Virtual Idol and Youth Identity: The Impact of Mainstream Culture on the Virtual Idol Online Fanbase Community in China

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Abstract

Virtual idols originated in Japan and are mainly composed of singing synthesizers, virtual reality technology, and ACG (anime-comics-games) cultural elements, which is a subcultural phenomenon. In recent years, the growing fanbase of virtual idols has attracted the attention of mainstream media and government in China. The state media in China have used virtual idols as a medium to promote mainstream culture to Chinese young people, and influence fans' youth identity by injecting mainstream culture into virtual idols' musical works, stage performances, and public opinion propaganda. This research will use a virtual ethnographic approach to explore the impact of the mainstreaming of virtual idols and their music on online fanbase communities. The study concludes that under the influence of mainstream culture, virtual idol subculture in China has gradually become mainstream, and its fanbase has also experienced a transformation from post-subcultural group identity to national identity. This study provides new insights into the musical phenomenon of the mainstreaming of virtual idols in China from the perspective of post-subculture theory and identity.

Keywords: virtual idol, youth identity, subculture, mainstream culture, online fanbase community

1. Introduction

Virtual idols originated in Japan and have a history of more than thirty years. It is different from real and objectively existing real idols, which are media stars (Black, 2008) generated by computer technology. The heroine "Akimi Hayashi" in the anime work "Chrono Fortress" launched in Japan in 1984 is considered to be the world's first virtual idol (Kong, Qi & Zhao, 2021). In recent years, virtual idols have developed rapidly except in Japan and China. For example, South Korea and Spain have VOCALOID with exclusive sound sources. At present, the academic research perspective on virtual idols is multi-faceted, such as fan economy, new media cultural communication, and subculture. In 2007, VOCALOID's "Hatsune Miku" became the first phenomenal virtual idol, and the combination of electronic singing synthesizers and anime characters made it popular all over the world (Sousa, 2016). There is no doubt that virtual idols have been closely associated with youth subcultures such as anime, electronic music, doujin, and otaku since their inception (Anderson, 2021; Han, 2020; Sousa, 2016), and contain a variety of popular culture elements, and have become representatives of youth pop culture in East Asia and around the world. As a neighbor of Japan, China is deeply influenced by Japanese popular culture, such as Japanese anime, electronic music, cosplay, Lolita, etc. are all influential among Chinese young people (Wong & Lee, 2021), virtual idols, as a collection of multiple subcultures, cater to a variety of Japanese pop culture fans at the same time, and soon gained a large number of fans in China.

The virtual idol character setting is simple, leaving fans more space to participate and creative ideas, so a creative method based on UGC (User-generated content) has been formed. In addition, the creation and dissemination of virtual idols rely on computers and Internet platforms, such as Japan's Niconico website and China's Bilibili website are important platforms for the dissemination of virtual idol works, which gather a large number of fans, video and audio creators of virtual idols. Fans socialize and share information through online platforms, forming a large-scale online community of fans, and virtual idols have become a new communication medium or a new form of media with their own fan groups (Yu & Yang, 2020; Han, 2020). The use of virtual idols for content dissemination can quickly influence fans, and the content disseminated can also be quickly noticed and recognized by fanbase (Yu & Yang, 2020).

According to I Research's report on China's virtual idol industry released in 2022, the main body of China's virtual idol fan base is post-90s and post-00s youth, and the influence of virtual idols among Chinese youth cannot be ignored. The media

characteristics of virtual idols and the large group of young fans have attracted the attention of China's mainstream media and government, who use virtual idols as a carrier to spread contemporary Chinese mainstream culture to fan groups, such as creating musical works by adding mainstream cultural ideas to song lyrics, and inviting virtual idols to perform on national mainstream TV stations. This not only makes the subculture of virtual idols gradually adopted by mainstream culture, but also has a profound impact on the youth identity of the fanbase community.

2. Definition of Terms

2.1 Virtual Idol

In recent years, virtual idols have developed rapidly, and new forms of virtual idols have emerged one after another, such as VTuber (virtual YouTuber), virtual singers and virtual anchors, and virtual idols have become an emerging media form and entertainment method in the era of media integration (Song, 2017; Wang, 2022). Although the current communication influence of virtual idols is gradually increasing, due to its rapid change speed and diverse forms, the current definition of virtual idols in the academic community is not uniform. Aiming at the research objects and problems, this paper draws on the research of previous scholars to define virtual idols as anthropomorphic avatars based on speech synthesis systems and using emerging media technologies such as digital reproduction and holographic projection to have the functions of music creation, stage performance, commercialization and real-time interaction in online and real scenes.

2.2 Mainstream Culture in China

The mainstream culture is the core culture advocated by a society and era. The connotation varies from country to country and at different times (Feng, 2014). Mainstream culture can also be called "guiding culture" in English, "leading culture" or "dominate culture", and "Leitkultur" in German, translated into French as "culture de reference" or "culture enracinée", It has diverse forms of expression and connotation levels in the complex political tradition of various countries. In contemporary times, every democratic country has its own dominant culture (Bao, 2018). The author believes that China's mainstream culture can be defined as a general term for a type of culture that conforms to mainstream popular culture and values with socialist culture with Chinese characteristics as the core and relying on mainstream media to promote and convey.

3. Background of Research

In fact, China's local virtual idol has been influenced by China's mainstream media since its birth. In 2011, at the animation award ceremony of the China Culture and Art Government Awards, Chinese mainland first virtual idol "Dongfang Zhizi" appeared on the stage of state media. However, as a singing-based virtual idol, Dongfang Zhizi does not have an exclusive sound source. In addition, it fell into a plagiarism storm because its appearance resembled that of Japanese virtual idol Hatsune Miku. Although Dongfang Zhizi was not a success as China's first virtual idol, it still laid the foundation for the development of virtual idol and music in China. In the same year, Yamaha Corporation of Japan officially launched the Vocaloid China Project, the first Chinese vocal library produced by the VOCALOID. Meanwhile, China's first self-developed Chinese sound bank, NIAONiao Virtual Singer, was released and sold. As more and more Chinese sound banks become available, more Chinese musicians are beginning to use virtual idols for music creation.

With the popularity of Chinese sound bank, music and fan works related to Chinese virtual idols began to appear in large numbers on the Chinese Internet, attracting many young people and ACG enthusiasts to become fans of virtual idols. In 2012, China's first local phenomenal virtual idol Luo Tianyi was born, Luo Tianyi is the world's first virtual idol based on the VOCALOID Chinese sound database. It is worth mentioning that Luo Tianyi is closely related to Chinese mainstream culture from character setting to post-operation, and Chinese national television once positioned her as a 15-year-old girl who loves Chinese traditional culture. Judging from her image, her hairstyle belongs to a classical Chinese bun, with Chinese knots and jasper jewelry with Chinese characteristics, and her name also comes from the goddess "Luoshen" in ancient Chinese literature. According to the author's online field observations, up to now, there are 106,000 videos related to it in the "Luo Tianyi" network section on the Bilibili website, with a total of 2.08 billion views. As a result, Luo Tianyi, a local Chinese virtual idol with a huge work and fan base, quickly attracted the attention of Chinese officials and media, not only appearing on Chinese national television many times, but also interacting with official media accounts on the Internet, and was called "good singer of the party", the "party" refers to the Chinese Communist Party .

At present, the most popular virtual idol group in the Chinese is the Vsinger team, which in addition to Luo Tianyi, there are many virtual singers with hundreds of thousands of fans such as Le Zheng Aya and Yan He. According to the author's online observations, Chinese state media accounts have repeatedly used the Vsinger team on online platforms for songwriting, and the content of their songs is to convey to Chinese youth the relevant concepts of loving the country, supporting the Communist Party of China and Chinese culture. In short, Chinese officials and media use virtual singers

as the medium to promote mainstream culture, which not only realizes the benign interaction between mainstream culture and young fan groups, but also makes virtual idols gradually fade the label of niche subculture and subtly spread Chinese mainstream culture to young people.

4. Literature Review

4.1 Virtual Idol Subculture

At present, it is generally believed that the rise of virtual idols is closely related to the Japanese otaku born in the 80s of the 20th century (Anderson, 2021; Taneska,2009; To,2014). As a subcultural group that emerged with Japanese anime and modern information technology, otaku have a common psychological foundation and a specific lifestyle, such as long-term obsession with anime, cartoons, games and other related products, thus constituting a character-centered subculture (Nozawa, 2016). The simple role setting of virtual idols gives users a high degree of content production power and imagination, and attracts multiple niche youth subcultural groups such as otaku with its subversive and marginalized characteristics (Sun & Jin, 2022).

In the study of subcultures, the interpretation of "style" is crucial (Hebdige, 1979), as the scholar Hall and Jefferson (2006) put it: "The interpretation of style is actually the interpretation of subculture". ZhaoYiyang (2020) believes that the virtual idol subculture style is reflected in many aspects such as anime-style characters, work expressions, and musical styles, and the construction of core styles is realized through its unique musical style. Subcultural groups use the appropriation and collage of different symbols to explore the "nomadism" and "poaching" qualities of the text(Jenkins, 2012). Since virtual idols "fandom" have greater content production rights for their idols, it is more likely to poach and appropriate various symbols in a nomadic manner, and creators combine branches in different cultures in the creative process and give them unique meanings, establishing the group order of the subcultural group of virtual idols in the process of deconstruction and reconstruction (Sun & Jin, 2022).   Ren Tianyu (2022) believes that virtual idol subculture is a new way for subcultural groups to express their demands individually with the blessing of technology. Most of the virtual idol subcultural groups have different cultural identities, they are grouped together by the same hobbies to form a loose new tribe connected by fun, and the creation and interpretation of virtual idols are full of individualism, and they resist loneliness, satisfy imagination and release emotions in the virtual constructed relationships and symbols.

Although the virtual idol subculture has been defined as "deviant" behavior by mainstream culture for a long time, most scholars currently believe that the virtual idol subculture group does not have strong resistance, and under the influence of the wave of consumerism, the emergence of new technologies, postmodernism and other factors (Zhao, 2020), the virtual idol subculture gradually lacks some deconstruction and resistance to authority, avoiding the direct conflict with mainstream culture. Under the penetration of culture and capital, the virtual idol subculture has gradually been adopted and disciplined by mainstream culture and business (Ren, 2022).

4.2 Virtual Idols and Fans

Through literature combing, it can be found that in the past virtual idol research, scholars have paid attention to the importance of fans as the subject, and believe that the interpretation works and images of virtual idols mainly rely on the highly autonomous content production of fan groups (Li & Chen, 2018). Even treat virtual idols as a kind of fan co-creation behavior under the authorization of the structure (Yao, 2022). Mililot (2017) points out that the success of virtual idols stems from the company's transfer of the creative rights to virtual idol images and content, turning them into a hub for fans to co-create, which fans can modify and control at will (Black, 2012), and add all their fantasies about idols to this creative process (Finan, 2023). Virtual idol fans not only make songs for their favorite virtual idols, but also create novels, manga, dances, and videos for them, among others. At the same time, virtual idols will also interpret the works created by fans, strengthening the motivation of virtual idol fans to create (Ye, 2021).

According to John Fiske (2006), fans are not only "perfect consumers", but also "productive" consumers. As creative users, fans actively intervene in the production of virtual idols, transforming from "poachers" and "nomads" produced by previous texts to more righteous producers (Song, 2019). On the one hand, fans with a high degree of autonomy broaden the text of virtual idols (Kobayashi & Taguchi, 2019). On the other hand, in actively participating in the creation of virtual idol content, the fan group establishes a close social interaction relationship (Zhang, 2019).

Relying on new media production technology and communication platforms, virtual idol fans have established many fan virtual communities, and promoted the communication and interaction of fans in the community through the production and interpretation of regenerative texts (Li, 2018). Fans of virtual idols do initially gather due to interest, but when fans enter the corresponding community, "idol worship" will be further amplified, thereby stimulating more emotional energy and resonance, and enhancing the emotional stickiness between virtual idols and fans (Zhang, 2018).

Within the community, fans can get some emotional satisfaction and community belonging (Bai, 2021). While participating in the production of virtual idol content, fans will also have a sense of identification with the value

orientation embodied in virtual idols (Yu & Teng, 2021). At the same time, in the process of this interaction, it also deepens the self-identity and collective identity between fans, which in turn has a more positive impact on the interaction of virtual idol fans (Zhang, 2019).

5. Theoretical Framework

5.1 Post-subcultural Theory

The concept of post-subculture was first proposed by Redhead in 1990 to illustrate the complex phenomenon of youth subculture in the postmodern context. In 2000, Muggleton proposed a relatively systematic post-subculture theory, arguing that contemporary youth culture is no longer the product of the "class antagonism" emphasized by the Birmingham School, but a reflection of the individualization and individual choices of the youth group. Compared with the perspective of subculture research represented by the Birmingham School, "post-subculture" has the following three characteristics: First, the participants of the subculture no longer have a clear and sharp confrontation with the mainstream culture, but pursue their own existence and value as "aliens". Secondly, in post-subcultural research, subcultural groups show obvious mobility and variability, subculture participants are no longer purely attached to a specific group, and the ability of subcultural groups to control individuals is weakened. Finally, early subcultures use symbolic forms to construct a distinction from mainstream culture, showing a distinct stylization, while traditional stylistic concepts are being deconstructed in post-subcultures. With the development of society, especially the emergence and rise of the Internet, the postmodern personality of the current youth group with multiple identities has also shown more postmodern characteristics such as heterogeneity, fragmentation and individualization. The online fan groups of Chinese virtual idols that this study focuses on are in line with the characteristics of youth subcultures in the postmodern context. Therefore, the theoretical perspective of post-subculture can provide certain theoretical support for the identity research of Chinese virtual idol fan groups.

5.2 Identity Theory

At the end of the 60s of the last century, American scholars Sheldon Stryker and others explained social behavior based on the interaction between self and society on the basis of microsociology, thus proposing an identity theory with "role identity" as the core. The so-called "identity" is the individual's answer to "who I am", and there will be multiple answers to this question. Individuals in social life have a variety of role positions, and the identification with each role contains the individual's interpretation and expectation of self. Giddens (1991) theorized about self-identity in his book Modernity and Self-Identity: Self and Society in the Late Modern Age. Self-identification is "the self as the individual reflexively understands it based on his personal experience, which is not given and is the result of continuity as an individual's system of action." Individual identity is not found in behavior or in the reactions of others, but is carved out in maintaining a particular narrative process(Giddens,1991).

From the above theory, it can be seen that identity has the characteristics of sociality, selectivity and pluralism, which is not static, but in a dynamic construction process. The identity construction of the virtual idol online fan group that this study focuses on is also constantly constructed and reconstructed in the process of interaction between the individual and society. Therefore, identity theory can provide strong theoretical support for interpreting the construction and flow of virtual idol fan group identity.

6. Limitation & Reflections

Since this is an empirical qualitative study, the research conclusions drawn are based on observational and dialect-based evidence, i.e. observations and interviews from the online lives of fans of virtual idols. The following are the restrictions and reflections while conducting interviews and processing data in this study. Due to the method of deep semi-structured interviews, only 10 informants were interviewed due to the time consummation, so there is a disadvantage of a small sample size, so it cannot represent a wider range of people. Therefore, the generality of its conclusions is also limited.

6.1 Trust

Because the informant communicates through the Internet, the informant has some concerns about the purpose of this study and the confidentiality of the data provided (such as online chat records and photos). Some informants are unwilling to show their true colors during online interviews and choose to communicate while wearing masks or face shields. Therefore, it is important for informants and whistleblowers to establish mutual trust. Interviewers need to spend more time building trust with informants to increase the credibility and authenticity of the information obtained.

6.2 Accurate Transcriptions and Interpretations

In qualitative research, since the researcher himself serves as the research tool, there is inevitably a certain degree of personal subjectivity in the analysis and interpretation of data. There is likely to be bias in understanding between the

researcher and the informant, so the accuracy of data transcription and interpretation is a big problem. According to McManus (2003), researchers need to become the most trusted interpreters for informants by carefully reviewing and checking coding techniques to achieve better interpretations and more accurate data analysis. However, due to the specific subcultural terms in many virtual idol fan groups, it will lead to some understanding deviations in different contexts.

6.3 Ethical Concerns

In practice, it is difficult to determine whether the use of data is ethical when observing online in a virtual ethnography. For example, online fanbase often publish some of their opinions and comments about virtual idols on the Internet, which are often in the form of text or pictures. Although data and information from public websites should be open to the public, when using these data, informed consent must be obtained to fully protect the privacy of the informant. In order to avoid ethical issues in the study, informed consent was obtained in advance. After the interview is transcribed and the manuscript is completed, it is sent to the informant with full respect for the informant.

7. Methods and Data Collection

This study adopts qualitative research, specifically using the research method of virtual ethnography. Data sources mainly come from online participant observation and online interviews.

The research field of online participant observation is the Chinese video-sharing website Bilibili. Bilibili was established after the Japanese barrage video website Niconico. It is currently the most influential online distribution center for ACG culture in China and a platform for cultural dissemination and exchange among contemporary Chinese youth (Yin & Fung, 2017). Bilibili is also the most important virtual idol creation and release platform in China and the largest virtual idol fan community (Kong & Zhao, 2021). There is a special category called "VOCALOID-UTAU" for virtual idol music in Bilibili. As of early February 2024, over 10 million virtual idol music videos have been released on this platform.

The purpose of online observation is to enter the online life of the fan group through the Bilibili fan online community. The Bilibili online platform gives fans a variety of ways to interact online, such as commenting in the comment area of virtual idol music videos, barrage, etc. It is also possible to disseminate information about idol activities by updating personal status, chat windows, and online links, and fans can express their identity through these actions. The data are compiled from a year-long (from February 2022 to February 2023) virtual ethnography that included systematic observation of the activities of 10 fans on Bilibili and direct follow-up contact through semi-structured interviews.

Every participant willingly provided their consent to take part in the interview. Each participant was assigned a unique code name during the research report's preparation phase (F1, F2, F3, …F10). Transcriptions and records were meticulously encrypted and stored in a secure file.

Table 1. Respondent's personal information

Participant	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
Age	23	19	21	22	24	18	21	20	25	20
Gender	Male	Male	Female	Male	Male	Female	Male	Male	Male	Female
Fandom (year)	7	6	5	6	10	4	7	3	9	4
Membership in Fanbase Community (year)	7	4	5	6	10	4	6	3	7	4

Participants and interviewees were primarily obtained through recruitment within the fan community, and informed consent was obtained from the participants, which allowed their daily online activities to be observed. Participants' updates on the website were visited every few days, and the researchers also visited virtual idol-related pages subscribed by participants. Participants' online activity data on the website, such as likes, favorites, and comments, are all taken into account.

Timeline posts are considered to be related to virtual idols if they explicitly mention attitudes toward idols, including virtual idols' music and activities, advertisements, games, animations, etc. Researchers recorded observations through field notes, screenshots, participants' posts, and comments, and saved external web pages that participants shared or linked to on Bilibili. Based on data collected from online observations, the researchers developed specific interview questions. The content of the interview outline is sent to the interviewee by email before the interview. The purpose of the interview is to answer the research questions and main content of the study, and the selected interview questions include:

1. Why did you join an online fan community?

2. What do you think of the collaboration between virtual idols and mainstream media?

3. Which virtual idol music work or stage performance with Chinese mainstream cultural characteristics is the most impressive to you? And how did it affect you?

The feedback from participants was recorded and carefully transcribed into the transcript verbatim for further analysis.

8. Data Analysis

This article uses thematic analysis (TA) method to code the content of the interview. According to Nowell et al. (2017), the TA method involves six iterative and reflective processes. They are: familiarization, initial code generation, topic identification, topic review, topic naming, and report writing.

First, the researchers familiarized themselves with the interview by listening to the recorded voice data multiple times. Second, the initial code is generated by transcribing the interview transcript verbatim and analyzing the written content. Each member of the research team receives a verbatim written copy of the interview and generates a code for it. After a thorough discussion by the research team, the codes for the first interview question were constructed: interest, communicate, identity, escapism.

The initial codes:

I.   **Like**: The criteria were developed based on one interviewee speaking. When asked why you join an online fan community, give a short but easy-to-understand answer. His statement is as follows:

Just because I like it.(F4)

In addition, three interviewees mentioned similar views.

Because I like it, I want to know more about it.(F2)

Of course, it's because I like Luo Tianyi, and because I like her, I've done a lot of things.(F6)

I didn't think much about it at first, maybe I just wanted to join because I like virtual idols.(F7)

II.   **Love**: This reason was highlighted by some participants during the interviews, with F3 and F8 elaborating on the following statements:

Love is the beginning of everything, and joining a community is the same. (F3)

I especially loved listening to "Tian Xing Jian" at that time.(F8)

III. **Favorite**: F1 gave the answer as follows：

Virtual idols have always been my favorite and I am definitely going to join the community.(F1)

IV.   **Latest news**: F5 believes that he joined the online fan community because he wanted to know more news about virtual idols. F6 described she thoughts：

Ten years ago, it was not as easy to get news about Luo Tianyi (virtual idol) as it is today. You had better join a community to ensure that you get the latest news about the idol as quickly as possible.(F5)

V.   **Information exchange**:F4 said that exchanging information with other fans is another reason why he joined the fan community.

After all, after joining the community, you can exchange the latest idol information with others.(F4)

VI.   **Learning**: In addition to being a fan, F10 is also a creator of virtual idol music. She mentioned that the reason why she joined the fan community was because she wanted to learn some knowledge about virtual idol music creation in the community.

I especially liked using virtual idols to create music, but I had never learned any related music creation, so I wanted to join the community and see if there was anything I could learn.(F10)

VII. **Find an organization**：When talking about his feelings after joining the community, F7 added：

If you want to find people like you, joining a fan community is like finding an organization, where you can find many people like you. (F7)

VIII. **Like-minded**：Finding some people who have the same interests as him through fan communities is also the original intention of F5 to join the fan community.

At first I thought it was cool to like Yan He (virtual idol) because there were almost no classmates who were like my idol in the class. After joining the community, I found that I was not alone, there were many like-minded people, and I was very happy. (F5)

IX.   **Make friends**：   Interviewee F2 said that because he could not find anyone with the same hobbies as him in life, he wanted to make friends through fan communities.

I want to make some friends who have the same hobbies as me.(F2)

X.   **Spiritual sustenance**：   F6 believed that her parents did not understand the subculture of virtual idols at the time, and they were very opposed to her hobby, so she chose to join the fan community to gain some recognition.

I think the fan community is my spiritual sustenance and a utopia in my imagination that cannot exist in real life. Because at the time my parents didn't understand why I was obsessed with anime characters.(F6)

XI.   **Self- space.** F10 described his psychological state when joining the fan community. The pressure of study and life led him to want to join an online community to relieve stress.

I was in high school at the time. Due to the pressure of the college entrance examination, I lived a very depressed life every day. Joining the virtual idol fan community makes me feel like I have a self- space where I can relax temporarily.(F10)

The third stage of TA method is to find the theme (Nowell et al., 2007). During this stage, the constructed code is analyzed and arranged in consistent patterns, forming various themes. Starting from the second stage, 11 initial codes were built. The codes were then analyzed and similar codes were grouped under a theme. Researchers started the process by creating diagrams to decipher codes and make connections between themes. Through this process, four distinct themes were developed. The themes are: interest, communicate, identity, escapism.

(1) Interest. The theme is composed of several codes :like, love, and favorite.

(2) Communicate. The theme consists of several codes: last news, information exchange, and learning.

(3) Identity. The theme consists of several codes: find an organization, like-minded, and make friends.

(4) Escapism. The theme consists of several codes: spiritual sustenance, self- space.

The fourth stage of the TA approach requires a thorough examination of the identified themes. This stage involves a recursive process in which the initial themes are critically evaluated in conjunction with the coded data and the entire data set to ensure that the data contained therein exhibit meaningful interrelationships and that they are clearly distinguishable from each other. In this case, all codes and themes considered in this study were presented to relevant experts for review and validation.
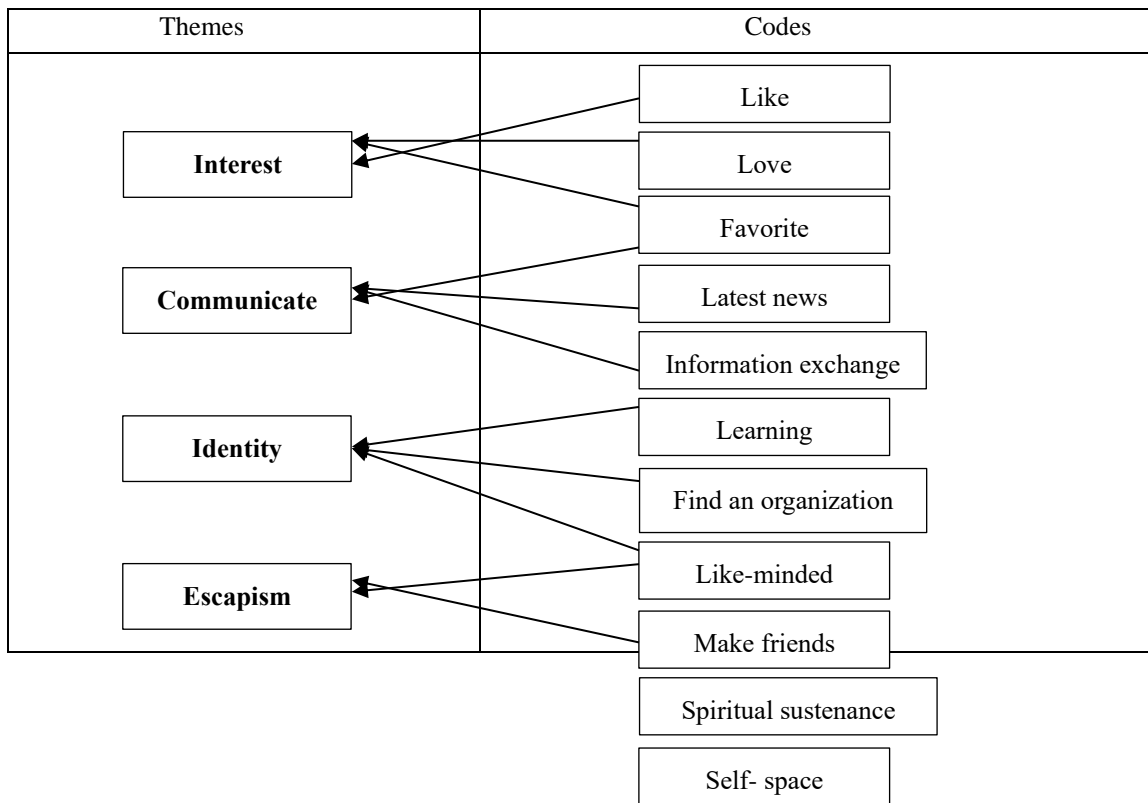

Figure 1. Illustrates the formulated themes and codes

Regarding the analysis of the responses to the second interview question, the same procedure as for the coding of the first interview question was followed. The code for the build is as follows: happy, unbelievable ,exciting, win-win, good publicity, nothing wrong.

The initial codes:

I.   **Happy**：According to the data obtained from the interviews, many fans are happy to see their idols cooperate with mainstream media. F8 is very happy about the cooperation between virtual idols and the media. Similar comments can also be seen in the answers of netizens F3 and F6.

I'm happy to see the cooperation between them.(F8)

I am very happy that my idol can be taken seriously by the mainstream media.(F3)

I believe that most fans are like me, they are very happy to see virtual idols can cooperate with mainstream media. This is a kind of national recognition of ACG culture.(F6)

II.   **Unbelievable**: When a virtual idol that is a niche hobby appears in the public eye through mainstream media, some fans think it is unbelievable.

In fact, when I first heard that Luo Tianyi was going to attend the Spring Festival Gala, my first reaction was unbelievable. I couldn't believe that niche virtual idol culture could enter the public eye.(F2)

The cooperation between virtual idols and mainstream media is unbelievable.(F5)

III.   **Excited**: When an idol appears in mainstream media, it means to fans that the country recognizes their idol, which makes them extremely excited.

At that time, this news appeared, which caused a sensation in the entire fan community, and everyone was very excited.(F9)

When I saw Luo Tianyi appear on the national TV stage, I was very excited and wanted everyone around me to know the good news.(F1)

IV.   **Win-win**: Based on its own experience, F10 talked about its views on the cooperation between virtual idols and mainstream media.

I would call it a win-win move. Not only have more people learned about virtual idols, but it has also given our fan base more respect. Before this, many people would not understand virtual idols and thought it was meaningless to like an idol that does not exist.(F10)

V.   **Good publicity**: The cooperation between mainstream media and virtual idols is considered to be a mutual promotion function. It not only helps the promotion of virtual idols, but also makes fans of many subculture groups begin to pay attention to national culture.

I think it is a good publicity for the country and allows many fans to understand the history of the country. Of course, for virtual idols, being able to cooperate with mainstream media is also a good publicity opportunity.(F4)

VI.   **Nothing wrong**：F7 said that they had not paid much attention to the cooperation between mainstream media and virtual idols before, and they lacked a certain political sensitivity.

There's nothing wrong with that, although I usually don't pay much attention to these, I just like to listen to their (virtual idol) music.(F7)

After careful review of the codes generated regarding the second interview question, it is clear that the synthesis of the four key codes - happy, unbelievable, excited, win-win, good publicity and nothing wrong can be seen as the fan base's response to mainstream media versus virtual I am psychologically supportive of idol cooperation and believe that it can bring about a series of good effects. This code passes the requirements of Part 4 of the TA model. The generated code was thoroughly explored by the researchers and approved by relevant experts.

（1）   **Support.** The theme is composed of several codes :happy, unbelievable, and excited.

（2）   **Favorable.** The theme consists of several codes: win-win, good publicity, and nothing wrong.
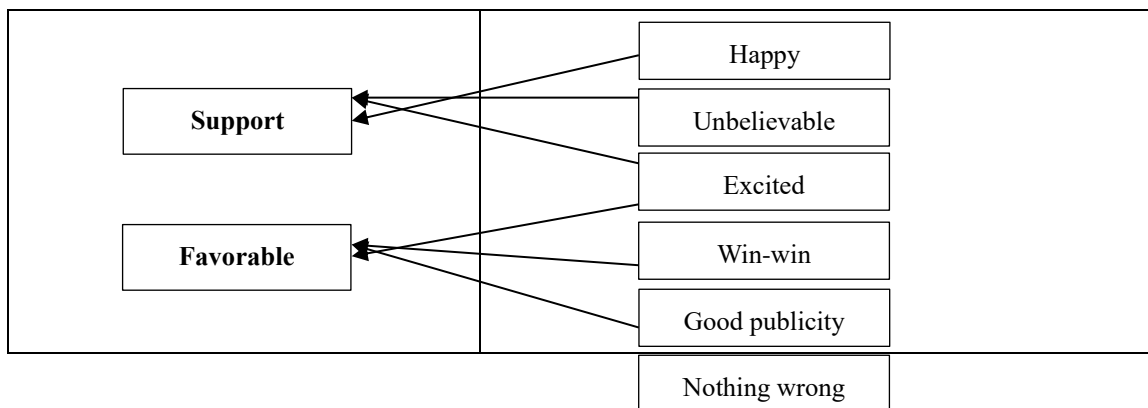
Figure 2. Illustrates the formulated themes and codes

When talking about the third question, the musical works or stage performances of collaboration between virtual idols and mainstream media that left the deepest impression on the informants, 4(F2，F4，F7，F10) of the 10 respondents mentioned "Tian Xing Jian", 2(F1，F9) mentioned "Di Shi Kun", and 2(F5，F6) mentioned the Spring Festival Gala, and 2(F3，F8)respondents discussed Luo Tianyi's cooperation with Peking Opera masters and virtual singers' cooperation with the Beijing Winter Olympics. The works mentioned are collected in Table 2.

Table 2. Interviewees mentioned the collaborative of virtual idols and mainstream media

Title	Time	Collaborator	Description of Content
Tian Xing Jian	2017	Communist Youth League Central Bilibili website account	The theme song of Made in China Day 2014, sung by virtual singer Luo Tianyi, uses a large number of Chinese historical classics to express the Chinese nation's unremitting spirit of self-improvement and tenacious struggle.
Di Shi Kun	2019	Communist Youth League Central Bilibili website account	It is a tribute song to celebrate the 70th anniversary of the founding of the People's Republic of China, sung by all Vsingers, the lyrics express the outstanding achievements in national construction, economy, culture, science and technology since the founding of the People's Republic of China, and express a strong spirit of nationalism and patriotism.
Listen to Me	2021	China Central Televison(CCTV-1)	This is a song written for children, sung by virtual idol Luo Tianyi and singer Wang Yuan and host Wang Hao, the lyrics are mainly to promote the traditional Chinese virtues of resource conservation, hard work and bravery, and love of labor to children.
Danyuan Ren Changjiu	2018	China Central Televison(CCTV-3)	Composed of ancient Chinese poetry (Song Ci) as the lyrics, this work is sung by Luo Tianyi and Wang Peiyu, a master of Chinese Peking Opera, expressing the aesthetics of traditional Chinese poetry and promoting traditional Chinese culture to the audience.
Time to Shine	2022	Beijing Organizing Committee for the 2022 Olympic and Paralympic Winter Games & China Federation of Literary and Art Circle	The lyrics of this work use both Chinese and English, showing China's enthusiasm for the people of the world through the Winter Olympics, and expressing good wishes to the participating athletes. The Olympic spirit of peace, unity and hard work was promoted to the audience.

When asked about their views on these musical works and musical events in the third interview question, their answers revealed a strong sense of national identity. Below is the code for the fan reply. The coding of TA still follows the secondary coding process, striving for the scientific nature of data analysis and the correlation between questions.

The initial codes:

I.   **Pride**: This code includes the expression of fans' pride in their country and the emotion of being proud that their idols can be recognized by official and mainstream media.

I am very proud of these achievements shown in the music video.(F3)

From "Tian Xingjian" I saw the past struggle of the Chinese nation. As a Chinese, I feel very proud.(F4)

I'm proud to have my idol on national television.(F6)

As a fan, I feel very proud to see my idol working with the Communist Youth League Central Committee.(F6)

II.   **Inspiring**: The code was primarily informed by people speaking from a musical perspective who found mainstreaming virtual music melodies and music videos to be very inspiring.

The combination of touching images and catchy musical melody in the video is very inspiring.(F2)

After listening to it, I was very inspiring. This has never been seen in previous virtual idol music works.(F4)

III.   **Moved**: Mainstreaming virtual idol music is often released in conjunction with video images. Music videos such as these often use touching historical events to achieve the purpose of touching people's hearts.

To be honest, after watching "Di Shi Kun" music video, I was very moved and I still want to be Chinese in my next life.(F9)

IV.   **Traditional music**: In the virtual idol music created by mainstream media, elements of traditional Chinese music are often used, which not only enhances the national character of the music, but also conveys a national identity to the audience.

There are elements of Chinese opera in this song, and I happen to like traditional music.(F5)

I think "Di Shi Kun"is a Chinese-style song, and China needs more such creations now.(F1)

V.   **Chinese classical literature**: Many of the lyrics sung by virtual idols come from Chinese classical literary works, including ancient poems, allusions, myths and legends, etc.

This song (Danyuan Ren ChangJiu)uses my favorite ancient Chinese poems, which once again deepened my love for Chinese classical literature.(F3)

VI.   **National history**: Many virtual idol music videos created by mainstream media emphasize the history of the Chinese nation and build the audience's cultural confidence through the long cultural and historical context.

"Tian Xing Jian" reviewed the five thousand years of struggle of the Chinese nation and gave me a deeper understanding of the country's history.(F10)

VII.   **National hero**: National heroes as well as important politicians and scientists will also appear in narrative form in the lyrics.

The lyrics describe many national heroes, such as Dayu and Shennong. I have admired them very much since I was a child.(F2)

VIII. **Diligence and thrift**: This code, like the following two codes(barve and love peace), is mainly expressed through the theme of the lyrics. The purpose is to promote some traditional Chinese virtues to fans and promote social harmony.

Although this song(Listen to Me) looks like a children's song, it expresses the traditional virtues of diligence and thrift of the Chinese nation.(F3)

IX.   **Brave.**

This work(Tian Xing Jian) praises the brave character of the Chinese people who never bows in the face of difficulties.(F7)

X.   **love peace.**

"Time to Shine" expresses the Chinese people's friendship and enthusiasm for the world. We have always been a peace-loving nation.(F8)

XI.   **Socialist core values**: Some songs enhance listeners' identification with the socialist system with Chinese characteristics by describing China's progress in politics, economy, culture and other aspects since the implementation of the socialist system.

I think the cooperation between these mainstream media and virtual idols is undoubtedly to convey more core socialist values to us young people who seem to be addicted to the online world. However, I cannot deny that by watching these music videos, I have indeed deepened my identification with the core values of socialism.(F5)

XII.   **Strengthen belief**: Such songs are most common in musical works created by Chinese state media, such as "Di Shi Kun", a song released to celebrate the 100th anniversary of the birth of the Communist Party of China. This code was also obtained from informants talking about their feelings about the piece.

"Di Shi Kun" introduced us to the main historical events since the founding of the Communist Party of China, as well as some of the historical achievements made by the Communist Party of China, which strengthened my

belief in supporting the party.(F6)

(1) National Pride. The theme is composed of several codes :pride, inspiring, and moved.

(2) National Culture. The theme consists of several codes: traditional music, Chinese classical literature, and History.

(3) National Spirit. The theme consists of several codes: national hero, diligence and thrift, brave, and love peace.

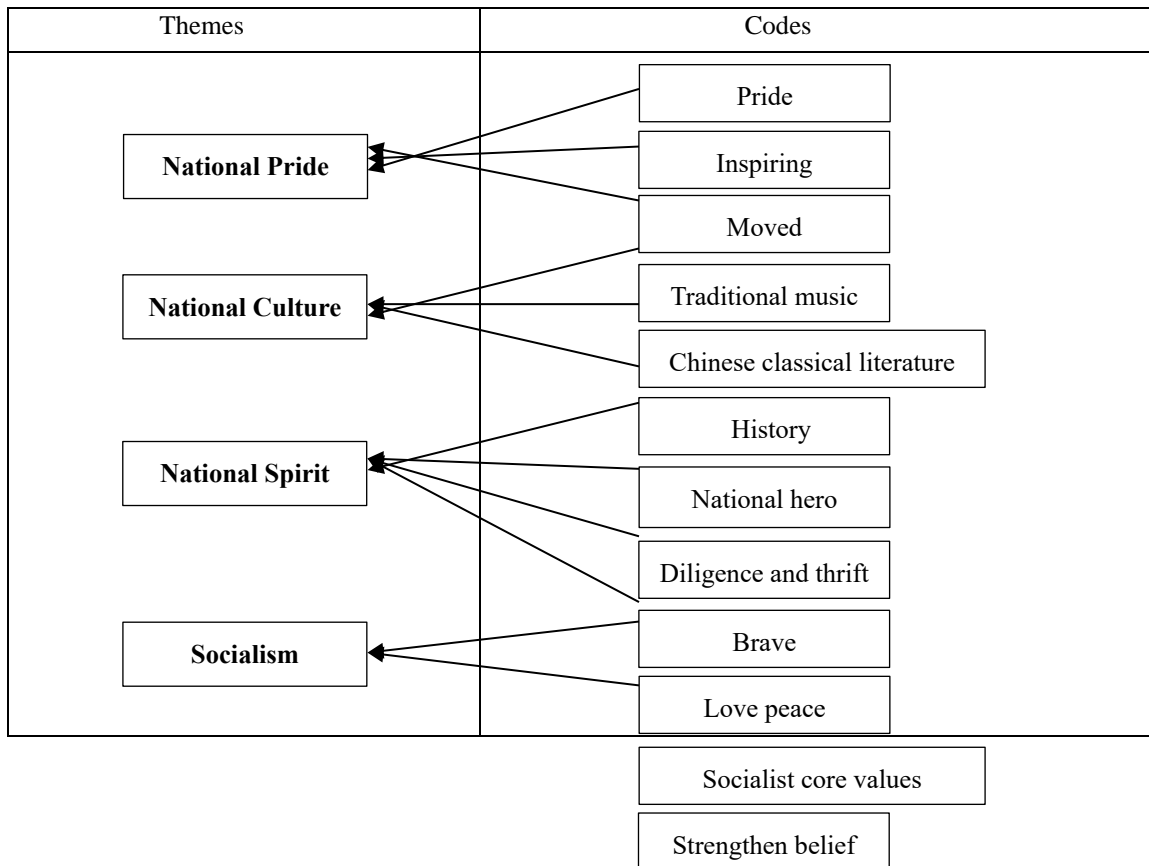**(4) Socialism.** The theme consists of several codes: socialist core values, strengthen belief.

Themes	Codes
National Pride	Pride
	Inspiring
	Moved
National Culture	Traditional music
	Chinese classical literature
National Spirit	History
	National hero
	Diligence and thrift
Socialism	Brave
	Love peace
	Socialist core values
	Strengthen belief

Figure 3. Illustrates the formulated themes and codes

8. Discussion

Interest-based Engagement as Fanbase Identity

From the above data analysis, it can be seen that the initial group of virtual idol fans joined the community mainly to establish an identity based on interests. As an interesting group, the early virtual idol online fan community has obvious characteristics of postmodern online youth subculture. The traditional subculture theory represented by the Birmingham School believes that stable subcultural identity is formed by fixed social relationships and class boundaries. However, the identity of the virtual idol fan group shows obvious fragmentation and decentralization characteristics, and does not have fixed social class relationships and continuity of historical significance. The identity representation of virtual idol fans can be simply divided into two types: recognition of the virtual idol's style and projection of their own emotions. Therefore, what maintains the existence of a loose and interesting group is the shared emotional experience of internal members.

Under the influence of new media and new communication platforms, identity begins to fragment, and as Giddens argues, the process of separation also contains a certain element of association, "distant events may become familiar, or more impactful than direct influences, they may be fully integrated into the framework of personal experience". In the current common needs and expressions of modern people, they often yearn for separation and cohesion, and people not only seek individualized characteristic expressions that are different from others, but also desire to gain a sense of identity and support from others in the group. As F7 says:

I initially thought it was cool to like Yan He (virtual idols) because there were almost no classmates in the class who were the same as my idols. After joining the community, I found that I am not alone, and there are many

people who share my hobbies, and I am very happy. (F7)

Personal identity presents new and complex characteristics in the context of the Internet, this behavior is no longer limited to offline activities, but more concentrated on the Internet platform, social media platforms provide a place for new identity and emotional satisfaction, more and more people take personal interests, emotions, etc. as the starting point to seek inner satisfaction. As a result, a large number of interest groups arise, often based on individual common interests and values. With the globalization of information, regional differences have been weakened, differences between groups have been broken, and "scenes" have established interesting relationships with common interests and value orientations. Networking interest groups are information exchangers and sharers who gather in online virtual communities. Virtual idol fans connect through the Internet, and are accustomed to holding various support or production activities on the Internet, and exchange resources and share information on major social network platforms.

Through online observation, it was found that fans come from various provinces in China and play many other roles in life, such as students, company employees, children, etc., which are not related to each other, and these people are difficult to gather together in real life. However, joining a fun-based online community gives fans a sense of identity and belonging.

Beside, as a young generation deeply affected by the Internet, they often have special feelings about the online world, and it is difficult to find a similar environment in reality. In real life, many virtual idol lovers' parents, teachers, and even classmates around them have an attitude of not understanding or even accepting their emotional preferences. When they mention that their idol is an anime virtual, they often receive a puzzled reaction. Because virtual idols seem to be an incredible existence for people outside the fan group, many idol fans are regarded as "marginal people" in mainstream society. As F4 said in the interview:

Most of my friends and classmates like film and television stars or K-pop's boy and girl groups, and it is difficult for them to understand my feelings for virtual idols, and some classmates even bluntly say that my idols are just a software.(F4)

However, for each individual, self-identity and the search for self-meaning are natural emotional needs, especially for the fan base of virtual idols. Based on the particularity of virtual idol fans, these group activities can make it easier for fans to obtain emotional identification and self-satisfaction in fan groups.

I think everyone is very happy together, I like the feeling that everyone has a common hobby, I always feel that the things we like together can be persistent, I will feel more satisfied, or I hope that the things I like are recognized. (F6)

We also need to answer a few simple questions before joining the community, and the administrator feels that we can answer before we can enter the community, and we must follow various community rules after coming in to ensure that no anti-fans come in .(F10)

From the interview of F6 and F10, it can be seen that the virtual idol online fan community has established, which has established a community organization centered on virtual idols through this summoning, gathering, and strengthening individual fans, providing conditions for the creation and development of virtual idols. In addition, the access mechanism and internal rules of the fan community also lay the foundation for the unity of the group. As Hall describes in Ritual Resistance, for subcultural groups, they fully develop the social rituals of life within the group, such as group concerns, conventions and taboos, and on this basis, gain the recognition and affirmation of the group, and express the collectiveness of their existence as a group.

Chinese National Identity

It can be seen from the data analysis that the fan group psychologically supports the cooperation between virtual idols and mainstream media, believing that the cooperation between the two parties will achieve some benefits that are beneficial to each other. Moreover, the cooperation between mainstream media and virtual idols has affected the national identity of fan groups to a certain extent. This includes national pride, recognition of national culture, national spirit and the socialist system with Chinese characteristics.

China's official and mainstream media have created a series of songs with the theme of mainstream culture, and by appropriating the style symbols of online youth subcultures to produce musical works that conform to mainstream ideology, instilling a national identity with patriotism as the core to the fan group. For example, the Communist Youth League Central Committee "is the national leading organ of the Chinese Communist Youth League, and in order to compete for ideological discourse power in the Internet environment and gain more recognition from young people, many such Chinese official propaganda organizations and mainstream media have settled in online youth subcultural platforms. This new type of mainstream media has become a kind of "mainstream cultural tribe", and members can freely enter or leave the mainstream cultural tribe by using video content produced by official accounts, participating in

message discussions, etc. In addition, the main attraction of members to become a member of the mainstream cultural tribe is based on the emotional connection of interest, and the members of the mainstream cultural tribe actively choose the mainstream cultural tribe based on their personal interests and hobbies, and the identification with the mainstream culture is generated by a common emotional experience.

Both "Tian Xing Jian" and "Di Shi Kun" are original songs created by the "Communist Youth League Central Committee" Bilbili account using Vsinger. The creation of "Tian Xing Jian" can be seen as the first online collaboration between an official Chinese account and a virtual idol. Sung by China's most popular virtual idol "Luo Tianyi", the work was first released as a theme song at the inaugural Made in China Day event, with lyrics from ancient Chinese poems or celebrity allusions, conveying patriotism to fans and young people. Considered by the majority of virtual idol fans as a companion to "Tian Xing Jian", "Di Shi Kun" is a tribute from the Central Committee of the Communist Youth League to celebrate the 70th anniversary of the founding of the People's Republic of China, sung by the entire Vsinger team, in which the image of the Great Wall, Mount Qingcheng and the Dujiangyan Irrigation System，and national heroes of China is displayed to convey a patriotic idea to the audience.

From the above cooperation between the Central Committee of the Communist Youth League and virtual idols, relying on the online youth subculture style to gain the attention and love of the online youth subcultural group, and build a common emotional experience in the process of using media content, and then form interest-based fan identity. As a result, the mainstream ideology hidden under the subcultural style is invisibly transmitted to the fan group, thereby strengthening their national identity.

The cooperation of virtual singers with mainstream Chinese television media has pushed virtual idols as online subcultures to the level of mass pop culture. The most typical case is the 2021 Luo Tianyi on the stage of the CCTV's (China Central Television) "Spring Festival Gala". The "Spring Festival Gala" is one of the most watched television programs annually in China, mainly in the form of art for political propaganda. National galas such as the "Spring Festival Gala" are nationwide media ceremonies and play the function of identity construction, allowing individuals to feel the existence of the family and country community and their connection with the community through concrete media content. All the audience members who watched the "Spring Festival Gala" became participants in this media ceremony, became a member of this cultural carnival, and under the common identity of the "Chinese nation", they were culturally and psychologically connected into a "community", thus shaping cultural identity.

It can be seen that China's mainstream culture has achieved the peaceful adoption of virtual idol subculture, and for the adoption of mainstream culture, the virtual idol fan group has gradually moved closer to the mainstream ideology, thus losing the resistance significance of the original youth subculture style. Some deconstruction and resistance to authority are missing, but they actively seek the affirmation and coronation of mainstream culture. As F5 proudly said of the virtual idol's performance at the 2022 Winter Olympics:

> *The appearance of virtual idols at the Winter Olympics is really a thing that makes all Chinese fans raise their eyebrows. There are many Japanese virtual idol fans on the Internet who are very envious of China's virtual idols to promote the Olympic spirit, and the motherland really understands us young people too well. (F5)*

Chinese mainstream culture makes full use of the postmodern subcultural group characteristics of the online fan group of Chinese virtual idols to recognize the online youth subculture, but, in the process, it weakens the resistance ideology of the online youth subculture with the mainstream ideology, and gradually realizes the mainstream development of Chinese virtual, not only realizes the benign interaction between mainstream culture and young fan groups but also makes virtual idols gradually fade the label of subculture while enhancing the sense of national identity of young fanbases.

9. Conclusion

After providing the above-mentioned literature review of virtual idols, as well as the data collected in online observations and interviews, we can conclude that under the influence of mainstream culture, the identity of Chinese virtual idol fan groups has gradually changed from interest-based fan identity to national identity.

The online fanbase of virtual idols formed based on fun is undoubtedly strongly postmodern. In the Internet-mediated community, the identity affiliation of individuals is characterized by fluidity and pluralism, and the group gradually loses control over the individual. Under such circumstances, mainstream culture can reintegrate discrete individuals into the identity of mainstream ideology through the penetration and construction of mainstream ideology, and transform interesting identity into national identity. Chinese official and mainstream media use the subcultural form of virtual idols to express mainstream Chinese culture, and by using virtual idols to express national historical concepts, thereby integrating the fragmented and non-historical identity of virtual idol fan groups into traditional national identity.

Furthermore, the virtual idol from a collection of youth subcultures to a new media carrier for the dissemination of mainstream culture is actually the result of a multifaceted comprehensive effect. From the perspective of post-subculture, virtual idols, as an online youth subculture, have a natural tendency to depoliticize, so mainstream culture can subtly penetrate into the virtual idol subculture, thereby strengthening the communication and influence of mainstream culture in the fan community. For the subculture fan group, the resistance as a subculture is weakened, and it tries to complete its own growth and development through the recognition of mainstream culture, so it also promotes the mainstream process of virtual idols.

In fact, the impact of the mainstreaming of Chinese virtual idols on their fans can be seen as a peaceful incorporation of subcultural groups by mainstream culture. In this mainstream cultural inclusion movement, virtual idols have already broken the previous definition of "music idols" and have obviously become a new form of media communication, using online platforms to have an important impact on Chinese youth culture.

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