

“Traffic attraction” and “fan retention” under the framework of meaning construction: content production, interactive communities and value realization of virtual streamers—A virtual ethnographic study of virtual streamers

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Abstract. Virtual Streamers (Vtuber) refer to content creators who conduct activities on video websites in the form of virtual avatars. Based on motion capture technology (mainly facial capture) and the combination with 2D or 3D character models, real people can hide behind the screen and perform with virtual avatars and voices. In the early stage, Vtuber mainly produced videos, but later shifted to live-streaming content such as games, chats, singing, and collaborations to attract fans and eventually monetize through “merchandise”, paid subscriptions, and donations. The emergence of the virtual streamer cultural phenomenon and the development of related industries have contextually shaped new ways of connection and interaction among media, society, and individuals. Therefore, it is necessary to pay attention to the social significance construction behind the behaviors of virtual streamer cultural participants. This article uses virtual ethnography as the research method to study the characteristics of virtual streamer content production, interactive communities, and value monetization. The research finds that “meaning construction” occupies a hidden main line in the activities of virtual streamers and is one of the driving forces for viewers to pay and participate in the re-creation cyber community. Virtual streamers use short-term live streaming and long-term “re-creation” community construction to combine short-term and long-term fan attraction and retention. In this process, the relationship between virtual streamers and viewers has also changed with the commercialization and systematization of the virtual streamer industry.

Keywords: Virtual Streamers (Vtuber), meaning construction, virtual ethnography, re-creation

1. Introduction

Virtual Streamers (Vtuber) refer to content creators who conduct activities on video websites in the form of virtual avatars. Based on motion capture technology (mainly facial capture) and the combination with 2D or 3D character models, real people can hide behind the screen and perform with virtual avatars and voices. In the early stage, Vtuber mainly produced videos, but later shifted to live-streaming content such as games, chats, singing, and collaborations to attract fans and eventually monetize through “merchandise”, paid subscriptions, and donations [1]. As a new form of occupation emerging on the background of subculture, virtual streamers have unique cultural characteristics. The emergence of this phenomenon and the development of related industries have shaped new ways of connection and interaction among media, society, and individuals [2]. Therefore, it is necessary to pay attention to the social significance constructed behind the behaviors of virtual streamer culture participants. Meanwhile, as of July 22, 2024, there are 8,689 virtual streamers on Bilibili, with 104 having more than 500,000 followers¹. As a booming new industry, what content virtual streamers produce, how they interact with their audience, and how they monetize are all issues worthy of studying. In summary, due to the close binding relationship between virtual streamer culture and specific online platforms, this paper adopts a virtual ethnography research method and takes “meaning construction” as the thread to study the characteristics of content production, interaction communities, and value monetization of virtual streamers. This paper will be divided into four parts. The first part will review the multi-sided research on streamers and virtual streamers other researchers done before. The second and third parts will analyze from the perspectives of immediate and long-term fields how virtual streamers achieve “traffic

¹ (2024-2029). China Digital Human (Virtual Human) Industry Development Prospect Prediction and Investment Strategy Planning Analysis Report.

attraction” and “fan retention” under the framework of meaning construction, covering content production, interaction communities, and value monetization. The fourth part will summarize the research, discuss the limitations of this study, and propose directions for future research.

2. Literature review

The phenomenon of virtual hosts emerged relatively recently (basically starting from 2017), and the labor form of virtual streamer is essentially similar to that of traditional real streamer. Therefore, this paper also reviews the academic research on traditional real streamer as the premise and background for the study of virtual streamer.

At present, the academic definition of virtual streamer is relatively broad and ambiguous. Searching on CNKI for “virtual streamer”, related research includes different terms such as “AI streamer” and “virtual digital humans”. The virtual streamer discussed in this paper are limited to those with “real people” behind them, that is, content creators who conduct activities on video websites in the form of virtual avatars. The activities of virtual streamers blur the existence of real bodies and identities, and their virtual avatars bring about extended and open interpretations of meaning. Virtual streamers possess both exquisite virtual appearances and the unique personalities of real streamers, and these series of characteristics makes virtual streamer culture a niche and marginal virtual subculture [3].

Scholars have found that the deep interactive participation of the subjects in virtual live streaming blurs the boundaries between the front stage and the backstage, as well as between the virtual and the real. Stranger virtual interactions characterized by companionship and anonymity have become a new form of social interaction in the internet era. Some scholars have studied the symbol construction and transmission in the interaction between streamers and audiences, and “the body” provides an important basis for symbol construction [4]. The body symbols produced based on the physical body are managed, presented, and constructed by female streamers to cater to the imagination and regulation of the majority male audience’s perception of the female body, becoming a visual resource and body spectacle [5]. The commercialization of their bodies is completed through the traffic and gift donations brought by the streamers’ bodies. Besides the symbolization of the body, creating a “persona” also helps to form symbolic capital. In this discussion, some scholars believe that virtual live streaming does not help women build a truly new ego, but rather, under the guidance of capital and the market, they maintain the stereotypical image of the media to satisfy male gaze and achieve the purpose of obtaining money and the sense of identity as grassroots celebrities [6]. Viewers are adept at using this new technological form to vent emotions, express individuality, seek recognition, and connect with society. They form a subculture group different from mainstream values and aesthetic orientations through a visual space with a sense of belonging and symbolic recognition of the streamers’ performances, and build their own cultural space [7]. Some scholars have analyzed the characteristics and spiritual qualities of this subculture. Other scholars have studied from the perspective of emotional labor and consumption in the context of a consumer society, viewing participation in virtual live streaming as a form of consumer culture. The rewards in virtual live streaming are a significant sign of the commercialized online interaction, which to a certain extent re-releases emotions and constructs multiple identities for both parties. Viewers achieve virtual presence through virtual gifts; the emotional labor process of virtual streamer is accompanied by emotional consumption. The core of emotional production lies in mobilizing consumers’ emotions, transforming “emotion” into virtual “gifts” and then into “money”. This labor process not only shapes streamers but also shapes fans as consumers [8].

Currently, academic research on virtual streamers on the one hand focuses on exploratory introductions and historical overviews of virtual streamer culture, on the other hand, on philosophical studies like what’s the relationship between “body” and “soul” of virtual streamers? Thus, lacking in-depth empirical research in the virtual field. Moreover, many studies that analyze phenomena or offer policy suggestions start from the assumption that virtual streamers and their audiences are in an economic relationship, ignoring the initial social roles of virtual streamers as content creators and their audience as viewers, leading to monotony research, which has the suspicion of economic imperialism. In fact, virtual streamers and audiences initially played the social roles of content creators, secondary creators, and audiences, and later shifted to the roles of content producers, prosumers, and consumers. However, their social roles as content creators, re-creators, and audiences may have weakened to a certain extent but have not disappeared. This paper studies the content output, community interaction, and value realization of virtual hosts from the dual identities of virtual hosts and audiences. This paper adopts a virtual ethnography research method and takes “meaning construction” as the thread to study the characteristics of content production, interaction communities, and value monetization of virtual streamers.

3. Research methods

Virtual ethnography is a relatively common research method in online fieldwork. As the proponent of virtual ethnography, Robert V. Kozinets pointed out in his monograph “Netnography: Doing Ethnographic Research Online” that “virtual ethnography is a specialized ethnographic method applied to everything that can happen in the current computer-mediated social world.” It mainly uses “participatory observation” and “covert observation” to collect various research materials. Compared with traditional ethnographic research, virtual ethnography focuses on the Internet context and has the advantages of immediacy and efficiency. It is particularly suitable for exploring social interactions in the Internet context, so it becomes the main research method of this

paper. The author immersed himself in online communities of virtual streamers' fans on platforms such as Bilibili, QQ groups, and Tieba for ten months, recorded the activities in the virtual streamer community, and collected texts produced by groups related to virtual streamer culture (virtual streamers, viewers, operators, etc.). Through the observation, recording, and analysis of the behaviors of multiple virtual streamers, fan groups, and historical materials, this research was completed.

4. Analysis

Why "Attract Traffic"? Traffic is a data representation of people's attention. Canadian communication political economist Dallas Smythe proposed the "audience commodity theory and audience labor theory", arguing that "the audience of media that makes profits through advertising produce their attention as a commodity and sell it to advertisers, thus they are audience laborers". Under the network media, the audience's attention can be used for profit. Meanwhile, Bilibili uses AI algorithms to evaluate the profitability of virtual streamers and allocates resources (mainly exposure) towards them. In this process, "traffic" is an important criterion for judgment.

Why Retain fans? Under the capital operation, Bilibili has introduced diverse content and promoted cross-sectionally to help virtual streamers rise to fame. However, after that, virtual streamers have not brought the expected revenue to Bilibili. The SCUT Data Center has statistically analyzed the income of over 3,000 virtual streamers with a certain fanbase on Bilibili as of November 2021 and found that more than half of them have a monthly income of 0 [8]. This data indicates that the breaking through strategy has been quite effective in introducing potential consumers to the virtual streamer market, but it has not effectively transformed these new secondary users into virtual streamer users with commercial value. New fans are attracted to the virtual streamer section, but they have not truly become consumers of virtual streamer products. Their consuming behavior towards virtual streamers remains rational [1]. This shows that the majority of viewers willing to pay for virtual streamers are still original users. There is an inherent consumption logic difference between the secondary users (also known as "mainstream market users") and the original users in the virtual streamer market [9]: the original users are basically fans of otaku culture, the core of which is "emotional realism" and "otaku existentialism". That is, the fan groups of virtual streamers pick the characteristics they like from the "persona" and the "real person", expand the imagination and construct symbols, and assemble an object for emotional projection. They choose to believe in this "simulation" and invest true feelings in it [10]. Fans are already known the virtual nature of virtual streamers, but they believe that as long as they believe and identify with the emotions they convey, they can regard them as "real existence". The fans' emotions towards virtual streamers are genuine, and giving "love" makes the fans feel their own existence. Scholar Wang Yuxu calls this concept of constructing self-identity "otaku existentialism": "I choose, I believe, I act, I create my own value and faith, and I am responsible for all the consequences arising therefrom [11]." However, secondary users do not have this ideological foundation, which makes their behavior different from that of original users, specifically in "meaning construction". Original users actively participate in meaning construction, are willing to pay as consumers or even become prosumers to create re-creation works for virtual streamers, while secondary users watch virtual streamers "for fun" and do not participate in meaning construction. Thus, it can be seen that meaning construction plays an indispensable role in the development and prosperity of virtual streamer culture and is one of the driving forces for viewers to pay and participate in the re-creation cyber community. Therefore, to increase value, virtual streamers need to achieve stabilizing fans through meaning construction.

Therefore, the basis for value realization is how to attract traffic and how to transform the attracted passers-by into fans. Virtual streamers use short-term live streaming and long-term re-creation community construction to combine short-term and long-term traffic attraction and fan stabilization. In this process, the relationship between virtual streamers and viewers has changed with the commercialization and systematization of the virtual streamer industry, from content creators, re-creators, and viewers to producers, prosumers, and consumers.

4.1. Fan attraction and retention through meaning construction in short-term field

4.1.1. Live streaming

Virtual streamers' live streaming rooms are carefully designed in terms of the constructed field. Besides the virtual streamer's setting, elements related to their character and worldviews are piled up in the background, the bullet chat column, and the frame around the screen. These contents may be updated but to some extent, they are stable, visually constructing a familiar atmosphere and a stable live streaming field for the audience, which helps to retain fans.

In the live streaming room, virtual streamers interact with the audience in real time, and the use of bullet chats also demonstrates interactivity. These interactions eliminate the barriers of time and space, creating a sense of presence and a sense of reality similar to daily conversations. This "simulation" helps to build more interactive communication behaviors [12]. According to Collins' theory of interaction ritual chains, the synchronous communication and immediate interaction in the live streaming room promote the flow and accumulation of emotions, thereby more likely to trigger relationship recognition and emotional resonance, achieving immediate meaning construction. Existing studies have explained the audience's viewing motives from perspectives such as emotional companionship and talent display. Meanwhile, a special type of live streaming deserves research. The characteristics of this type of live streaming are long duration, high repetition rate, and low or even increasing audience rating. The immediate

meaning construction, specifically, the audience's psychology of "witnessing history" is the main driving force for viewing. This "witnessing history" psychology expands into an atmosphere through the synchronous communication in the live streaming room, which in turn affects both the fans and the attracted passers-by, thereby achieving fan attraction and retention through meaning construction. The basis of this meaning construction is the synchronous field of time and space in the live streaming room, which is immediate. The significance of the audience witnessing the virtual streamer achieving a goal or creating a record moment "on-site" is incomparable to the after-replay or video, as evidenced by the frequent appearance of "being on-site" comments in the comment section.

In September 2020, the virtual streamer "Machita Chima" (町田ちま) from the NJSANJI company conducted a "(endurance) 100 times 7リ-♪ 7" singing challenge", singing for nearly 8.5 hours and gaining nearly 20,000 followers. During the event, the average concurrent users increased from 7,000 to 25,000, consistently ranking in the top three on Japanese Twitter trends. When she sang the 100th time, a large number of "witnessing history" bullet chats appeared. Viewers commented, "I was on-site, from 11 p.m. to 6:30 a.m., witnessing the number of online viewers increase from several hundred to over ten thousand. It's a valuable live stream to witness." This demonstrates the audience's short-term meaning construction psychology based on the virtual streamer's live streaming content and the fan attraction and retention achieved through this.

4.1.2. Paid

Donations and other paid behaviors are important ways for the audience to watch and participate in live streaming. Currently, some scholars have studied the paid behaviors of virtual streamer audiences and expounded on the social meaning construction behind them. The conclusions categorize the paid motives into the monetization of the connection of live streaming platforms, gifts from fans to "sponsors", physical consumption through the negotiation of economic rationality and emotional investment, and interactive consumption for purchasing emotional value [13]. This study found that under these paid motives, paid behaviors have characteristics of long-term, low single-streaming paid rates, and dispersity in terms of time and number of people; while live streams with large revenue, high paid rates, and concentrated paid behaviors are mainly "anniversary live streams" (such as birthday parties, 500,000-follower anniversary live streams, etc.). Behind this large revenue, high paid rates, and concentrated consumption, fans participate in live streaming interactions through payment, engaging in immediate meaning construction and obtaining emotional value in this process. Passers-by are attracted by the atmosphere of concentrated consumption and meaning construction and get to know the virtual streamer. Some people follow the trend and make payments. Thus, virtual streamers achieve fan attraction and retention through live streams similar to "anniversaries".

On October 21, 2020, a Japanese virtual streamer named "Hiseki Erio" (緋赤エリオ) saw her channel's subscriber count increase by approximately 80,000 people in a single day. She received 5,337 donations, generating a revenue of 480,000 yuan. Her paid subscribers reached over 3,000, and she received a 3,000 yuan "Super Chat" from Bilibili Live's official account. That night was dubbed the "Miracle Night". Before this, her channel had only around 40,000 subscribers. Initially, during her live stream, Hiseki Erio revealed that she was laid off by her company due to the pandemic and her family elder was seriously ill, hinting at her possible "graduation" (means resignation). One of her fans wrote a touching article about her on NGA (a virtual streamer forum), which was then shared across various Baidu Tieba forums. With a heart full of sympathy and a desire to help, many new viewers began to get to know this virtual streamer. Meanwhile, hololive, which once occupied half of the Chinese market, was boycotted by Bilibili viewers for allowing and tacitly approving its virtual streamer "Kiryu Coco" (桐生 ココ) to insult China. A large number of viewers needed an outlet for their emotions. At this time, the convergence of many factors made Hiseki Erio the focus of attention, and her live stream revenue soared. In the second half, Bilibili's live streaming official donated 3,000 yuan "SC" (super chat) and posted an advertise to draw traffic, attracting many passer-by to follow suit and donate "SC", ultimately achieving a revenue miracle. Regarding this "miracle night", some comments said, "Whether it's a trap of capital operation or the frenzy of herd mentality, as long as the protagonist of the story believes in it, I am willing to pay for this drama, because drama itself is the scarcest thing in reality. No matter how many times you read the fairy tale of Cinderella, once it happens, you will still be moved." The virtual streamer company Hololive's withdrawal from the Chinese virtual streamer market due to the insult to China has disrupted the meaning jointly constructed by virtual streamers and viewers, and has caused viewers to lose confidence in the jointly constructed meaning. Hiseki Erio, who persisted in the bad condition until this important period, attracted many viewers, and restored the confidence in interactive meaning construction and even the confidence in the virtual streamer scene. This event inspired a large number of virtual streamers who were originally planning to resign, retained the old viewers who almost decided never to invest their true feelings and energy in jointly constructing meaning with virtual streamers again, and brought a large amount of fresh blood to the virtual streamer scene, making Bilibili's virtual streamer scene stand up again and laying the foundation for the subsequent development of virtual streamers.

The above case confirms the viewers' psychology of paying for immediate meaning construction. Viewers use payment methods to jointly create program effect with virtual streamers, transform their own identities into actors, and jointly perform dramas such as "efforts will be rewarded" with virtual streamers, providing extraordinary experiences for daily life. Viewers' subjectivity and sense of self-existence are enhanced in live stream interactions, and they shift from "witnessing history" to

“creating history”. This psychology of hoping to “create history” is the psychological driving force for payment. In the process of immediate meaning construction, viewers draw strong emotions and a sense of achievement, shaping their own existence.

4.2. Long-term field: attracting and fixing fans through meaning construction

4.2.1. *Relationship labor*

Virtual streamers and viewers establish emotional interactions through the digital space of the live stream room and further extend this interaction and relationship beyond the live stream room. The relationship between virtual streamers and viewers is often more complex and long-lasting. Compared to the temporary “emotional labor” concept of Hochschild, the concept of “relationship labor” is more suitable for describing the essence of the work of virtual streamers in maintaining relationships with viewers both inside and outside the live stream room [14]. Most virtual streamers take live streaming as their main activity, and at the same time, outside the live stream room, they also update their social media accounts and interact with viewers through fan groups. Especially for virtual streamers who focus on providing emotional value, they will carry out higher-intensity relationship labor: for those working for their own, whether or when to stream has a certain degree of freedom, but on days when they don’t stream, many virtual streamers even write “asking for a Leave” to explain why they are not streaming. Through diversified, daily, and long-term communication, virtual streamers deepen viewers’ understanding and recognition of themselves, and viewers further obtain long-term emotional satisfaction from it. Under these conditions, a deeper and more intimate relationship can be established between the two, achieving the solidification of fans.

4.2.2. *“re-creation” cultural community*

“Re-creation” refers to non-official creative works based on the image, voice, and characteristics of virtual streamers, including MMD, editing (slicing), videos, games, music, memes, paintings, and other forms. The virtual streamers activity forms can be roughly divided into three categories: casual talk, song covers, and games, and content mainly focuses on talent shows, emotional companionship, and reinforcing the character setting, providing a foundation for “re-creation”. Compared to real-life streamers, virtual streamers have “virtual images”, “character settings”, and “worldviews”. They integrate their distinct character settings with their own personalities and present them through live streaming or interactions with viewers. The content produced by virtual streamers provides fertile ground for fans to engage in “re-creation”, and the “re-creation” and the construction of subculture communities represent a form of long-term meaning-making.

In the culture of virtual streamers, some fans with certain cultural capital, driven by their love for virtual streamers, transform from viewers to re-creators. The “Z generation” has grown up with the Internet, and “participation” is an important feature of the cyber subcultures they have produced [15]. “Re-creation” is a form of participatory culture. Fans of virtual streamers take the content already presented by virtual streamers as a basis, redefine “reality and fiction” based on their own preferences, and act as “poachers” and “nomads”, picking up the features they like from the “settings” and “voice actors” (中の人). They create new works by modifying and enriching the original character settings, worldviews, and live-streaming content of virtual streamers, expressing their value judgments and aesthetic tendencies, and generating group texts and symbols as well as constructing meanings [10]. Later, the creators put their scattered “re-creations” works under the #re-creation# tag, forming a community within the fan base where they share information, express opinions, exchange emotions, and create a “new tribe” as described by Michel Maffesoli. This community promotes a sense of group belonging among members in an atomized society through online media.

After 2019, with the capital operation of Bilibili, the cultural context of virtual streamer viewers changed. Coupled with the conflicts between Japanese virtual enterprises and the Chinese market and the language barrier, domestic virtual streamers gradually developed and took root on Bilibili. At this time, some domestic virtual streamers inherited the “virtual feeling” of traditional Japanese virtual streamers, emphasizing “role-playing” and character settings. Due to the removal of the language barrier, the closeness of daily life, the collective memories as Chinese people, and the strong emotions of “liking and supporting”, the re-creation cyber community of virtual streamers became active. Re-creators abandoned limiting virtual streamer character settings and worldviews, they collect materials from reality, and combined live-streaming content with online hot topics and “meme” for re-creation, greatly enriching the soil that provides inspiration for re-creation. At the same time, re-creators also diversified the forms and contents of re-creation, expanding from highly “otaku” forms such as “MMD” to more diverse and less “otaku” forms like “short essays” and “folk songs”. This transformation of the re-creation community has a significant advantage in attracting traffic: high-quality re-creations attract casual viewers, and the reduction in “otaku” component lowers the acceptance threshold, changing the impression of the virtual streamer scene as “arrogant”. Re-creation culture associated with “memes” and hot topics, or those that are too abstract and unique due to genuine emotions, have broke into the mainstream, thereby playing a role in attracting new viewers and retaining existing ones for virtual streamers.

As the portion of re-creation materials derived from virtual streamers has relatively decreased, the re-creation community has shown a trend of “decentralization”, with the subjectivity of re-creators strengthening and taking the dominant position. During this process, the humanity and concreteness of virtual streamers have relatively weakened, while their symbolic representativeness

has significantly increased. Virtual streamers with distinct virtual images and personas, on the basis of having a large number of fans, have shifted from specific individuals to IPs for monetization, thereby realizing their symbolic value as cultural symbols.

5. Conclusion and reflections

In the context of the booming virtual streamers industry facilitated by online media, this paper mainly discussed the characteristics of content production, interactive communities, and value monetization of virtual streamers. By conducting a long-term virtual ethnography on the fan communities of multiple virtual streamers on the Bilibili platform, this paper analyzed the content production, interactive communities, and value realization of virtual streamers from both the immediate and long-term perspectives, with the focus on the fan attraction and retention achieved through meaning construction. Through the research, it was found that “meaning construction” plays a hidden but significant role in the activities of virtual streamers, serving as one of the motivations for viewers to pay and participate in the re-creation cultural community. Virtual streamers utilize both live streaming and long-term “re-creation” community construction to achieve a combination of short-term and long-term fan attraction and retention. In this process, the relationship between virtual streamers and viewers has changed with the commercialization and systematization of the virtual streamers industry, evolving from content creators, re-creators, and viewers to producers, prosumers, and consumers.

The main contributions of this paper are twofold. First, based on long-term virtual ethnographic research, this paper has collected a large amount of data and cases, enriching and supplementing the empirical research on the social and cultural phenomenon of virtual streamers in the academic field. At the same time, this paper starts from the “lifeworld” and adopts a “meaning construction” perspective with humanistic and interpretive characteristics to study the collective emotions and individual perceptions of fans, providing an alternative interpretation of the content production, interactive communities, and value monetization of virtual streamers that differs from the “utilitarian” perspective, thereby advancing the recognition and understanding of this social and cultural phenomenon. Second, the analysis of the characteristics of content production, interactive communities, and value realization of virtual hosts in this paper can not only provide ideas for individuals and companies engaged in virtual streamer industry but also offer references for the management and guidance of the virtual recognition market, thus having certain practical significance and value.

The limitations of this study mainly lie in the following aspects. First, virtual streamer is a global cultural phenomenon, but due to the researcher’s inability to collect relevant data from foreign websites (such as YouTube), the research is mainly limited to the Chinese virtual streamer market, and the generalizability of the conclusions needs further research and verification. Second, cultural background has a profound impact on virtual streamer themselves and the interests and preferences of viewers. Due to the inability to study the more developed and mature Japanese virtual streamer market and the global virtual streamer market, it is difficult to conduct comparative analysis and further explore the influence of different long-term and large-scale cultural backgrounds on virtual streamer culture from the perspective of cultural background. Third, this paper focuses on “meaning construction” as the thread, weakening the existence of “chaos” and “poor ecological conditions” in the virtual streamer industry, making it difficult to provide targeted suggestions for the development of the virtual streamer market.

Based on our research and the reflection on the above limitations, future research can be developed in the following aspects. First, further collect research materials related to virtual streamers from foreign websites to verify and further modify, improve the current conclusions. Secondly, based on the collection of research materials on virtual streamers from foreign websites, and in combination with the cultural background of foreign countries (such as the development situation of the otaku culture industry, etc.), research on the content production, interactive communities and value realization of local virtual streamers, and compare it with the domestic virtual streamer market. Study the measures worth learning and drawing on in terms of the development of the virtual streamer market, the operation of virtual streamer enterprises, and the supervision and management of network platforms in other countries, and provide cases, suggestions and templates for the healthy and sustainable development of the Chinese virtual streamer market.

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