



Emotional Rituals in Digital Fan Practices: A Case Study of Luo Tianyi in the Chinese Virtual Idol Industry

Zirui Chen

¹ Loughborough University, Loughborough, United Kingdom. Z.Chen2@lboro.ac.uk

Abstract. Over the past decade, virtual idols have gained immense popularity among Chinese youth, with an industry research report estimating the core market size to exceed ¥12.08 billion in 2022 and reach ¥48.06 billion in 2025 (iiMedia Research, 2023). The commercial success has positioned virtual idols as iconic symbols of Chinese digital culture. Luo Tianyi, one of the most prominent virtual idols in China with over 3.9 million domestic followers, was chosen as the case study for this research. Drawing on Randall Collin's (2014) theory of Interactive Ritual Chains (IRC), this study explores how Chinese virtual idol fans engage with Luo Tianyi and participate in their online fan community through digital fan practices. It focuses on the relationship between digital fan practices and their emotional devotion to the virtual singer and fandom community. This study contributes to the broader discussion on the integration of culture, technology, and economy within the Chinese creative and cultural industries. By extending the application of Collins' model to the digital environment, this study highlights the role of fans as both consumers and co-creators, revealing how emotional rituals drive the sustainable development of virtual singers. The case of Luo Tianyi also exemplifies the potential of online fan communities in producing cultural value and driving economic growth on digital platforms, which offers insights into the evolving trends in the culture and creative industries.

Keywords: virtual idols, online fan communities, interactive ritual chains (IRC), China.

1 Introduction

As technological advancements in voice synthesis, computer-generated imagery, and artificial intelligence continue to evolve, virtual idols have emerged as prominent

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figures in China's entertainment industry. According to iiMedia Research (2023), the core market size of China's virtual idol industry was projected to exceed ¥12.08 billion in 2022 and is expected to reach ¥48.06 billion in 2025. Unlike traditional celebrities, virtual idols are not simply passive media products; they serve as interactive cultural agents, engaging with audiences through digital platforms, live-streamed performances, and immersive interactive experiences.

The growing prominence of virtual idols reflects a broader trend in the commercialisation of digital culture, where fan participation plays a crucial role in fueling economic sustainability (Liang & Shen, 2016). Relevant studies in Japan have argued that it is fan creation that maintains the success of virtual idols. In the case of Hatsune Miku, Japan's most famous virtual idol, the business model allows fans to use the software called Vocaloid to produce and distribute materials while the traditional music company only releases a limited amount of official content (Guga, 2014; Zaborowski, 2024). This model empowers fans as co-creators, blending artistic expressions with economic contribution.

Despite the economic and cultural impact of virtual idols in China, academic research on the role of fans in sustaining the industry has been relatively limited. To address this gap, this paper draws on Randall Collins' (2004) Interaction Ritual Chains (IRC) theory to examine fan engagement and community dynamics within virtual idol fandoms. From the angle of microsociology, Collins offers valuable insights into how emotional energy and solidarity are generated through repetitive micro-interactions. While originally designed for face-to-face rituals, recent studies have extended the IRC model to digital environments, demonstrating its applicability in analysing online communities (Chen, 2023; Zhang et al., 2024). Based on these discussions, this paper explores how fan practices and fan emotions in the digital space arouse a sense of belonging in virtual idol fandoms. Additionally, this paper also offers a more critical perspective by investigating how gender and engagement levels shape hierarchical distinctions within fan communities.

This study focuses on Luo Tianyi, widely regarded as the most iconic virtual idol in China, and her fans. By applying a mixed method approach, including semi-structured interviews and online participant observation, it examines how fans follow, engage with and support their idol, as well as their contribution to the virtual idol ecosystem. The findings suggest that while Collins' IRC model is highly adaptable to online fan communities, researchers should also pay attention to the power dynamics and hierarchical structures within these fandom communities.

The following sections first review research on fan studies and virtual idols, and then outline the theoretical framework that integrates insights from fan studies and Collins' Interactive Ritual Chains (IRC) model in both offline and online settings.

2 Fan Studies: From Mass Media to Digital Fandom

Fandom, as a sociocultural phenomenon, has long been intertwined with media consumption, identity formation, and economic structures. Although the term "fan" can be traced back to 17th-century England (Duffett, 2013, p. 5), it was not until the 1960s—with the rise of mass media phenomena like *Star Trek*—that fandom became a

subject of academic inquiry (Hellekson & Busse, 2006, p. 43). Several key themes are worth briefly flagging as they are particularly relevant to this study and help bring a more critical edge to Collins' IRC model.

Early fan studies highlighted the creativity and productivity of fan communities, which challenged the negative stereotypes of fans as obsessive and socially isolated (Sandvoss et al., 2017). For example, scholars like Henry Jenkins (1992) and Camille Bacon-Smith (1992) reframed fandom as a form of participatory culture, where fans actively reinterpret media texts and create their own content, rather than merely consuming mass-produced media. This perspective laid the groundwork for later studies on fan agency, creativity, and community dynamics (Coppa, 2014). However, the expansion of the internet, the emergence of social media platforms, and the development of algorithm-driven content distribution fundamentally altered the way fans interact with media and each other (Yin & Xie, 2024; Zhang et al., 2023). Unlike traditional mass media fandom, digital fandom operates within highly networked and globalised communities, which has fostered collective emotions and has shaped fan experiences (Booth, 2014).

One defining feature of digital fandom is the increased emphasis on consumption and creativity, where fans simultaneously act as both consumers and producers of media content (Sugihartati, 2020). The accessibility of digital tools and platforms enables fans to create, remix, and distribute their own works, ranging from fan fiction and digital artwork to remixed music (De Kosnik, 2012; Galuszka, 2017). This participatory culture, which was once limited and technologically constrained, has now become a mainstream cultural phenomenon, allowing fans to exert greater influence over the cultural landscape. The ability to easily share and engage with content within online communities strengthens internal relationships among fans and encourages deeper emotional investment in fandom activities (Zhang & Wu, 2022).

Meanwhile, influenced by Pierre Bourdieu's (1984) concept of cultural capital, some researchers (e.g., Dixon, 2012; Sandvoss, 2005, pp. 44-66) emphasised the power struggles within fan communities and the types of social categories such as gender, age and sexuality. While digital spaces provide greater autonomy for fans, they also reproduce traditional power dynamics, wherein individuals with access to greater resources, technical skills, or insider knowledge often hold higher status (Booth, 2015, pp. 1-24; Pearson, 2010). Prominent content creators and fan organisers tend to gain more visibility and influence, reinforcing distinctions between casual participants and more dedicated contributors.

Additionally, more critical perspectives have argued that fan participation often constitutes unpaid labour, generating creative works and promoting their favorite idols that ultimately benefit media companies and advertisers (Bakioğlu, 2018). In the Chinese digital landscape, this phenomenon is also pronounced, as fans play an active role in driving the visibility and success of their idols through structured promotional campaigns. Yin (2020), for instance, demonstrated how fans on Weibo contribute to the commercial success of music idols by amplifying their presence through the datafication of fan practices, including content creation and online engagement. Both of these arguments are relevant to this paper, but the latter is particularly pertinent when examining virtual idol fandom, where the value of fan labour is even greater given the minimal costs required to sustain a non-material celebrity. The following section will discuss the unique features of virtual idol fandom in depth.

3 Virtual Idols as Objects of Fandom

Virtual idols as computer-generated celebrities, rely on digital technologies to simulate human-like characteristics and performances (Black, 2008). Unlike real-life celebrities, virtual idols exist in a digitally perfected form, maintaining eternal youth and idealised beauty (Rahmi et al., 2018). Scholars often examine virtual idols through the lens of posthumanism, emphasising how their ageless and morally “pure” image aligns with commercialised femininity to appeal to diverse audiences (Black, 2012).

Beyond this, virtual idols are also theorised through glocalisation and cultural identity. Originally developed in Japan, Vocaloid software has enabled Chinese users to construct culturally distinct virtual idols, incorporating elements of traditional music, language, and national aesthetics (Yin, 2018). This adaptation suggests that virtual idols are not merely neutral digital entities but can be infused with national and cultural identity through localised content.

Another crucial perspective focuses on fan participation and the business model that sustains them. Unlike real-life celebrities, whose careers depend on record labels, management agencies, and promotional campaigns, virtual idols thrive on user-generated content. Hatsune Miku, for example, does not rely on a centralised company to produce her music; instead, her fans compose, remix, and distribute her music, making them an essential part of her creative ecosystem (Condry, 2018; Zaborowski, 2016). This producer-fan dynamic is similarly seen in Chinese virtual idols, where fan labor plays a crucial role in shaping an idol’s success, blurring the boundaries between consumer and creator.

Building on these discussions, the following section integrates insights from fan studies with Collins’ IRC model to explore how online fandom communities are structured and sustained.

4 Interaction Ritual Chain in Offline and Online Settings

Randall Collins’ Interaction Ritual Chains (IRC) theory builds upon the foundational work of Emile Durkheim and Erving Goffman, both of whom explored the role of rituals in social cohesion. Durkheim (2016) viewed religious rites as structured actions designed to generate and sustain collective emotions, which strengthen social bonds within a group. Goffman (1967), on the other hand, introduced a microsociological perspective, analysing how everyday interactions and routinised behaviours foster group cohesion. Drawing from these perspectives, Collins (2004, pp. 3–46) developed the IRC theory by shifting the analytical focus from individuals to situational interactions, arguing that social encounters shape those involved rather than simply being shaped by pre-existing individual characteristics.

According to Collins (2004, pp. 47–48), there are four key elements of interaction rituals: the physical presence and characteristics of participants, the establishment of boundaries that distinguish insiders from outsiders, a shared focus of attention, and the emotional connection generated through interaction (see Figure 1). He emphasised that mutual engagement and shared emotions are crucial as they produce four major outcomes: group solidarity, emotional energy (EE), adherence to group symbols, and shared moral values (Collins, 2014, pp. 48–49). These ritual interactions, when

sustained over time, form chains of emotional and social reinforcement, leading to a durable sense of community.

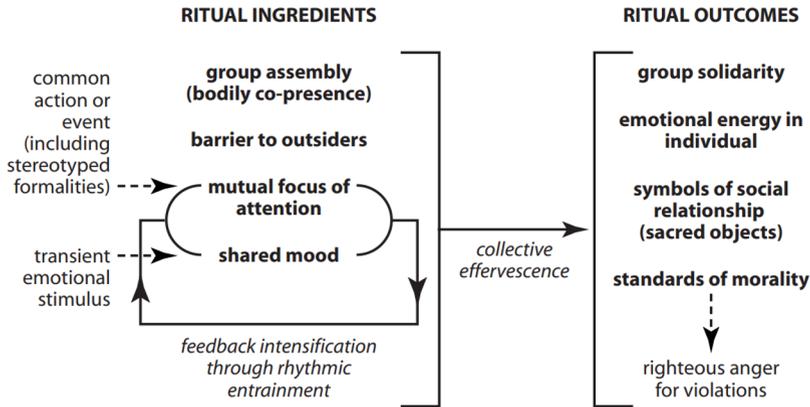


Fig. 1. The model of Randall Collins’ Interaction Ritual Chains (Collins, 2004, p. 48)

The application of Collins’ IRC theory in English-language literature has predominantly focused on religion, where religious services are examined as interaction rituals. Empirical studies have explored specific variables such as congregational strictness (Wollschleger, 2012) and gender dynamics (Ferguson, 2020) in shaping emotional energy and group solidarity. Wellman et al. (2014) and Marks et al. (2018) further examined different scales of religious rituals, comparing American megachurch services and Jewish family Shabbat ceremonies, both of which highlighted the role of shared emotions in fostering a sense of sacredness and communal bonds.

Beyond religious settings, IRC has also been applied to non-religious groups, including sports fandom and consumers. Cottingham (2012) found that collective effervescence, a concept traditionally linked to religious gatherings, also manifests among sports fans, reinforcing group identity and emotional intensity within stadium environments. Similarly, Brown (2011) extended the framework to consumer behaviours, demonstrating how ritualised shopping experiences generate emotional engagement and brand loyalty.

While many studies continue to focus on physical spaces such as stadiums and everyday social activities (Kišjuhas, 2024), scholars have begun advocating for research in digital contexts. Hill et al. (2022) highlighted the need to examine how digital technologies, including virtual reality, reshape ritual practices and group cohesion. As digital platforms increasingly mediate fan interactions, applying IRC to online communities and virtual fandoms becomes essential for understanding how emotional energy and solidarity are sustained in non-physical environments.

Although Collins (2020) emphasised the importance of embodied interactions in the IRC model, recent studies have explored its application in digital environments. For example, DiMaggio et al. (2018) analysed online interactions within two international companies, showing that engagement with digital posts follows ritualistic patterns, with emotional energy influencing participation. Similarly, Maloney (2013) examined pro-

anorexia websites, demonstrating that emotional connections play a central role in sustaining online communities.

Chinese scholars have also explored IRC within social networks and online fan communities. Pan and Zhang (2014) examined a Chinese online fan community for a Korean TV show, finding that real-time discussions and live broadcasts functioned as digital rituals, reinforcing shared emotional experiences. Cheng (2021) similarly observed that fans gathered on social media to focus on their idols, accumulating emotional energy that sustained repeated interaction rituals. Wu (2022) highlighted how watching live streams fosters a sense of belonging, allowing audiences to feel connected despite physical separation. Additionally, Xu and Wang (2021) argued that fan communities serve as spaces for production, consumption, and identity formation, where interactive rituals strengthen collective identity.

This study extends the application of IRC to Chinese virtual idol fandoms, examining how digital fan practices generate emotional energy, develop community hierarchies, and sustain engagement in online environments. The following section outlines the data collection and analysis methods used in this research.

5 Methods

Case studies are a widely used method in fandom research, allowing scholars to examine specific fan behaviors and interactions (Busse & Hellekson, 2006, p. 43). This study focuses on Luo Tianyi and her fan community on Bilibili. Luo Tianyi was chosen for two key reasons: first, she has over 4.4 million followers on Bilibili, making her one of China's most popular virtual idols; second, she is the first Chinese-speaking virtual singer to gain mainstream recognition, performing at national events such as the Spring Festival Gala and the Beijing Winter Olympics promotion. Bilibili was chosen as the research site due to its user-driven content model and unique engagement features, particularly Danmu (real-time comment overlays), which foster community interaction and collective identity formation (Chen, 2020, 2021).

Given that this study aims to understand fan practices during both everyday engagement and major media events, two qualitative methods were employed: online participant observation and semi-structured online interviews. Full ethical approval was obtained before data collection, and all participants provided informed consent before taking part.

Online participant observation was conducted over nine months (December 2021 – August 2022), focusing on fan interactions, engagement patterns, and content creation. During this period, Luo Tianyi's official account posted 142 updates and 29 videos, allowing for a comprehensive review of fan engagement metrics, including likes, comments, and top-ranked Danmu interactions. This method aligns with previous research that integrates ethnographic observations with interview design to ensure an informed approach to data collection (Popova, 2020; Shafirova & Kumpulainen, 2021). A key event—the 10th anniversary of Luo Tianyi (July 12, 2022)—was selected as a fandom event, enabling a focused analysis of ritualised online interactions surrounding a major fandom milestone.

Semi-structured interviews were conducted with 10 fans, recruited through Bilibili-based snowball sampling. All the participants were over 18 years old, followed

Luo Tianyi's official account and actively engaged with the fandom (see Table 1). All interviewees were relatively active contributors, engaging in activities such as liking, commenting and in some cases producing original content. Among them, two participants were fan-producers, composing and sharing songs within the fan community.

Table 1. Details of those interviewed for the study

No.	Gender	Age	Education	Occupation	Level of participant
1	male	19	Undergraduate	Student	
2	male	18	Undergraduate	Student	Producer of music
3	male	28	Bachelor's degree	Office worker	Participated in offline activities
4	female	18	Undergraduate	Student	Producer of images
5	female	18	Undergraduate	Student	Producer of images
6	female	23	Postgraduate	Student	Producer of music
7	male	23	Bachelor's degree	Marketing assistant	Manager of online fan chat groups, organiser of offline activities
8	male	18	Undergraduate	Student	Producer of images and written content
9	female	20	Undergraduate	Student	Producer of images
10	female	20	Undergraduate	Student	Offline meetings with other fans

The interviews, lasting between 30 to 60 minutes, explored topics including fan entry points, engagement practices, community dynamics, and perceptions of the virtual idol industry. Given the diversity of fan experiences, semi-structured interviews allowed for both structured inquiries and flexible, open-ended responses (Gubrium et al., 2012, p. 197). The interview process stopped upon reaching theoretical saturation, meaning no new insights emerged from additional interviews. As this was a small-scale qualitative study, the goal was not to obtain a representative sample of all virtual idol fans but rather to capture a range of opinions and attitudes expressed by Bilibili users following Luo Tianyi's official account.

Interviews were transcribed and analysed using thematic analysis (Braun & Clarke, 2006). Three core themes were identified: (1) personal connections with Luo Tianyi, (2) relationships within the fan community, and (3) broader attitudes toward the

virtual idol industry. These themes were further examined using Collins' IRC framework, specifically focusing on ritual ingredients and ritual outcomes. Figure 2 shows how insights from IRC were applied to our case study.

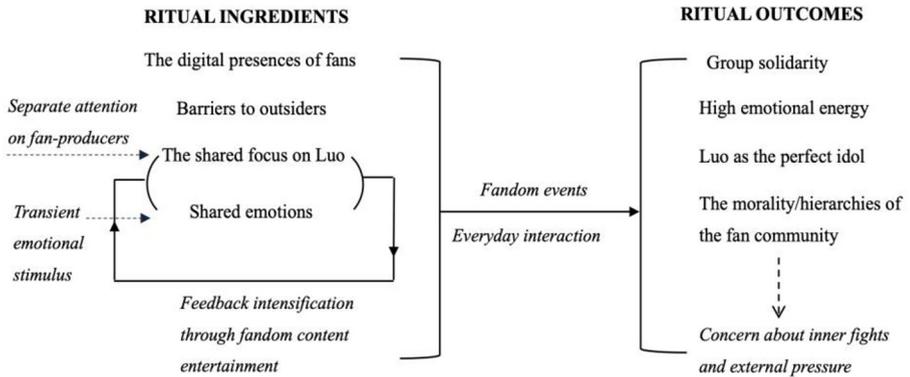


Fig 2. The IRC model (Collins, 2014: 48) adapted for the study of Luo's online fan community

6 Ritual Ingredients

6.1 The digital presence of fans

Although rituals can occur without physical co-presence, Collins (2004, pp. 53–64) emphasised the importance of people gathering in small-scale social settings or large public events, such as music concerts, to generate collective emotional energy. However, when Collins originally discussed remote communication, he referred to telephone, television, and email, which provide only limited interactive experiences. Today, the internet has largely removed many of these constraints, allowing people with shared interests to connect across time and space while engaging in a variety of interactive practices.

Luo Tianyi's fan community exemplifies this digital transformation of rituals. With over 4.4 million followers on Bilibili, fans do much more than passively consume content—they like, comment, send Danmu (real-time comments), and watch live-streaming concerts, all of which simulate real-life social gatherings. Two key reasons drive their online engagement:

First, the digital nature of virtual idols aligns with the digital presence of fans. Collins (2004, p. 59) argued that fans seek to be as close as possible to their sacred object, which, in this case, is Luo Tianyi. Since physical interaction is impossible, fans instead engage with her official account, responding to her posts—such as simple

greetings—as if conversing with a real person (see Figure 3).



Fig 3. “Good evening” from Luo’s official account on Bilibili and one fan reply

Second, the niche nature of virtual idol culture in China limits opportunities for offline interactions. Most interviewees noted that few people in their daily lives shared their interest in virtual idols, making online spaces essential for fan engagement. Collins (2004, pp. 88–89) acknowledged that remote rituals can approximate offline communication when they foster interactive, real-time engagement. In this context, the internet enables social encounters that fans rarely experience offline. Nevertheless, it is worth noting that fans do not prefer online engagement exclusively. As Collins (2004, p. 60) suggested, collective enthusiasm is strongest in physical gatherings, and many interviewees expressed disappointment at the lack of offline fan events, particularly due to COVID-19 restrictions. Interviewee 9 (Female, aged 20) mentioned that:

“I usually know other fans online. Actually, I can know very few other fans offline. If I can meet them, they usually are those who like Luo Tianyi very much.”

However, it does not mean that fans want online communication only. As an audience would develop a stronger sense of identification with collective enthusiasm on the scene (Collins, 2004, p.60), fans of Luo are also not satisfied with online communication only. Most interviewees complained that they didn’t have enough chances to participate offline activities especially with the influences of COVID-19 in recent years. Interviewee 1 (Male, aged 19) said that:

“It is very difficult for you to take part in an offline fan activity, especially in places I usually live. There are no such activities, so you can’t blame me for not attending. No opportunities for me to attend.”

6.2 Barriers to outsiders

According to Collins (2004, pp. 355–356), entry barriers help define insiders and outsiders within a community, often implying hierarchical distinctions. Within Luo Tianyi’s fandom, these barriers manifest through linguistic norms, exclusivity, and a sense of superiority over other fandoms.

One of the most noticeable barriers is linguistic differentiation, similar to the coded language observed in pro-anorexia communities (Maloney, 2013). Luo Tianyi’s fans use unique terms to refer to themselves and their idol, distinguishing their

community from others. Fans commonly call themselves “Luo Chu” (洛厨) or “little friend” (小伙伴), creating a sense of in-group identity that sets them apart from mainstream idol fandoms. This aligns with Collins’ (2004, pp. 277–278) discussion of youth counterculture, where subcultural groups reject dominant cultural norms. Interviewee 5 (Female, 18) explained:

“Actually, most people around me call ourselves ‘Luo Chu’ which originated from the ACG culture in Japan. When the official company communicates with us, they usually use ‘little friend’. Fans are more of real life (idol fans).”

Similarly, fans prefer to refer to Luo Tianyi as a “Vsinger” (virtual singer) rather than a “virtual idol”, emphasising her musical identity over her status as a digital celebrity. As virtual characters become increasingly common, this distinction helps Luo’s fans separate themselves from other digital fandoms. Interviewee 8 (Male, 18) noted:

“Because I notice you used the word ‘virtual’. Other than virtual singers, you know there are Vtubers which are virtual streamers. They also belong to virtual types, but there are real people behind them. They have rather fixed images and are controlled in a relatively subjective way.”

Although most fans admit that Luo, in general, still belongs to the category of virtual idol, they prefer to highlight the singing function of Luo as well as the creation of fan-producers. Interviewee 2 (Male, 18) emphasised that:

“Undeniably, she is a virtual idol. As long as someone likes her, she is a virtual idol. However, I personally hope she can do better as a singer. Because the only way to extend her life is creation, right?”

By defining themselves in opposition to fans of other digital idols, Luo Tianyi’s followers view their engagement as more intellectually and artistically significant than that of other fandoms. This idea of cultural consumption as “healthy” or “nourishing” has a long history in media studies (Stanfill, 2013) and is frequently used to construct hierarchies of taste. As a result, the interaction between taste-based distinction and participatory rituals further solidifies the insider/outsider divide, strengthening their own sense of community and collective identity.

6.3 Shared focus and emotions for Luo

A shared focus is essential in Collins’ interaction ritual model, as it generates collective emotions that bind participants together (Collins, 2004, pp. 79–87). Within Luo Tianyi’s fandom, this focus is centered on her unique qualities, with fans frequently citing three key reasons for their devotion: the unique voice, the Chinese-style image and the diversity in fandom content. Interviewee 2 (Male, aged 18) explained that:

“Probably because her emotions and characters are endowed by us, producers and fans. Her voice is also beautiful...I’m in China, of course I identify more with Chinese culture (embedded in Luo).”

Interviewee 6 (Female, aged 23) also mentioned that:

“The first thing must be her beautiful voice, which is the soul. Secondly, she is a virtual idol that has great diversity in creation. After all, she is defined by us fan-producers. In my opinion, it has no limitations as long as the copyright permits. Thirdly, it’s her image, which is not that important to me, but I like watching her cute image.”

As a result, interaction rituals serve as the medium through which shared focus transforms into collective emotions (Collins, 2004, pp. 107–111). Fans express their emotions in two primary ways: passively consuming Luo’s content and actively producing new content for her.

The most common practice is watching, listening, and interacting with Luo’s media, including songs, images, and fan fiction. Many interviewees described listening to Luo’s music daily, reinforcing what Collins (2004, pp. 102–140) defines as “emotional energy”—the sustained excitement and engagement that fuels continued participation. Interviewee 8 (Male, 18) stated:

“I read (Luo’s posts) every day. It’s true that every day I follow Luo’s posts. It has become a part of my daily life, a habit. When I get up without other things to do, I go to Bilibili to have a look at her updates.”

Apart from regular likes and comments, it has become a fan tradition to honour Luo’s song achievements. Songs on Bilibili (in the form of videos) with over 100,000 watches are entitled “Top-level”, those with over 1 million watches are “Legendary”, those with over 10 million watches are “Epic”. Other than basic watches, there are other standards that songs must meet. Interviewee 5 (Female, aged 18) explained that:

“These songs are required to be uploaded in a designated area on Bilibili. Human voices can’t be included in them, which means they can’t be the cooperation of Vsinger Luo and real people. Therefore, it is very strict to honour song achievements.”

In research from Wollschleger (2012), both the strictness in religion and the emotion energy of effective rituals are linked with the participation of congregation. Similarly, the strict standards of Luo’s song achievements also contributed to a special fan practice by calling on other fans to increase her video watches. In this process, Luo’s song lyrics and emojis are often used to arouse collective enthusiasm. It usually starts by a comment that consists of a song lyric sentence, an achieved number and a temporary number target. For example, figure 5 shows that 778 fans participated, they aim to call on 7120 fans in total and their final goal is 2 million watches. If other fans want to join, they will simply follow this.



Fig 4. One comment under Luo’s song video (over 1.24 million watches)

Additionally, many fans contribute original content, producing new Luo Tianyi songs and remixes. The process of collaborative music production requires cooperation between composers, lyricists, and animators, further reinforcing shared focus and emotional investment. Interviewee 2 (Male, 18) reflected on the experience:

“I think it is rather complicated (to create a song for her), because usually you can’t do it alone. Of course, some talented fan-producers may be able to do it. But people like us, each can only do one part of the song. For example, I can have Luo sing the song. Then I need to invite friends to write lyrics, to compose, to draw pictures and to edit videos.”

9 out of 10 interviewees all mentioned that they had created relevant content before. Although fans who are willing to accept interviews may be relatively more active and cannot represent the whole community, it is worth noting that fandom content creation is also significant to ordinary fans.

This section examined the ritual ingredients that structure Luo Tianyi's fandom, including the role of digital practices, barriers to outsiders, and shared focus on Luo as an artistic figure. The next section explores the outcomes of these rituals, focusing on group solidarity, emotional energy, the perception of Luo as an ideal idol, and the moral hierarchies within the fan community.

7 Ritual Outcomes

7.1 Group Solidarity

When group activities focus on a single object, they naturally cultivate solidarity within a community (Collins, 2004a, pp. 81-87). Cottingham (2012) extended the IRC theory beyond religion and found that sports fans exhibit similar patterns, strengthening emotional energy and reinforcing interaction rituals over time. This phenomenon is evident in Luo Tianyi's fandom, where shared enthusiasm for the virtual idol fosters deep social connections among fans. Interviewee 7 (Male, aged 23) describes this process:

“It is a mutual thing. You like Luo Tianyi first. Then you communicate with others in the process of listening to songs, exchanging opinions, and participating in activities. You both like Luo, and then you come to know each other. The two things complement each other.”

As previously discussed, creating fan content plays a pivotal role in strengthening fan engagement. Humphreys (2021) found that collective intimacy among K-pop fans in Cuba inspired them to voluntarily support their idols with unpaid labor. Similarly, Luo's fans communicate and collaborate in producing content, which simultaneously deepens their affection for her and reinforces community bonds. This cycle of creation and interaction ensures that group solidarity remains a driving force for repeated participation. Interviewee 6 (Female, aged 23) mentioned that:

“I produce her songs... In this process, you continuously get in touch with her (Luo's) voice, which usually deepens your feelings for her. At the same time, I also get in touch with other fans' work. In this way, I gradually know (Luo) more. The more I know her, the more I like her.”

Elsewhere, it is worth noting the degree of agency that the individual expresses in carrying out unpaid labour for 'their' virtual idol. Rather than viewing themselves as a worker for a large capitalist enterprise, they instead adopt the position of 'teacher', someone who can guide and inform the activities of the idol (see Figure 5). This is most clearly expressed in the idea that the fan can 'teach' the idol to 'sing the melody in my heart'. In most para-social relations between fan and celebrity, it is the latter whose creations (music, film, stories) move the former. In this case, we see a reversal as the fan expresses their own feelings or emotions through the production of content for the idol.

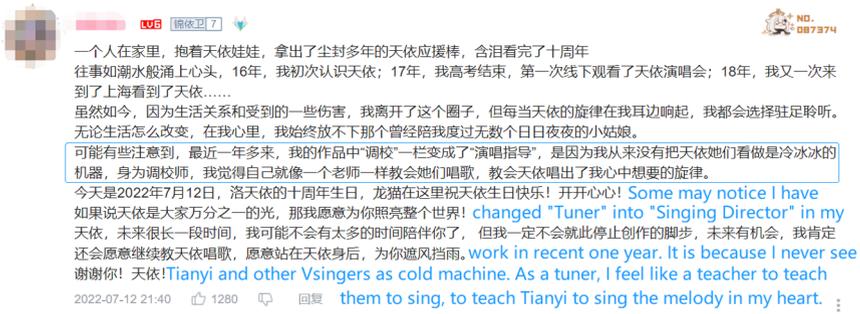


Fig 5. A fan commented with his/her creation experience as a tuner, feeling like a singing teacher to Luo Tianyi

This pattern of fan participation is widely reflected in online discussions, where fans frequently comment on their creative processes and experiences (see Figure 6). The steady flow of innovative content illustrates the fandom’s vibrancy and longevity. According to Fiske (2002), fans as people out of the industry greatly contribute to the production of popular culture and even comments/texts can be seen as their cultural production. The online concert of Luo’s 10th anniversary received over 1.8 million views and in total about 93,000 real-time comments in observation. Although danmaku (live comments) may seem meaningless for its repetition of incoherent short phrases, research from Zhang and Cassany (2020) demonstrates that it has potential coherence and users can still interact meaningfully in this way.



Fig 6. Live comments from Luo’s 10th-anniversary concert, with most of them saying “Happy birthday Tianyi”

Beyond creation, emotional energy (EE) plays a key role in sustaining these rituals. Collins (2004, pp. 118-121) defines emotional EE as the long-term accumulation of emotions that

can drive positive (high EE) or negative (low EE) actions, shaping future interactions. Research on sports fandom highlights the role of high EE in intensifying emotional bonds among physically co-present fans (Cottingham, 2012; Knijnik, 2018). In online fan communities, King-O’Riain (2021) identified EE as a crucial factor in K-pop’s international appeal, where emotional links between fans and idols, as well as among fans themselves, create a tight-knit community.

Although the discussion mainly centres around Luo, the communication itself is not constrained to a small number of fans and the emotional bond encourages them to repeat fandom practices. Interviewee 2 (Male, aged 18) mentioned that:

“The common interest of Luo Tianyi or Vsinger brings us a large number of strangers together, which makes us connected. To some extent, we even have very close connections in heart, like brothers and sisters, a sense of identification in heart. We help each other...we unite together because of the common interest.”

7.2 Luo as a perfect idol

Drawing on Durkheim, Collins (2004, pp. 37-39) asserts that a fan community’s shared focus naturally becomes its sacred object. Löbert’s (2012) research on Elvis Presley’s fandom demonstrated that idolisation can occur even in the absence of physical presence. This also applies to Luo Tianyi, who exists purely in digital form. Without human limitations, she is perceived as flawless, embodying an idealised, unchanging entity. Interviewee 8 (Male, aged 18) articulates this sentiment:

“Compared with real people, Tianyi is the purest and the only one. In one sentence, if there are a thousand Hamlets in a thousand readers’ eyes, there are a thousand Tianyis in a thousand fans’ eyes. As a virtual singer, Tianyi can be whoever you want her to be. That’s why I find Tianyi so charming.”

This notion of perfection becomes especially evident in conflicts between Luo’s fans and followers of real-world celebrities. Luo’s eternal youth and purity set her apart from human idols, as noted by Interviewee 1 (Male, aged 19):

“Once fans of real-person celebrities attacked our community and they were stunned with one sentence: after decades, when your idols are old men, our Highness Luo will still be fifteen years old. And she will never misbehave.”

Even in instances of intra-community disputes, fans do not hold Luo responsible for mediating conflicts. Interviewee 4 (Female, aged 18) explains:

“Fights inside are... because some producers may have bad characters, they may scam money from other fans or make malicious comments about others. However, it is impossible for Luo to be involved in such activities.”

As a digital prototype, Luo is regarded as a perfect idol—forever youthful, pure, and beyond human flaws or moral failings. This idea ties in with the final feature of Collins’ IRC model, ‘feelings of morality’, which dictate the legitimacy and necessity of participation in the community (Collins, 2014: 39-40). The final section will not only discuss the morality but also extend the model to focus more explicitly on questions of power within the fan community.

7.3 The morality and hierarchies within fan community

High morality implies the tendency of people to devote themselves to the group and the sacred object without considering their own benefits. This moral commitment is evident

in Luo's fandom, where fans show deep respect for fan-producers and their contributions. All the interviewees consistently acknowledge the impact of fan-producers in sustaining the community, which at the same time puts fan-producers at the top of fan hierarchy. Interviewee 5 (Female, aged 18) highlights that:

"Fan-producers of Luo actually don't have many incomes (that come from fandom content creation). They basically have their own day jobs. I think it is not easy for them, because they don't earn money (by producing Luo's songs) as a hobby and they may even need to spend money on this... They need to sacrifice much of their own time... They insist on creation. Some of them may leave because of personal life, but it is understandable. Most of Luo's fan-producers are not professionals."

As a result, the dispersion of attention unavoidably brings disputes within the fan community. Fans who only stress Luo are considered as new in the community and are criticised for their neglect of producers' devotion. Research from Lynch (2022) shows that gatekeepers of an online fan community tend to have more power to control the discourse. In this case, fan-producers as gatekeepers of Luo's fandom content also have influences on relevant discourses. Interviewee 10 (Female, aged 20) expressed that:

"We also like the character (of Luo) which carries stories and songs, but the meaning of the character is given by us, all the producers. If a fan doesn't know any producers' names, we will relatively despise (them)."

Meanwhile, the moral standards of a group are linked with the anger towards the violation in the social interaction of intercourse (Collins, 2004, p. 236). Certainly, the case of Luo and her fans can be quite different from the example of intercourse analysed by Collins. Instead of anger, interviewees showed two main kinds of concern about inner fights and external pressure, which is seen as the violation of a friendly and peaceful community. When asked what else they wanted to say, over half of the interviewees complemented their wishes for a more united fan community with harmony. Interviewee 2 (Male, aged 28) added that:

"If fans truly like Luo, they should cherish the opportunity. And so are fan-producers. They all like Tianyi and spend a lot of time on music creation, but the fights of the community make me feel pity. The community is in urgent need of solidarity to maintain the harmony, which can also support Tianyi to develop further."

Having examined the morality within fan communities and the hierarchy based on levels of commitment, I now turn to gender, as another significant role in shaping fan interactions and status. Echoing Black's (2012) study on the Japanese virtual idol Hatsune Miku, male fans of Luo Tianyi are more likely to project romantic fantasies onto her. For example, interviewee 3 (Male, aged 28) described his idealised perception of Luo:

"I think if Tianyi were a real girl, her character should be an iron hand in a velvet glove. Therefore, she seems soft outside, but she's strong inside. I also like this kind of girl."

It is common to see male fans referring to Luo as their "wife" in comments on her official social media accounts (see Figure 7).



Fig 7. Male fans calling Luo Tianyi “wife”

In contrast, female fans tend to perceive Luo as a companion or friend. Interviewee 5 (Female, aged 18) expressed this perspective:

“Although I have to admit that she in nature is a tool, she is a person who accompanies me in my mind...like a friend.”

However, these gender differences can also lead to friction within the fandom. Fan communities dominated by men—such as sci-fi fandom (Yodovich, 2020) and football fandom (Lenneis & Pfister, 2015)—often exhibit gender stereotypes and prejudices. One notable challenge for female fans is the sexualization and denigration of female characters or idols (Booth, 2010). Female fans of Luo Tianyi experience similar discomfort, particularly when she appears in provocative outfits. Interviewee 10 (Female, aged 20) voiced concerns about this issue:

“Female fans are concerned about some of Luo’s clothing. For example, one (digital) cheongsam of hers is so tight that even her belly button shows. Female fans couldn’t accept that and criticised the company. If the company intentionally pleases male fans, we think it’s the fault of male fans who dominate the fandom... We hope Luo can be more normal and more regular.”

Although female fans attempt to resist these strategies, they often feel powerless against both the subtle sexism within the community and the commercial interests that exploit it (Nisbett & Paul, 2021, pp. 25-38).

8 Virtual Idol Luo as a Commercial Success

Having examined the ritual ingredients and outcomes, this section briefly examines Luo’s 10th anniversary as a fandom event, which sheds light on the commercial success of virtual idols in China.

First of all, it is worth noting that the commercial success of virtual idol Luo Tianyi cannot be separated from the socioeconomic environment of modern China. According

to Kellner (2005), countries that participated in new technological revolutions are faced with the appearance of new spectacles in cyberspace. Fairchild (2007) also pointed out that in the new era of digital technologies, the battle for people's attention results in the growth of media spectacles involving popular idols. According to the 54th statistical report on China's Internet development (CNNIC, 2024), the number of Internet users in China had reached nearly 1.1 billion by June 2024 and the construction of digital infrastructure had continued to expand and deepen. It is no wonder that there are over 4.4 million fans following the official account of Luo Tianyi on Bilibili which is the largest digital platform in China for ACG culture. When compared with 'real' singers, her achievement is remarkable for in terms of the attention she commands, along with her appearances at Spring Festival Gala and Beijing Olympics.

Secondly, the media spectacle that Luo gave rise to is also closely linked with the commercial operation of the company that developed her. Kellner (2005) pointed out that an entertainment celebrity in media spectacle was almost equal to a company brand or a commercial product by selling consumers' images and lifestyles. Consequently, Luo Tianyi was promoted by the official company not only as a virtual idol but also as a commercial product. On the one hand, the nature of Luo is nothing more than a computer program. Her songs are based on the production of a music software called Vocaloid and therefore fan-producers are consumers at the same time (Yin, 2018). Interviewee 6 (Female, aged 23) who is also a fan-producer directly pointed out that:

"Vocaloid (voice database) is the basis of a virtual singer. I think it should be the top priority of the official company...To be honest, from a rational perspective, it (Luo Tianyi) is a product. If the quality of a product is not good, it is the responsibility of the manufacturer."

On the other hand, the company uses Luo as advertising endorser for the cooperation with other brands. When asked about the advertisements during the online concert, almost every interviewee had deep impression of Luo's main endorsement for a credit card. Under this circumstance, idols in media spectacle can be perceived as the connection between real products and audiences/consumers (Galbraith & Karlin, 2012). All the interviewees showed general understanding towards Luo's commercial activities for her future development and perceived her endorsements as the recognition of the public. Interviewee 3 (Male, aged 28) clearly expressed his support that:

"The cooperation of Tianyi and the bank is impressive for her image as a heroin. The song also sounds nice...I'm pretty proud of this. Tianyi now is really successful. As people I meet at work don't really know virtual singers, it completely depends on the official promotion (here refer to ads). One's own effort is not enough."

Nevertheless, fans also have suggestions for the choices of endorsements. Interviewee 9 (Female, aged 20) mentioned that:

"I support her to endorse products. As long as she wants to develop, she will need more sponsors. But I do hope the ads fit her character settings and the company doesn't take ads blindly. After all, some ads really don't suit her. I really support her to take ads. After all, fan-producers also need money to survive."

To sum up, based on the socioeconomic environment of modern China, the official company promoted Luo with commercial operation including endorsements. As a result, the commercial success of Luo presents herself more as a product rather than an idol. Fans are willing to support her endorsements for the better development

of Luo as well as fan-producers, but they also have criticism towards inappropriate ads, especially purely money-oriented ones.

9 Conclusion

By extending Collins' Interactive Ritual Chains model to the digital environment, this study explored the practices and experiences of virtual idol fans in China, highlighting how they function as both consumers and co-creators. Emotional rituals play a crucial role in maintaining online fan communities as well as sustaining the development of virtual singers. The case of Luo Tianyi, one of the most popular and long-standing Chinese virtual idols with over 4.4 million domestic followers, was chosen to analyse online fan engagement, community dynamics, and fan hierarchies. A mixed-methods approach was adopted, including semi-structured interviews with 10 fans and digital participant observation of 142 official posts from Luo's Bilibili account.

While Collins' original framework emphasised physical presence, digital practices in Luo's fandom replaced in-person interactions. Online engagement, linguistic norms, and exclusive knowledge served as entry barriers to outsiders, reinforcing community identity. Luo Tianyi functioned as the primary focus of fan attention, with shared emotions emerging through both content consumption and fan production.

In terms of ritual outcomes, four main aspects were identified: group solidarity, high emotional energy, Luo as the "perfect idol," community morality and hierarchies. Group solidarity motivated fans to continue producing and supporting each other, with emotional energy reinforcing daily engagement. Notably, two types of fan-idol relationships emerged—romantic and friendly—largely shaped by gender. Male fans were more likely to develop romantic attachments to Luo, whereas female fans viewed her as a supportive companion.

A key theme that emerged was the hierarchy within the fandom, structured around both gender and fan practices. Male fans were more accepting of Luo's sexualised portrayals, while female fans resisted such representations and advocated for a more "wholesome" image. This gender dynamic often led to tensions, particularly regarding the sexualisation of Luo, which male fans tended to accept or encourage, while female fans criticised. Additionally, fan hierarchies were evident in the distinction between lurkers, active consumers, and fan-producers. Fan-producers, who create original content such as music and videos, occupied the highest status, often serving as gatekeepers of the community. In contrast, passive fans who merely observed or consumed content without engaging in creative production were viewed as lower in status.

The study also examined Luo's 10th-anniversary celebration as a fandom event. Luo's commercial success is deeply tied to China's socioeconomic environment. Fans generally accepted her commercial endorsements as markers of her continued success. They engaged in online concerts by purchasing collectibles and participating in real-time discussions, further strengthening fan-idol relationships and mirroring the accumulation of emotional energy observed in daily fandom practices.

While this study provided valuable insights into virtual idol fandom, several limitations must be acknowledged. First, the research was based on a small sample,

limiting its generalisability. Future studies could adopt a broader sample size and incorporate quantitative methods, such as surveys, to gather demographic data. Second, the study focused exclusively on adult fans, neglecting younger audiences who may experience fandom differently. Third, while gender differences were explored, other variables such as age, class, and ethnicity could be examined in future research. Additionally, the case study focused solely on Luo Tianyi, leaving room for comparative research across different cultural sectors and countries. Lastly, female fans appeared less active in the interview process, suggesting the need for further research on their perspectives and engagement patterns.

As virtual idols continue to rise in cultural and commercial significance, their influence on fan communities, online culture, and media industries remains a crucial area for future research. This underscores the increasing importance of digital fandom in shaping new business models and creative practices, offering valuable insights into the evolving landscape of cultural production in the digital age.

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