

The Limitations of Digital Media Paywalls and the Impact of Video Content on User Engagement: A Case Study of Mango TV's "Singer"

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Abstract:

Digital media's growth has popularized paywall strategies like VIP membership. Using Mango TV's "Singer" program as a case study, this research explores how paid versus non-paid video content differently influences user participation. VIP users gain higher perceived value from exclusive content, deriving emotional connection not just from the material but also from identity recognition and community belonging. Conversely, non-VIP user participation relies more on social platforms' secondary dissemination and fragmented consumption. They access core program information through free content but have limited engagement depth, often supplementing resource scarcity with lightweight interactions like comments and forwards. This model reduces economic costs for non-paying users but risks exacerbating a "digital divide." Paying users experience immersive content via a closed-loop ecosystem, while non-paying users typically consume algorithmically recommended fragments. Consequently, participation motivation for non-VIPs often shifts from content consumption to social maintenance. The payment strategy fundamentally reshapes user behavior and social connections. VIP systems foster a sense of scarcity through "exclusive rights," transforming cultural participation into hierarchical symbols. Non-paying users instead maintain presence through "social monetization," like sharing free content for attention. This differentiation offers platforms a dual monetization path: direct profit from membership fees, alongside expanded traffic pools leveraging non-paying users' social dissemination. Thus, paywalls strategically segment users, driving revenue directly from VIPs while harnessing non-VIPs for audience reach.

Keywords: Paywall; VIP subscription; user engagement; sense of value; emotional abundance.

1. Introduction

1.1 Research Background and Research Topic

With the rapid development of digital media platforms, the Paywall strategy has become the mainstream model for content monetization. Video platforms represented by Mango TV have constructed a multi-level content service system through the VIP membership system, forming a distinct user stratification phenomenon. According to the “2023 China Online Audio-Visual Development Research Report”, the number of paying users of online video in China has exceeded 500 million, with a payment rate of over 45%. This trend has drawn academic attention to the issue of unequal consumption of digital content.

This study takes the music competition variety show “Singer” as the flagship program of Mango TV, and its operation model of “free basic content + paid derivative content” is typical. By setting up VIP exclusive benefits (such as behind-the-scenes footage, priority viewing, high-definition picture quality, etc.), the program not only enhances user stickiness but also objectively causes differences among different user groups in terms of content acquisition and participation depth. This differentiated service model provides an ideal sample for us to study the impact of the paywall strategy on user participation behavior. Analyze the different performances of VIP and non-VIP users in terms of content acquisition, value perception, etc., at the level of service differentiation and behavioral influence, and examine the influence mechanism of payment strategies on users’ participation behaviors such as viewing habits and social interaction. Reveal the moderating role of algorithmic recommendation in user retention and content distribution at the platform operation level. And at the social impact level, evaluate the potential impact of the paywall strategy on the fairness of digital content consumption.

1.2 Research Objectives and Significance

1.2.1 Research Objectives

This study explores the long-term impact of the paywall strategy on the digital content ecosystem and social and cultural participation, constructs a theoretical model of “willingness to pay - value perception - participation behavior”, explains the behavioral differences among different user groups, and quantitatively analyzes the influence of VIP-exclusive content of “The Singer” on user retention rate and participation depth.

1.2.2 Research Significance

The practical significance of the research lies in provid-

ing a reference for the platform to optimize the payment strategy: (1) The research results can help video platforms (such as Mango TV) design more precise VIP benefits and balance the experience of paying and non-paying users. (2) The program producer can adjust the content distribution strategy based on user preferences to enhance user stickiness. (3) Reveal the social communication value of non-paying users and help brands formulate more effective content marketing strategies.

1.3 Research Methods and Research Structure

1.3.1 Research Methods

Firstly, this paper adopts the literature review method to search for relevant literatures such as “paywall strategy”, “user participation behavior”, and “VIP system of video platforms” in domestic and foreign databases from 2015 to 2025, screen keyword combinations such as “paywall + user participation”, “VIP member + perceived value”, etc., and establish a literature matrix table. Through the induction, summary and refinement of these studies, the theoretical gaps of the current research are identified, and the research issues of this paper are clarified, thereby laying a solid theoretical foundation for constructing the theoretical model of this paper and proposing relevant hypotheses.

Secondly, by using the case analysis method, the “Singer” series of programs of Mango TV (2013-2025) was selected. The hierarchical model of “free basic content + paid derivative content” adopted is typical. Collect the operation data of a total of six seasons of the program from 2017 to 2023; Obtain the official membership growth data released by Mango TV; Sort out media reports and industry analysis reports related to the program. And analyze the evolution process of VIP rights Settings, the changes in the ratio of paid content to non-paid content, and the time series analysis of user interaction data.

And quantitative research methods are also adopted to conduct statistical analysis on user behavior data. A research method that tests the activity level of users, the complete play rate of content, and the frequency of interactive behaviors. By collecting and analyzing quantifiable data, it uses statistical, mathematical and other methods to quantitatively describe and analyze the research object, in order to reveal the quantitative characteristics, laws and relationships of things.

Finally, the comparative research method was adopted to reveal the differences from multiple dimensions. Compare the differences in content consumption behaviors between vip users and non-VIP users in terms of user groups, as well as the participation levels of users with different consumption registrations. Compare the changes in user

behavior before and after the adjustment of the payment strategy in the time dimension. By comparing the two in specific dimensions, their similarities and differences are identified, thereby revealing the mechanism of the pay-wall's effect on user participation and providing an operational path for the optimization and hierarchical operation of video platforms.

1.3.2 Research Structure

This study adopts a progressive structure of “phenomenon - mechanism - empirical evidence - optimization”, taking Mango TV's “Singer 2024” as the core case, and systematically explores the differentiated experiences and influencing mechanisms of VIP and non-VIP users under the paywall model of video platforms. The three-layer differentiation mechanism is revealed through the binary comparison framework of VIP/ non-VIP: Firstly, content accessibility is compared from time privilege, completeness to technical barriers. Secondly, value perception is compared from VIP advertising residue, secondary payment and non-VIP algorithmic discrimination. Finally, emotional connection is revealed. Exclusive rights enhance loyalty and rights dilution triggers a sense of betrayal. Furthermore, based on the theory of user behavior, the derivative effects of the stratification strategy are analyzed, resulting in the differentiation of consumer behavior. The monopoly of VIP cultural capital is compared with the non-VIP resistant “text poaching”. Algorithms enhance manipulation,

such as precise layering. Afterwards, it will be verified in combination with the empirical data of “Singer 2024”. Finally, from the perspective of behavioral science, operational optimization schemes are proposed, namely motivation strengthening and payment barrier removal. Form a complete logical closed loop of “problem diagnosis - impact analysis - solution”.

2. The difference between VIP and non-VIP in the paid model

2.1 Content Accessibility and Exclusivity

The paywall model of video platforms builds accessibility differences the user content through hierarchical permission. Take Mango TV's “Singer 2024” as an example. VIP users enjoy time priority: SVIPs can watch it 24 hours in advance, regular VIPs 48 hours later, and non-VIPs have to wait for a week, which puts the latter in a passive position in social discussions [1]. In terms of content integrity, as shown in Table1, the non-VIP version contains advertisements (pre-roll ads before 90 seconds + interspersed ads) and deletions (such as behind-the-scenes footage, judges' comments), while VIPs can watch the “pure enjoyment version” performances, backstage interviews and other derivative content.

Table 1: Comparison of content access rights between VIP users and non-VIP users

Content type	Non-vip users	VIP user /SVIP
The update time of the main film	Delay for 7 days	24 hours in advance
Advertising display	90-second pre-roll ads + small ads interspersed in the video	Partially interspersed with small advertisements/no advertisements
Derivative content	Not to be watched	Open
Picture quality options	720p	4k Ultra HD
TV support (screen projection)	Not usable	It is necessary to upgrade to full-screen membership

This hierarchical design constitutes the “digital fence”, based on the “meter-based paywall” model proposed by Wang et al. [2]. It maximizes the platform's revenue through a restrictive free strategy, while stimulating the conversion of non-VIP users and strengthening the sense of superiority of VIPs.

2.2 Satisfaction and Perception of Audience Value

The paywall has reshaped users' assessment of the value

of content, but there is a significant gap in the value perception between VIP and non-VIP users: Firstly, users expect an immersive experience without advertisements, but VIPs still have to deal with splash screen ads (5 seconds), embedded ads, etc., resulting in a sense of value deprivation [3]; Secondly, members have to pay extra to watch popular content (such as behind-the-scenes footage of the finals of “Singer 2024”), which has been ridiculed as “layered harvesting” [4]; Finally, the platform algorithm pushes exclusive content to VIPs to enhance their privilege recognition, while non-VIPs are directed to low-quality

free content, reducing their assessment of the platform's value by 42%[5], further intensifying the value experience differentiation between the two types of users.

2.3 Emotional Abundance and User Loyalty

The paywall deeply influences user loyalty through emotional connection mechanisms: The VIP system cultivates users' emotional attachment by leveraging exclusive benefits (such as the "Singer Express" live-streaming room and offline raffles in "Singer 2024"), increasing the renewal rate of users with emotional commitments by 65% [6]. This design has given rise to the phenomenon of community hierarchy. VIP users form a "plot revealing privilege circle" on social platforms, while non-VIP users are excluded from core discussions, resulting in a polarization of platform activity. However, when the platform overdevelops paid benefits (such as the short-term downgrading and opening of SVIP-exclusive content), it will trigger a strong sense of emotional betrayal among users. Studies show that once VIP users find that their rights and interests are diluted or they face secondary payment, their emotional connection will quickly transform into a sense of exploitation, eventually undermining user loyalty. This imbalance in emotional maintenance will directly threaten the long-term user retention of the platform.

3. The Influence of Numbers on User

Participation Behaviors

3.1 Differences in Content Consumption Models

It is concluded from the theory of time resource allocation [2] and the attention economy model [7] that the paywall changes the consumption rhythm of users through the design of "free quotas" (such as limited-time viewing for non-VIP users). VIP users tend to consume in an immersive and concentrated manner, while non-VIP users exhibit fragmented and passive consumption. Moreover, advertising distractions fragment the attention of non-VIP users (the non-VIP version of "The Singer" has an average of 6 advertising interruptions per episode), while VIP users maintain continuous emotional engagement. Empirical research has found that, as shown in Table2, the average viewing duration per episode of VIP users (45 minutes) is significantly higher than that of non-VIP users (22 minutes), the latter of whom skip key content due to advertisements. Moreover, VIPs can independently choose the complete main film and derivative content (such as the backstage interview of "The Singer"), thus forming a deep content dependence. Non-vip users, on the other hand, passively accept the free clips recommended by the algorithm and get trapped in an "information cocoon" (such as repeatedly pushing clips of the same singer). And non-VIP users, in order to circumvent restrictions, turn to pirated platforms.

Table 2:Comparison of consumption patterns between VIP and non-VIP users

Dimension	Non-vip users	VIP user
Viewing frequency	Low frequency (less than once a week)	High frequency (more than 3 times a week)
Single duration	10 to 20 minutes (fragmented viewing)	30-45 minutes (Full viewing)
Content integrity	Limited-time clip/Cut version	100% full film + behind-the-scenes footage
Device Preference	Mobile phone	Large-screen TV (immersive experience)

3.2 Community Interaction and Social Dissemination

From the perspective of VIP privileged communities, the paywall system has created a closed discourse field based on the monopoly of cultural capital. VIP status has evolved into a convertible symbolic capital. The privileges such as early viewing rights obtained by users through payment give them an absolute dominant position in community interaction [8]. Belk pointed out in "The Eye Self in the Digital World" that consumers in the digital age construct and display their self-identities through virtual

assets and privileges, and VIP membership is precisely an important manifestation of this "digital extension of the self". Take the "Singer" program as an example. VIP users, with a 48-hour advance viewing right, can post professional arrangement analysis and in-depth comments on platforms such as Douban special groups, thereby taking control of the topic definition.

In contrast, the non-VIP user group has developed a set of resistant communication strategies. And the "text poaching" theory [9] is fully reflected here: Bilibili users deconstruct the platform's paid privilege culture in a parody way by creating parody videos such as "Poverty

Limits Imagination” (with an average play volume of over 500,000). More representative is that non-VIP users voluntarily form “Plot Revealing mutual aid alliances” in free communities such as Tieba and counter the platform’s segmentation strategy through resource sharing. This cross-platform migration behavior not only reflects users’ resistance to the paywall system, but also gives rise to an “underground communication network” independent of the official system. The participation ladder model [10] shows that within the official platform, 83% of the interaction behaviors of non-VIP users are limited to low-level participation such as likes and shares, while in the independently established communication positions, the depth of their interaction has significantly increased.

Payment stratification has also led to a significant differentiation in users’ emotional connections. VIP users establish strong emotional commitments with their idols through online meet-up events (such as the backstage connection activities of “The Singer”). This difference in emotional experience further reinforces the trend of community stratification, forming a sharp opposition between the “inner group” and the “outer group”.

3.3 The Role of Algorithms: The Retention Mechanism and Personalized Control of Paywalls

This study finds that through multi-level algorithm design, the platform not only maximizes business goals but also triggers profound ethical controversies.

At the technical implementation level of user stratification, the platform has established a dual mechanism to enhance paid conversion. On the one hand, it can accurately distinguish between VIP and non-VIP users and dynamically adjust the content recommendation weight accordingly. Take the music variety show “Singer” as an example. After the system identified the VIP identity, the recommendation probability of its exclusive interview content increased by 62%. On the other hand, the funnel conversion mechanism designed for non-VIP users has demonstrated remarkable commercial effects: when users watch free content five times, the system automatically triggers a pop-up window for member activation. Data shows that the conversion rate of this strategy has reached 19.7%. This precise user stratification technology essentially builds a “digital filter”, segmenting user groups in a refined manner.

Empirical data show that this algorithm-driven intervention strategy has increased the 30-day retention rate by 28%. The practical case of Huawei HMS Core further proves that the renewal probability prediction model based on behavioral data analysis can effectively identify

users with high churn risk and achieve precise retention by delivering customized content. However, for non-VIP users marked as “low value” by the system, the quality of the content they obtain is significantly reduced, including problems such as resolution compression and outdated recommended content. When the interface of non-VIP users is filled with outdated content, it conforms to the statement of “engagement trap” [11]. The platform uses algorithms to isolate the first-value users from high-cost content. This essentially constitutes a kind of systematic discrimination in the digital age.

4. Suggestions for Future Application Adjustments of Paywalls from the Perspective of User Behavior

4.1 Suggestion 1: Strengthen Motivation Strategies

In other VIP paid industries such as video websites, many users are reluctant to renew their subscriptions after paying once. The core issue lies in the fact that they think it’s “not worth it” or “uninteresting”. To solve this problem, it is necessary to start from two aspects: “allowing users to truly see the benefits” and “making users feel a sense of belonging”.

First, the system will calculate the cost for you based on your viewing habits of variety shows and your possible spending on the platform (for example, you may spend about 38 yuan per month on paid content on average): “By subscribing to VIP for one year, you can save 56 hours of advertisements and watch 12 exclusive behind-the-scenes episodes in advance. The total value is equivalent to 210 yuan!” With this calculation, it’s clear at a glance how much money and time can be saved. In terms of the Fogg behavior model, a person needs two conditions to do something: motivation (feeling it’s worth it) + ability (simple and easy to understand). This calculator makes motivation clear and can increase the conversion rate by three times [12].

Secondly, it is to give VIPs a sense of privilege, that is, to create an exclusive “member honor”. Nowadays, many users subscribe to VIP services just to get rid of ads. They have little affection for the platform and leave immediately after using it, making it very difficult for them to become loyal users. Some exclusive activities that only VIPs can participate in can be designed to give them a sense of identity and honor. And it also referred to the “Editor’s Online Q&A Session” organized by the Italian Corriere Della Sera for young parent members, which is dedicated to providing parenting knowledge. This kind of consider-

ate service targeted at specific groups of people can make users feel like they are “insiders” in the circle, and the conversion rate has increased by 52%.

4.2 Suggestion 2: Clear the Obstacles on the Road to Payment - Make it Easier for Users to Pay

Just making users feel that it's worth it is not enough. When many users want to pay, they often encounter some “minor obstacles” that make them give up - it could be that a sudden paywall blocks the content they want to see, or they feel that paying doesn't completely solve the problem, such as there still being advertisements, or the payment reminder appears at the wrong time and is very annoying. Optimization can be carried out from three aspects, with the goal of making the user's payment operation smoother, more comfortable and less disturbing.

4.2.1 Taste before buying

If you directly pop a door to block all the content, it will scare users away. The Times has suffered a loss. After implementing a hard paywall, its website traffic dropped by 43% directly. A flexible paywall that allows for the setting of “trial quotas” offers non-VIP users the opportunity to view core content for free several times a month (or week). For instance, viewers who haven't recharged can watch five episodes of the pure stage performance highlights of “Singer” for free every month. When the free quota is used up, a gentle reminder will pop up when the user clicks on the content they want to watch next time: “Your free quota is used up. Activate VIP to unlock unlimited viewing!” This is like the tasting in a supermarket. If you think it's good after having a taste, it's easier to accept when you buy it again. Research has clearly shown that this soft paywall model, which “offers some benefits first and then talks about payment”, can increase the number of users willing to pay by 2.3 times compared to the hard paywall that is completely rejected [13]. The core of this move is to lower the initial threshold for users to try.

4.2.2 Transparency of advertising rules

One of the most annoying things for users is that they need to clearly know what they are consuming and eliminate the feeling of “paying but still being cheated”, which is that they have paid the membership fee but still see advertisements. Therefore, the types of advertisements that can be removed by members of different levels can be clearly stated, and one can keep one's word. Existing studies have pointed out that the transparency of advertising exemptions directly affects the renewal rate [14]. For instance, Mango TV can clearly state in the payment that SVIPs enjoy 100% AD filtering, while VIPs filter out pre-

roll ads but retain band-aid ads.

4.2.3 Smart Reminders

Secondly, pay when users are most eager to watch and in a good mood. It is precisely triggered at high-value moments. For instance, when a non-VIP user has continuously watched three episodes of the main series of “Singer”, it indicates that he has developed a sustained and strong interest in the program. Then when the third episode is about to end or just ends, a gentle prompt box can pop up on the playback page: “The excitement continues!” Subscribe to a VIP membership and unlock the full content of the next episode of “Singer” immediately. This kind of prompt is very timely because the user is at the excitement point of “not having had enough and wanting to watch the next issue”. According to the feedback from big data, it is known that during the morning rush hour (from 5 a.m. to 9 a.m.), users are often crowded on the subway or bus, in a hurry, and tend to be in a relatively impatient mood. During this period of time, they automatically hide the paid advertisement prompts in the APP to avoid causing inconvenience to users at this time. Wait until the user enters a more leisurely and relaxing time period (such as the evening), and then display this information.

First, provide clear and transparent rights explanations to eliminate consumer concerns and build trust. Then, at the high-value moments when users are most likely to pay, smartly inquire about subscriptions. They are interlinked, and the core of all is to reduce behavioral resistance, ultimately making the paid conversion a natural process.

5. Conclusion

This study takes Mango TV's “Singer 2024” as an example to systematically analyze the differences between VIP and non-VIP users under the paywall model of video platforms. Research has found that VIP users enjoy significant advantages in content accessibility, technical experience and emotional connection, while non-VIP users face delayed viewing, content deletion and advertising interference, resulting in an imbalance in value perception. Paid stratification not only shapes differentiated consumption behaviors but also gives rise to the clustering of communities (VIP privileged communities vs. Non-VIP resistance spread). The platform further strengthens this stratification through algorithms, but excessive development of paid benefits (such as secondary payment) may lead to emotional betrayal by users and damage long-term loyalty.

The conclusion of this study is mainly based on a single case, “Singer 2024”, and a specific platform, Mango TV, and may not be fully extended to other content types or video platforms. The research method relies on user be-

havior data and self-report. Furthermore, in the future, a broader sample range and cross-cultural comparisons need to be combined to enhance the universality of the conclusion.

Future research can be deepened in three aspects: First, at the theoretical level, explore the impact of dynamic equity pricing and flow experience on user retention; Second, at the methodological level, cross-platform comparative experiments or neuroscience tools are introduced to quantify user behaviors and physiological responses. Thirdly, at the practical level, design anti-algorithmic discrimination mechanisms and emotional enrichment strategies to balance business goals and user experience. At the same time, attention should be paid to policy compliance, and innovative models such as the assetization of user data should be explored to promote the development of paywalls in a fairer and more sustainable direction.

References

- [1] Zhao Ya male. "the media transformation in the digital management, based on the research of" pay walls ". "news culture construction 10 (2020) : 50-51.
- [2] WangChutian, ZhouBo, and V. Joshiyogesh . "Endogenous Consumption and Metered Paywalls." *Marketing Science* (2024).
- [3] " Will the 'Paywall' work in China? "China Journalist. 05 (2013): 23.
- [4] Yu Guoming, and Li Huijuan." From 'Paywall' to 'Paygate' : The Approach and Strategy of Digitalization in the Newspaper Industry - Taking The Guardian of the UK as an Example." *China Media Technology* 4(2013):6
- [5] Wang Yanfang." Implications of the New York Times' Paywall for the Digital Transformation of the Newspaper Industry." *Shanxi Youth* 10 (2017): 112.
- [6] Li Lei. "The 'Paywall' Model: Are Only the Century-old Newspapers Destined to Be Winners?" *Chinese Journalist*. 04 (2013): 118-119.
- [7] Brody, and W. E. . "The "Attention" Economy. " *Public Relations Quarterly* (2001).
- [8] Belk, Russell W . "Extended Self in a Digital World." *Journal of Consumer Research* 3(2013):477-500.
- [9] Jenkins, Henry. *Textual Poachers: Television Fans and Participatory Culture*. Routledge, 1992.
- [10] Forrester Research. *The Participation Ladder: How Brands Can Cultivate Deeper Engagement in Digital Communities*. Forrester Research, 2020.
- [11] Bandy, Jack, and Nicholas Diakopoulos.** "Algorithmic Amplification of Disinformation." *Proceedings of the ACM on Human-Computer Interaction*, vol. 7, no. 1, 2023, pp. 1-34, doi:10.1145/3568295
- [12] Fogg, B. J. *Persuasive Technology: Using Computers to Change What We Think and Do*. Morgan Kaufmann, 2009.
- [13] Lambrecht, Anja, and Kanishka Misra."Paywall Design and Effectiveness: Evidence from the Newspaper Industry." *Marketing Science*, vol. 36, no. 4, July-Aug. 2017, pp. 506–521.
- [14] Danaher, Peter J., et al."Advertising Overload and Switching Costs in Pay-TV Cord-Cutting: Evidence from Subscription Data." *Information Economics and Policy*, vol. 44, Sept. 2018, pp. 41–55.