature of AI-generated content (AIGC) makes it difficult for consumers to trace the source of product information, depriving consumers of their right to know. Users have no idea how the algorithm collects data and generates recommendations. The frequent traceability dilemma is also due to the fact that in the current era when AIGC is prevalent, it is difficult for consumers to distinguish whether the product review or recommendation in front of them is a real-life experience or an AI-generated "soft article", increasing the possibility of consumers being misled into making a purchase. Due to the existence of logical black boxes, users cannot trace the original source of the information, nor do they know where the data was collected or how it was processed into recommendation reasons. The inequality in the human-machine relationship can also lead to a dilemma regarding consumers' right to know, as algorithms predict hidden and invisible marketing in the dark. Many mobile apps, such as Ele.me, Xiaohongshu, NetEase Kaola, etc., have personalized recommendations that undermine consumers' choice on shopping pages, making it difficult for users to truly experience the advantages of algorithmic recommendations. Instead, they are more often forced to "feed", and there are also algorithmic black boxes that manipulate prices and markets

in collusion with the platforms. Platforms use algorithms deeply bound to market behavior to manipulate prices silently, adjust pricing strategies or traffic allocation. This "invisible hand" intensifies the concealment of market monopolies.

5 Consumers' Privacy Rights

5.1 Abuse Of Platform Technical Power, Selling Information Leading to Leakage Risks

Empowered by technology, platforms have extended their reach into users' privacy through technological means, yet the law has not fully kept pace with corresponding regulatory measures. The view of "technical architecture is law" points out that the law has overly focused on the "data collection" stage while neglecting the privacy harm caused by the "data processing" and "profiling" stages of algorithms. This has led to loopholes in protection, providing opportunities for profit-seeking, and there have also been cases where merchant platforms sold users' information. For instance, in 2020, lawless elements colluded with several "insiders" at YTO Express. They rented the system accounts of YTO employees at a daily rate of 500 yuan to steal personal information, and then resold citizens' personal information layer by layer to different downstream criminals. The leaked information included the addresses, names, and phone numbers of senders and recipients, and the actual number of leaked information items exceeded 400,000 [6]. Technology can integrate information to facilitate operational inquiries, but the convenience at the same time can also be the source of personal privacy leaks. According to big data mobile application platform statistics, when e-commerce platforms force users to obtain permissions such as contact lists and geographical locations that are not related to core services during registration, an analysis of the types of personal information violations of applications reported nationwide in November 2025 shows that 35.27 percent of applications have "illegally collected personal information". 32.73 percent of the applications had "not explicitly stated personal information processing rules"; 14.55 percent of apps have "forced, frequent, and excessive requests for permissions". Tool-type social e-commerce apps even create a "legal maze" by checking privacy policies by default and collecting data without users being prompted to be explicitly informed. It can be seen that it is difficult for individuals to restrain the platform, nor can they jointly manage the privacy boundaries with the platform. Users cannot obtain their due right to know, and the human-machine relationship is more like the unilateral "possession" of algorithmic machines [7].

5.2 Governance Paths for Privacy Protection

First of all, it is necessary to deeply depict the concept of human-machine interaction and extend the scope and scale of legal regulation. Lawmakers should seriously and deeply address the fundamental business motives that drive engagement strategies, impose restrictions on data that is not necessarily collected, including surveillance advertising, the platform economy, and broader ills, and make extensive use of all relevant legal frameworks, such as referring to the definition in the General Data Protection

Regulation - any manipulation of personal data [8]. From numerous instances can be noted that in 2002, the Cyberspace Administration of China, in collaboration with multiple departments, launched the "Clean Net Operation", which investigated more than 1,200 cases related to AI privacy. According to Article 1034 of China's Civil Code, "collecting evidence", such as filing a lawsuit for the leakage of records, individuals can use legal means to protect their privacy security. Secondly, the business norms under the algorithm should combine rational values with instrumental rationality and ethical consciousness, and aim for the platform to be strict with itself, self aware and self-governing, and to enhance the main responsibility of the platform to be accountable to all users including the platform. Instrumental rationality cannot replace value rationality. It is necessary to grasp the existing and ought human society while using technology. As a result, it is difficult for users to fully exercise their right to know and choose, and technological rationality and value rationality should complement each other to create a new era of "truth, goodness and beauty". Take responsibility for protecting personal information security [9]. When driving out the commercial value of interests, when balancing social value standards in theoretical norms, clearly define what information is necessary and unnecessary to obtain when collecting and using data, and do not overdo, cross boundaries, or force the acquisition of personal information. Finally, users in the data age should cultivate their "right to self-determination" and comprehensively enhance their data literacy. Peng LAN once pointed out that data literacy should also be one of the basic qualities of citizens. That is, having data risk awareness, ethical awareness, reflection on algorithms and necessary restraint in their use, personal data protection awareness, privacy awareness and so on [10]. Leverage human wisdom to fill the "regulation vacuum" brought about by technological advancements and effectively safeguard the privacy and security of individual users.

6 The Privacy Rights That Consumers "Voluntarily" Hand Over

6.1 In Exchange For "Real Money" Discounts and Conveniences

This is the most direct and common motive. Personal information is often used as the "currency" for accessing services. Driven by economic interests: Businesses often use promotions such as "new user discount", "sign up for red envelopes", and "free gifts" to entice you to sign up or place an order. In the face of such direct economic benefits, many people think "it's worth giving away a bit of information for a few dozen dollars." To simplify the operation process, consumers may be willing to authorize contact lists, photo albums or location information in order to achieve "one-click login", "auto-fill address" or "quick match of friends". This pursuit of convenience, to some extent, weakens users' vigilance against privacy risks and causes them to overlook the data collection behind it. Google, for example, illegally collects 235 million registered email addresses from users and thousands of photos on Flickr, one-third of which explicitly expose location cookies.

6.2 Trust Illusion and the "Herd Effect"

People's psychological mechanisms often act as the driving force behind privacy leaks. The halo effect shows that when faced with big platforms like Wechat, Alipay, Taobao, or well-known merchants, consumers subconsciously think that "large corporations are generally perceived as trustworthy" and "big companies can protect my data", which leads to the brand halo of big platforms easily weakening users' risk judgment. This trust makes consumers very casual when they click to authorize, and they even agree directly without looking at the terms. From the perspective of the herd mentality, in high-frequency usage scenarios, the herd mentality further reinforces the authorization behavior. If consumers see that everyone around them is using it and authorizing it, they automatically think "it should be fine" and follow the crowd to make the same choice. Forced mechanisms of "invisible consent": In many scenarios, such as takeout, group buying, filling in a mobile phone number is a mandatory option for placing an order, or the page defaults to checking "consent to receive marketing messages". In order to complete the purchase, users have to "be forced" to give up their privacy rights, a phenomenon known as "invisible consent".

6.3 Social Needs and Self-presentation

In the era of social media, with platforms encouraging exposure and interaction mechanisms, the act of sharing has gradually evolved into an active surrender of privacy. Seeking recognition On platforms such as Moments, Weibo and Douyin, users may actively share their life photos, locations, emotional status and even whereabouts in order to get likes, comments and follows. This desire for social identity often outweighs concerns about privacy leaks. Combined with the spiral theory of silence, being passively drawn into social situations due to the fear of being isolated. Sometimes it's not an active leak, but rather the user is "dragged" into the public eye when friends post photos or updates, and this social relationship's ripple effect can also lead to the loss of privacy.

7 Conclusion

This article observes the changes in the short video marketing paradigm in the algorithmic era, with the main feature being the emphasis on the user's choice experience and the enhancement of brand authority. It is also noted that algorithmic bias and algorithmic black box ethical issues have emerged in the integration of algorithms with marketing, to some extent undermining consumers' right to information. Regarding the issue of protecting consumers' privacy rights, the society should also urge laws to improve and extend the scope of regulation, and take concrete actions to protect consumers' privacy rights. It is also noted that not all privacy issues are caused by businesses or platforms, and sometimes the privacy rights voluntarily surrendered by consumers are also a major cause of privacy leaks, which requires improving consumers' own data literacy. Although algorithms bring many difficulties and problems, it is undeniable

that algorithmic technology is still a thriving industry. People should not view technology merely as a tool, but rather measure it from a higher perspective on how to use technology for good in human-machine collaboration, how to use the convenience and speed of technology to serve people, and how to view algorithms with necessary restraint and a calm and objective perspective. The algorithmic marketing of short videos in the future is not necessarily about changing users' living habits, but about enhancing and assisting users' consumption experience. The society should continue to delve deeper into these areas to explore the possibility of sustainable development of the industry.

References

1. Guo, J. Y.: The mainstream ideology of film and television culture expression study. Zhengzhou University (2020)
2. Richards, N., & Hartzog, W.: Against engagement. *Boston College Law Review* 104, 1151–1179 (2024)
3. Yao, M. R.: Mobile short video transmission strategy based on content marketing discussion. *Journal of Media Communication* 16, 74–75 (2018)
4. Liu, H., & Zhang, Y. J.: Anti-algorithmic discrimination and the reconstruction of the concept of equality: Implications of the principle of anti-submission under the view of collectivist equality. *Southeast Academic*, 149–161 (2024)
5. Gregory, R. W., Henfridsson, O., Kaganer, E. A., & Kyriakou, H.: The role of artificial intelligence and data network effects for creating user value. *Academy of Management Review* 46(3), 534–551 (2021)
6. YTO's "insider" leads to the leakage of 400,000 citizens' personal information. *China Brand* 21 (2020)
7. Li, P. Y., & Wu, Y.: Blurred boundaries: The connotation, evolution and regulation of privacy boundaries in algorithmic communication. *News and Writing*, 22–29 (2022)
8. Alkhasawneh, A., & Khasawneh, F. A.: Legal issues of consumer privacy protection in the cloud computing environment: Analytic study in GDPR and USA legislations. *Journal of Digital Law Studies*, 40–62 (2023)
9. Guo, S.: Big data under the background of library users' personal information and privacy protection countermeasures. *Journal of Library*, 116–121 (2019)
10. He, S. M., & Cao, W. Q.: Ethical dilemmas and regulation of personalized recommendation algorithms on online shopping platforms: A case study of mobile e-commerce Taobao. *Urban Studies*, 1–6 (2019)

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

