
Driven Factors of the Development of Virtual Idols

¹ Yu Yunzhu, ² Simon CM Kwong

¹ Yunzhu Yu, City University, Petaling Jaya, Selangor, Malaysia; Jiaying University, Meizhou, Guangdong, China

² Professor. Dr. Simon CM Kwong, City University, Petaling Jaya, Selangor, Malaysia
Email: ¹yyzh@jyu.edu.cn, 6811423@qq.com, ²simoncmkwong@city.edu.my

Abstract: *With the rise of virtual idol marketing, understanding the factors driving the development of virtual idols has great significance to help people understand the generation and working logic of virtual idol marketing. In the development of virtual idols, factors including technology, culture, economy, and consumer's idealized self, spiritual sustenance, and identity seeking play important roles, which help promote the rise of virtual idol marketing.*

Keywords: *virtual idols; virtual idol marketing; driven factors;*

1. Introduction

Nowadays, virtual idols including *Hatsune Miku*, *Luo Tianyi*, and *A-SOUL* have become an important type of idol in the idol market, and virtual idols become a special and beautiful cultural landscape in countries including China, Japan, and South Korea. With the popularity of virtual idols, virtual idol marketing now is favored by numerous brands, and virtual idols thus become popular digital brand endorsers in today's digital era. In order to better understand the phenomenon of virtual idol marketing and grasp the reasons for the emergence and popularity of virtual idols, it is necessary to have a study on the factors that promote the development of virtual idols.

According to the literature review, the below macro factors (i.e., technology, culture, and economy) and micro factors (i.e., idealized self, spiritual sustenance, and identity seeking) are believed to play crucial roles in the development of virtual idols.

2. Macro Factors that Promote the Development of Virtual Idols

2.1 Technology

Technology not only promotes the birth and iteration of virtual idols, but also promotes the spread of the phenomenon of virtual idols, and helps provide a suitable social environment for the acceptance of virtual idols.

First of all, technology drives the creation of virtual idols. Technology is the production engine of virtual idols. In the 1990s, the world's first virtual idol *Kyoko Date* was created by computer modeling technology. Since then, along with the iteration of technology in the domain of computers, various of the latest technologies are used in the creation of virtual idols. For example, the creation of *Hatsune Miku* and *Luo Tianyi* mainly relies on the sound synthesis technology named VOCALOID, the creation of *Ling* mostly relies on Computer-generated Imagery (CGI) technology, and the creation of *A-SOUL* mainly depends on the technology of real-time capture of motion and expression.

In addition, technology promotes the iteration of virtual idols. The development and progress of technology promote the upgrading and iteration of the virtual idol market (Yu & Geng, 2020). For example, the progress of Computer-generated Imagery (CGI) technology drives the appearance of virtual idols to become more and more realistic and vivid. In the same way, the progress of technologies in the fields of live streaming, real-time capture of motion and expression, Augmented Reality, and Virtual Reality, enables virtual idols to possess the ability to interact in real-time with audiences. In a word, with the involvement of advanced technology, the line between virtual and reality is becoming hazier for virtual idols, and the difference in the ability of idol performance between virtual idols and human idols is disappearing. On some occasions, virtual idols even can possess better performances than human idols.

Next, technology promotes the spread of the virtual idol phenomenon which is important to drive the development of virtual idols. The development of technology, especially the emergence of Web 2.0 and Web 3.0, has created favorable conditions for the spread of the virtual idol phenomenon, thus driving the development of virtual idols. Web 2.0 technology has given people more rights to participate in the network, and allowed network users to change from passive information recipients to active content creators and information disseminators. Blogs and virtual communities spawned by Web 2.0 technology provide vital space for subcultures lovers including virtual idols fans to create and share related content. As Zhao (2020) pointed out that the Internet is fertile land for the survival and development of subcultures, the Internet not only creates a virtual community for subcultures but also provides space for the dissemination of subcultures. Subsequently, the development of Web 3.0 technology further promotes the formation of many-to-many communication networks on the Internet. In the era of

Web 3.0, various platforms of user-generated content sharing have emerged in large numbers, which provide space for creation and communication for virtual idol lovers and promote the emergence of the virtual idol phenomenon. As Kobayashi and Taguchi (2018) pointed out that various user-generated content platforms, including YouTube, Nico Nico Douga (Japanese video-sharing website), and Pixiv (illustrations and manga sharing and communication website), helped trigger the spread of the Hatsune Miku phenomenon.

At last, the progress of technology helps create a suitable social environment of the acceptance of virtual idols, thereby provides a good audience base for the development of virtual idols. With the development of computer technology and the increasing importance of the Internet in people's daily life, people are becoming more at ease with "*substituting representations of the reality for the real*" (cited from Garnier & Poncin, 2013; p.85). For example, with the progress of computer and Internet technology, people have long been used to using virtual avatars to represent themselves in the virtual world such as virtual community and online game. Moreover, the progress of technology makes people more capable of accepting various new things and willing to enjoy the convenience brought by scientific and technological progress. Especially for Generation Z, as the digital natives who have grown up in the digital world, have long accepted and got used to all kinds of things in the cyber world, including virtual idols. Therefore, virtual idols are favored by Generation Z (Li & Chen, 2018), and Generation Z has also become the main audience of virtual idols (Lu & Yu, 2020).

2.2 Culture

Japanese Otaku culture and Postmodernism culture are the two vital cultural factors that help drive the development of virtual idols.

The first crucial cultural factor that drives the development of virtual idols is the Otaku culture. The term "Otaku" is from Japanese, which refers to people with an affinity for fictional settings (Tamaki, 2007), such as animation, manga, and video games. The Otaku culture is a unique subculture that emerged in Japan in the last century. In the 1970s and 1980s, the industries including animation, manga, and video games in Japan ushered in a booming period, and a fan base obsessed with animation, manga, and video games began to emerge. Later, people started to use the term Otaku to name a person who is addicted to, enthusiastic about, or skilled in animation, manga, or video games. Afterward, the Otaku culture started to rise.

Otaku is influential in the idol industry (Kitabayashi, 2004), and they play a very important role in the early emergence and development of virtual idols (Black, 2012). As illustrated above, Otaku is aficionados of ACG (Animation, Comics, and Games), and the emergence of the Otaku culture is closely related to the developed

ACG industries in Japan. Due to virtual idols being inextricably linked to the ACG culture, hence Otaku in Japan has become one of the earliest and main support groups for virtual idols.

The Otaku culture is a subculture that is committed to the production and consumption of a technologized, commodified, and artificial femininity (Black, 2012). The emergence of virtual idols perfectly satisfies the attributes that the Otaku culture seeks. Therefore, Black (2012) sharply pointed out that virtual idols actually combine the Otaku people's obsession with computer technology, animation, and robotic or other artificial bodies with their cherished femininity, such as cute, sexy, and non-threatening.

To the same degree, virtual idols cater to another important attribute of the Otaku culture, which is database consumption. Database consumption is the behavior of collecting information from digital texts in order to combine and re-present the information in creative ways (Black, 2012). Database consumption is a basic attribute of the Otaku culture (Azuma, 2009). Virtual idols are digitally exists constructed by data. The digital body construct of virtual idols allows people to produce content related to virtual idols in their way, such as composing a song sung by *Hatsune Miku*. Thus, virtual idols can easily bring Otaku to get involved in and enjoy the database consumption, and each Otaku can own and manipulate the virtual idol they favorite individually in the database consumption of virtual idols. During the process of database consumption of virtual idols, Otaku gradually forms an intimate relationship with the virtual idols they are favorite, which is much more intimate than the relationship with any of a human idol, and Otaku can obtain big satisfaction from this relationship (Black, 2012).

Take *Hatsune Miku* as an example. In 2007, *Hatsune Miku* was launched in Japan. The launch of *Hatsune Miku* sparked a huge Otaku movement in Japan. Otaku produced a lot of work related to *Hatsune Miku* and uploaded them to the Internet, which made the Internet flood with *Hatsune Miku*'s performance and caused the *Hatsune Miku* phenomenon. With the production and consumption of Otaku, *Hatsune Miku* is portrayed as an artificial, cute, and seductive female figure. Fueled by the database consumption by Otaku, *Hatsune Miku* then became the world's first super virtual idol with global influence. Therefore, it can be seen that the Otaku culture plays a crucial role in the beginning of the development of virtual idols.

The second crucial cultural factor that drives the development of virtual idols is the postmodernism culture. Virtual idols are products of postmodern culture (Hutomo, 2023), and postmodernism is regarded as an important cultural inducement for the emergence of the virtual idol phenomenon (Zhao, 2020). Researchers found out that young people were easily affected by the postmodernism culture, and this made the young people, especially Millennials and Generation Z, became the main force of virtual idols audiences (Shen, 2019; Zhao, 2020). Thus, from this point of view, the

postmodernism culture can be considered as one important force that drove the development of virtual idols.

The postmodernism culture is an important reform of the spirit and value orientation of modern Western culture, which can be characterized by anti-subjectivity, anti-rationality, anti-authority, decentralization, and subversion of the grand narrative (Zhang G.Y., 2007). In short, postmodernism culture can be summarized as the criticism and transcendence of traditional culture (Zhang S.Y., 2007). Influenced by their special age and social status, young people often like to accept new things, and they have the personality of self-publicity and like to express themselves. Meanwhile, they like to hold a rebellious attitude toward the existing situation they are experiencing. The special cultural psychology and mentality of the youth group coincide with the postmodernism culture. Therefore, it is very easy for young people to accept and agree with postmodern culture, and become the leaders and advocates of postmodernism culture. Their cultural concepts and behaviors also will show an obvious postmodernism tendency (Zhang G.Y., 2007).

Postmodernism holds the banner of subverting classics and traditions, therefore, young people who are influenced by the postmodernism culture would pursue stars in an unusual way (Shen, 2019). Virtual idols are a new category in the idol market. The appearance of virtual idols totally overturns people's traditional cognition of "star" and "idol". The virtual idol constructed by digital data is neither an idol in the classical sense nor an idol in the traditional one. Because of the subversion of classics and traditions, virtual idols are easily accepted and loved by the young people affected by the postmodernism culture. Thus, young people's cultural behavior has also changed from the love and worship of human idols to the love and worship of virtual ones. In this sense, the pursuit and admiration of virtual idols represent the rebellion of youth groups against mainstream culture and authority (Zhao, 2020).

For example, in the process of pursuing virtual idols (such as *Hatsune Miku* and *Luo Tianyi*), fans can create content related to the virtual idols they loved. In this process, fans can fully express themselves and show the value of their existence to others. Zhao (2020) argued that this kind of content creation is in line with the personality of self-publicity and the desire for expression for young people who are affected by postmodernism culture. Moreover, postmodernism advocates integration and compatibility, opposes the dominance of mainstream culture, and believes that a variety of cultures should have their own performance moments (Shen, 2019). Therefore, young people affected by the postmodernism culture have a stronger tolerance for the niche subculture like virtual idols, they can accept the rise of virtual idols easily and become supporters of virtual idols. In this sense, when discussing the development of virtual idols, the influence power of the postmodernism culture can not be ignored.

2.3 Economy

Economic globalization promotes cultural globalization, thus economic globalization is considered as one of the economic incentives for the emergence of virtual idols (Zhao, 2020). As mentioned above, virtual idols stemmed from Japan, and the landscape of virtual idols was aroused in Japan at first. The wave of economic globalization has driven the cultural export of Japan. With the wave of economic globalization, virtual idols represented by *Hatsune Miku*, along with Japanese cultural products including animation, manga, and video games, have been exported to other countries and regions outside Japan. Now, virtual idols are no longer the unique cultural landscape in Japan. Economic globalization not only promotes the spread of the ideas, technology, and culture of virtual idols around the world, but also drives the rise and development of the virtual idol industry in China, South Korea, the United States, and other countries and regions.

In addition, the development of the virtual idol industry is closely related to the economic development of a country or region. Prior research pointed out that when the GDP per capita approximately reaches US \$10000, the idol industry will experience rapid development (Zhuang, 2019). As a part of the idol industry, the development of the virtual idol industry will also be affected by the economic development level of a country or region. From the point of view of expenditure, virtual idols belong to the product category of entertainment and culture rather than belong to the product category of necessities of life. Therefore, for those economically underdeveloped countries and regions, the consumption related to virtual idols will be very limited. Only when economic development reaches a certain level, the dominant position of material consumption will be gradually replaced by spiritual consumption which includes the consumption of entertainment and culture. Therefore, only when the economy develops to a certain extent can the consumption expenditure related to virtual idols will be increased and the industry related to virtual idols can be developed. Furthermore, from the perspective of demand, economic development will lead to an increase in consumer income and consumption ability, which is conducive to the increase of the demand for entertainment and cultural products, so as to drive the development of the virtual idol industry.

Take China as an example. According to the National Bureau of Statistics of China, the country's annual GDP reached 101.59 trillion yuan (around 15.68 trillion US dollars) in 2020, surpassing the 100 trillion-yuan threshold, and per capita GDP exceeded US \$10000 for two consecutive years (P.R.C. National Bureau of Statistics, 2021). The good trend in China's economic development has stimulated the increase in consumer demand and driven the development of China's virtual idol industry. According to the "2021 China Virtual Idol Industry Development and Research Report" released by iiMedia Research, with the continuous growth of mass entertainment

demand and the continuous iteration of network and video audio technology, the virtual idol industry in China has gradually entered the peak period of development. As the data provided by iiMedia Research (2021), the scale of the virtual idol industry in China reached 3.46 billion yuan in 2020, with a year-on-year growth of 70.3 %, and it is expected to reach 20.52 billion yuan in 2023; meanwhile, the scale of the industries driven by virtual idols reached 64.56 billion yuan in 2020 and is expected to reach 333.47 billion yuan in 2023. In a word, economic development can bring the increase of national average income, which can stimulate the consumption related to virtual idols, and then promote the development of virtual idols.

In the same way, with the development of the economy, the entertainment industries, including music, movies, TV plays, TV programs, cartoons, and games, will tend to be mature in terms of scale, mode of profit, and industrial chain, which will lay a solid foundation for the further development of the whole idol industry (Zhuang, 2019). There is no doubt that as part of the idol industry, the virtual idol industry can benefit from the maturity of the whole entertainment industry as well.

3. Micro Factors that Promote the Development of Virtual Idols

3.1 Idealized Self

The worship of idols often originates from people's projection of an idealized fantasy in real society. In the book "*Neurosis and Human Growth: The Struggle Toward Self-realization*", Karen Horney (1950) proposed that people's selves can be divided into three parts, which are the actual self, the real self, and the idealized self. According to Horney (1950), the real self is the degree to which an individual can be self-actualized, the actual self is the self that the individual experiences in reality, and the idealized self refers to the self that the individual wants to be in the imagination and fantasy. Thus, the idealized self is actually an individual's fictitious self-image that the individual detaches from reality.

Idolaters are often not satisfied with the humble and incompetent actual self, they will try their best to build the idealized self in the inner world (Wang, 2000). During the idolater's construct of the "idealized self", the idol that is chosen by the idolater often becomes the mirror image of the idolater's idealized self. To be specific, fans will project their dreams and desires onto their favorite idols. Therefore, to some extent, idols can be regarded as the realistic extension of fans' idealized selves (Yu & Geng, 2020). The behavior of idolatry is actually a kind of pursuit of the idealized self for fans in their real life.

As a special type of idol, the virtual idol constructed by digital data becomes the perfect carrier for fans to project and pursue their idealized selves. The virtuality of virtual idols can create a fantasy, beauty, and pure utopia for fans (Song, 2019). It is because different from the production mode of human idols, the unique production

mode of virtual idols gives fans more space for participation and autonomy (Yu & Geng, 2020). In the unique mode of producing virtual idols, fans are called “prosumers” (Black, 2012; Kobayashi & Taguchi, 2018; Zhou, 2019). “Prosumers” is the combination of “producer” and “consumer”. It means that fans play both the roles of producers and consumers of virtual idols. Fans can be deeply involved in the production of their favorite virtual idols through content creation. In the process of such “production”, or content creation, fans can project their idealized selves onto their favorite virtual idols through the content they create.

Take *Hatsune Miku* as an example, the launcher of *Hatsune Miku* only provided the basic design elements in terms of appearance and gender, and the power of the rest of production is assigned to the “prosumers” of *Hatsune Miku*. Hence, it is the “prosumers”, or fans, who bring life into *Hatsune Miku* through applying their own ideas, thoughts, and artistic talents to the character. The process by which fans “produce” *Hatsune Miku* is actually the process that fans project their idealized selves (Lam, 2016).

The production of *Luo Tianyi* is similar to the production of *Hatsune Miku*. However, fans of *Luo Tianyi* have been given more power to create this virtual idol. Before the launch of *Luo Tianyi*, the company that launched *Luo Tianyi* solicited ideas about the physical appearance of this virtual idol to the audiences of virtual idols in China. Moreover, after the launch of *Luo Tianyi*, the launcher allows the song and costume for each performance of this virtual idol to be decided by online voting or fans’ content creation (Shen, 2019). *Luo Tianyi* gives fans unlimited space for content creation and imagination, fans can freely project the traits of their idealized selves onto *Luo Tianyi* (Lu & Yu, 2020), which caused the born of the super virtual idol *Luo Tianyi*.

3.2 Spiritual Sustenance

Compared with the complex real world, the emotions in the two-dimensional world are often the purest and not utilitarian (Lu & Yu, 2020). Virtual idols come from the two-dimensional world, but they exist parallel to the real world (Liu, 2020), which makes virtual idols an ideal emotional sustenance for audiences. Especially for young people, due to their weak and powerless status in real life, virtual idols become a paradise for them to escape from reality when facing social pressure (Shen, 2019).

As mentioned above, virtual idols can satisfy fans’ expectations and fantasies of their ideal selves. On top of that, virtual idols do not age, they will not have any scandals, and they also will not cheat or betray the fans. These make virtual idols able to become stable emotional sustenance. For instance, in one of the case studies of *Luo Tianyi*, Lu and Yu (2020) found that in the eyes of fans, *Luo Tianyi* was a kind of beauty and purity existing in the virtual and fantasy world, thus, fans would like to pour the most sincere and pure emotions on *Luo Tianyi* without any concerns.

For people who feel lonely in the real world, virtual idols offer the healing, empathy, and companionship they crave. As social animals, humans are inherently afraid of loneliness. In Japan, Otaku is used to the company provided by virtual idols. Some of them even blur the line between real and virtual and bring virtual idols into their real life. According to the news report, a 35-year-old Japanese man named *Akihiko Kondo* spent \$18,000 to marry *Hatsune Miku* in 2018 by using hologram projection technology from the company called Gatebox (Chandler, 2018). Although the marriage of *Akihiko Kondo* and *Hatsune Miku* was not recognized by *Kondo*'s family or the law, Gatebox still issued an official marriage certificate for the couple. Such news is not unusual for Otaku. For Otaku, virtual idols can be a complete substitute for real people, because virtual idols can soothe their lonely hearts and give them the emotional sustenance they crave.

The emotional sustenance provided by virtual idols can satisfy people's inner need for self-comfort. As the message from the online community left by fans of *Luo Tianyi*, "Only those who have been truly lonely can understand the feeling, no matter you are sentimental, angry, willful or indifferent, she (*Luo Tianyi*) is always there, waiting to comfort and inspire you" (Li & Chen, 2018, P. 21). Fans find spiritual sustenance and obtain emotional comfort from virtual idols, and they will release their love for virtual idols through consumption in the real world. "The peripheral products related to my favorite virtual idol have been launched, I must go to buy, it is the way I express my love to my favorite virtual idol" (Shen, 2019, P. 90), this has become the collective psychological reaction of the majority of virtual idol fans (Shen, 2019). Although sometimes the consumption from fans may seem very crazy, it is actually a rational choice made by fans just to realize their spiritual sustenance (Lu & Yu, 2020).

3.3 Identity Seeking

Identity includes self-identity and social identity. Zhang et al. (2012) stated that identity was an individual's confirmation of self-identity and cognition of the group to which he or she belongs, as well as the accompanying emotional experience and the psychological process of integrating behavioral patterns. Identity involves two key questions, the first question is about self-identity which can be summarized as "Who am I", and another question is about social identity which can be summarized as "Which group do I belong to" (Zhou, 2019).

In terms of self-identity, Giddens defined self-identity as "*the self as reflexively understood by the individual in terms of his or her biography*" (Giddens, 1991, P. 254). In this sense, self-identity can be regarded as an individual's sense of approval for what he or she thinks and behaves. Giddens (1991) further pointed out that there was a certain relationship between self-identity, self-esteem or pride, and idealized self, and the idealized self was the core element of self-identity because the idealized self was the

direction of individual efforts to realize self-identity.

In terms of social identity, social identity refers to an individual's recognition of belonging to a certain social group and the value and emotion that being a member of that group brings to him (Tajfel, 1982). According to Tajfel (1982), social identity is established through three basic processes, which are social categorization, social comparison, and positive distinctiveness. Individuals will first identify with the social group they belong to through social categorization, then they will generate in-group preference and out-group bias. After that, individuals will improve their self-esteem by realizing or maintaining a positive social identity and making positive distinctions between in-group and out-group (Zhang & Zuo, 2006).

The fans of virtual idols can obtain the identity including self-identity and social identity through virtual idols. In other words, virtual idols can satisfy fans' needs for identity seeking. This is one of the reasons why virtual idols can gain solid support from fans and why the fandom of virtual idols can be kept growing.

Specifically speaking, fans of virtual idols seek self-identity and social identity mainly through two paths: the production and consumption associated with virtual idols. As stated above, the fans of virtual idols are very special, they are the "prosumers" (producers + consumers) of their favorite virtual idols. Actually, the term "prosumers" was first proposed by Toffler (1980). In his book "The Third Wave", Toffler (1980) used the concept of "wave" to explain the social transition of human society. In Toffler's description, the First Wave was the agricultural phase that began about 10,000 years ago, the Second Wave was the industrial phase that approximately began 300 years ago, and the Third Wave was the era of new energy and new technologies represented by computers. In the Second Wave, the Industrial Revolution created a system of mass production in which production and consumption were separated. The Third Wave, however, is an era in which consumers are involved both the consumption and production/sale of goods. Toffler (1980) used the term "prosumers" to describe the people involved in both consumption and production and he pointed out that human society was shifting from the Second Wave to the Third Wave. The fans of virtual idols are exactly the "prosumers" described by Toffler in the Third Wave. They are the consumers and producers of virtual idols. During the consumption and production related to their favorite virtual idols, fans accomplish the seeking of self-identity and social identity.

From the production point of view, fans can spread their own information and values by producing content related to their favorite virtual idols, such as songs, videos, posts, and so on (Lam, 2016). In the process of content creation, fans can project the attributes of their idealized selves onto their favorite virtual idols. This is the process for fans to realize self-identity. On top of this, after fans post their created work online, they will receive positive feedback from the fandom of the virtual idol. Other fans

might forward the work, make a comment, or re-create the work based on the original one. For example, when creative fans of *Hatsune Miku* share their works on a UGC (user-generated Content) sharing website, interactive users (fans) will immediately get involved by adding comments (Kobayashi & Taguchi, 2018). Creative fans who have the ability to create works that are favored by other fans, and fans who can receive more positive feedback from other fans, are usually can gain a higher status within the fandom. Some of them can even gain their own fans in the fandom of the virtual idol (Lu & Yu, 2020). Therefore, fans can gain recognition and pride from others in the fandom of the virtual idol through work production, meanwhile, fans can also deepen their sense of belonging in the group during the work production. In other words, fans can achieve both self-identity and social identity at the same time in the production of content related to their favorite virtual idols.

From the consumption point of view, consumption is the action and symbol of identity, and people's consumption is always carried out around identity (Wang, 2001). As Friedman observed, consumption in the world is always a consumption of identity (Friedman, 1994). It is because all goods can be used by consumers to construct meanings about self, social identity, and social relations (Fiske, 1989). For fans, purchasing goods related to their favorite idols actually represents a kind of self-identity of their fans' attributes, and this kind of purchase behavior can bring fans a sense of belonging within the fandom and give them social identity (Zhuang, 2019). Thus, buying goods related to their favorite virtual idols is an important way for fans to construct and represent their identity, it can help fans gain recognition and support from other fans in the fans group, especially if the purchased goods are special or limited edition, it will become the important symbol of status in the fandom (Lu & Yu, 2020). This shows that consumption is a means for virtual idol fans to make social categorizations. Fans can identify "fans", "passers-by", "anti-fans", and "die-hard fans" through consumption related to the virtual idol. Meantime, fans can also make social comparisons and positive distinctiveness through consumption. For example, through the consumption of special or scarce goods related to their favorite virtual idols, fans can achieve better performance and status than other group members in the fans group. These kinds of favorable comparisons and positive distinctiveness are conducive to the realization of a positive social identity for fans.

In addition, prior research further revealed that although achieving self-identity and social identity were the consumption motivations for fans of virtual idols, however, there was a big difference in consumption motivations between two types of fans, namely fanatical fans and loyal fans (Zhou, 2019). Generally speaking, the motivation for consumption for fanatical fans is mainly to achieve self-identity, while the motivation for consumption for loyal fans is mainly to obtain social identity. To be more specific, fanatical fans of virtual idols will take their favorite virtual idols as their

idealized selves, and their consumption motivation will change from simply showing their love for idols to helping themselves realize self-identifications. However, for loyal fans of virtual idols, their consumption motivation is more focused on obtaining a social identity, thus they will use social categorization, social comparison, and positive distinctiveness to enhance the sense of group belonging and self-esteem.

4. Conclusion

With the rise of virtual idol marketing, understanding the factors driving the development of virtual idols has great significance to help people understand the generation and working logic of virtual idol marketing. The rise of virtual idol marketing is inseparable from virtual idols, and the development of virtual idols is closely related to some specific environmental factors. With the driving forces from factors including technology, culture, economy, and consumers (idealized self, spiritual sustenance, and identity seeking), virtual idols are able to gain development, which constitutes an important premise for the rise of virtual idol marketing.

Acknowledgment

This paper is supported by the Projects of the Philosophy and Social Science of Guangdong Province China (grant number GD22CGL30).

References

- Azuma, H. (2009). *Otaku : Japan's Database Animals*. University Of Minnesota Press.
- Black, D. (2012). The Virtual Idol: Producing and Consuming Digital Femininity. In P. W. Galbraith & J. G. Karlin (Eds.), *Idols and Celebrity in Japanese Media Culture* (pp. 209–228). Palgrave Macmillan.
- Chandler, S. (2018). Japanese Man Marries Video-game HOLOGRAM in Bizarre \$18,000 Wedding Ceremony. *The Sun*.
<https://www.thesun.co.uk/tech/7756888/japanese-man-marries-video-game-hologram-in-bizarre-18000-wedding-ceremony/>
- Fiske, J. (1989). *Understanding Popular Culture*. Routledge.
- Friedman, J. (1994). *Cultural Identity and Global Process*. Sage.
- Garnier, M., & Poncin, I. (2013). The Avatar in Marketing: Synthesis, Integrative Framework and Perspectives. *Recherche et Applications En Marketing* (English Edition), 28, 85–115. <https://doi.org/10.1177/2051570713478335>
- Giddens, A. (1991). *Modernity and Self-identity: Self and Society in the Late Modern Age*. Polity Press.
- Horney, K. (1950). *Neurosis and Human Growth: The Struggle towards Self-Realization*. W. W. Norton & Company, Cop.
- Hutomo, S. B. (2023). Utilizing Virtual Idol “Luo Tianyi” to Promote Traditional Culture to the Generation Z. *Embracing the Future: Creative Industries for Environment and Advanced Society 5.0 in a Post-Pandemic Era*, 120–123. <https://doi.org/10.1201/9781003263135-24>
- iiMedia Research. (2021, July). 2021 China Virtual Idol Industry Development and Research Report. IiMedia.cn. <https://www.iimedia.cn/c460/79469.html>
- Kitabayashi, K. (2004). The Otaku Group from a Business Perspective: Revaluation of Enthusiastic Consumers. *NRI Papers*, 84(1), 1–10.
- Kobayashi, H., & Taguchi, T. (2018). Virtual Idol Hatsune Miku: Case Study of New Production/Consumption Phenomena Generated by Network Effects in Japan's Online Environment. *Markets, Globalization & Development Review*, 03. <https://doi.org/10.23860/mgdr-2018-03-04-03>
- Lam, K. Y. (2016). *The Hatsune Miku Phenomenon: More Than a Virtual J-pop Diva*.

The Journal of Popular Culture, 49, 1107–1124.
<https://doi.org/10.1111/jpcu.12455>

Li, J., & Chen, F.Y. (2018). Research on the Internet Interaction of Virtual Idol and Its Fans: A Case Study of "Luo Tianyi". *China Youth Study*, (06), 20-25.

Liu, Q. Y. (2020, April). Psychological Interpretation of Fans' Love for Virtual Idols.
<https://www.bilibili.com/read/cv5727088/>

Lu, X. L. & Yu, W. (2020). Research on Consumer Culture of Virtual Idol Fans: Taking Virtual Singer LuoTianyi as an Example. *Contemporary Communication*, (06), 75-78, 112.

P. R.C. National Bureau of Statistics. (2021, February). Statistical Communique of the People's Republic of China on 2020 National Economic and Social Development.
www.stats.gov.cn.

http://www.stats.gov.cn/tjsj/zxfb/202102/t20210227_1814154.html

Shen, Y. (2019). The Generation Logic and Guidance of Network Virtual Idol: A Case Study of "Luo Tianyi". *Teaching Reference of Middle School Politics*, (15), 89-91.

Song, L. Y. (2019). The Characteristics and Significance of the Participatory Culture of Virtual Idol Fans. *Modern Communication(Journal of Communication University of China)*, 41(12), 26–29. cnki:SUN:XDCB.0.2019-12-006

Tajfel, H. (1982). Social Psychology of Intergroup Relations. *Annual Review of Psychology*, 33(1), 1–39. <https://doi.org/10.1146/annurev.ps.33.020182.000245>

Tamaki, S. (2007). Otaku Sexuality. In C. Bolton, I. Csicsery-Ronay, & Tatsumi (Eds.), *Robot Ghosts and Wired Dreams: Japanese Science Fiction from Origins to Anime* (pp. 222–249). University of Minnesota Press.

Toffler, A. (1980). *The Third Wave*. Bantam Books.

Wang, Y.P. (2000). The Deviation and Return of "Ideal Self" and "Real Self" — the Mentality and Countermeasures of Teenagers' "Star-chasing". *Journal of Xiamen City Vocational College*. (01),19-21.

Yu, G. M. & Geng, X. M. (2020). Technology Empowerment and Deconstruction of Virtual Idols in the Age of Artificial Intelligence. *Journal of Shanghai Jiaotong University (Philosophy and Social Sciences)*, 28(01), 23-30.

Zhang, G.Y. (2007). The Influence of Postmodernism on Youth Subculture. *Contemporary Youth Research*, (01), 35-41.

- Zhang, S. Y. (2007). The Post-modernistic Criticism of Modernity. *Journal of Peking University(Philosophy and Social Sciences)*, 01, 43–48. doi:CNKI:SUN:BDZK.0.2007-01-008
- Zhang, S.H., Li, H.Y., & Liu, F. (2012). Review on Research of Identity. *Psychological Research*, (01), 21-27.
- Zhang, Y.R., & Zuo, B. (2006). Social Identity Theory and It's Development. *Advances in Psychological Science*, (03), 475-480.
- Zhao, Y. Y. (2020). Research on Virtual Idol Landscape from the Perspective of Youth Subculture -Taking Luo Tianyi as an Example. *Beijing Youth Research*, 29(03), 47-54.
- Zhou, S. Y. (2019). A study on Consumer Motivation of Chinese Fans of Virtual Idols from the Perspective of Identity-Taking Hatsune Miku as an Example [Master Thesis].
- Zhuang, L. (2019). The Influences of Idol Effect on the Purchasing Decisions of Their Fans. *Www.atlantis-Press.com*. <https://doi.org/10.2991/ssmi-18.2019.31>