Research on Fitness Live Broadcast Interactions from the Perspective of Ritual Chain

-- Taking Liu Genghong's Fitness Live Broadcast on Tik Tok as an example

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Abstract. During the COVID-19 pandemic, the public's demand for home-based fitness became more eager, and the interactive fitness mode of live broadcast + fitness rose rapidly. Among them, the live fitness of Liu Genghong quickly became popular, setting off a nationwide fitness wave. From the perspective of Collins' interactive ritual chain theory, this paper analyzes the interactive mechanism in Liu Genghong's live fitness room by using the research methods of case analysis and participatory observation of network ethnography. It is found that the audience formed a solid group unity in this ritual, and the group symbols formed by the anchor and body language not only enhanced individual emotional energy but also deepened people's identity in the ritual.

Keywords: Interactive ritual chain; Live broadcast fitness; Interactive mechanism.

1. Introduction

Relying on the rapid development of Internet technology, the demand for network users is increasing, showing a personalized and diversified form. Thanks to the development of the Internet, the new mode of "livestreaming+" during the COVID-19 epidemic quickly covered various fields such as live lectures, live delivery, and so on, and met people's various needs without leaving home. Based on the national strategy of national fitness and the eager demand of public fitness at home, the mode of "livestreaming + fitness" emerged, and some live broadcast platforms and anchors have joined the profession of live fitness.

According to the relevant report, by April 2022, the number of fitness anchors on the platform of Tik Tok exceeded 60,000 . The most representative one is Liu Genghong. He and his wife ViVi lead netizens to exercise and burn fat five days a week. On February 18th, 2022, the number of people watching the first live broadcast in Liu Genghong's live broadcast room reached 247,300, and the number of fans rose by nearly 8,000, reaching more than 10 million in 7 days . With the original version of the shuttlecock exercise of Compendium of Materia Medica, Liu Genghong became the most popular anchor on Tik Tok .

The live broadcast has only emerged in China in the past two years, and its characteristics of spanning time and space and immediacy greatly meet the urgent fitness needs of people. Some scholars have realized the importance of exploring live broadcast fitness, but most of them analyzed the development status and strategies of live broadcast fitness from a macro perspective and put forward suggestions for its development mode. Basically speaking, a live broadcast is an instant communication between the anchor and the audience. Different from other real-time interactions, due to the long-term characteristics of weight loss and shaping, the interaction between the two sides of live fitness also has certain psychological and temporal continuity. At present, there is no in-depth research on the overall interaction mechanism between the anchor and the audience, such as how the interaction happens, how the interaction process goes on, and what the interaction results.

Therefore, based on Collins' interactive ritual chain, taking the live broadcast of fitness anchor Liu Genghong as an example, this paper focuses on the real-time interaction between the fitness anchor and the audience, analyzes the elements, contents, and results of its interactive ritual chain, and reflects on the interactive ritual of live fitness on the Internet. This study is conducive to enriching the research of interactive mechanisms in live fitness and providing enlightenment for the future development of live fitness through the research of real-time interactive relationships.

2. Literature review

2.1 Research on interactive ritual chain

2.1.1 The status quo of research abroad

At present, there have been many studies on the theory of interactive ritual chain in academia, with a wide range of research fields, and the overall characteristics are interdisciplinary and cross-cutting.

The emergence of the interactive ritual chain theory can be traced back to the popular ritual analysis and symbol research in the late 19th century, which has a distinctive classical religious color. The scholars who laid the foundation for the formation and development of this theory are Durkheim and Erving Goffman. Durkheim discussed the interaction of scenes in daily life from a microscopic perspective. His focus was on religious ceremonies, which he regarded as an important element in religious culture . Goffman regarded ceremony as a form of interaction designed and followed by individuals, which has the symbolic significance of his behavior. He believed that the interactive ceremony was a kind of planned expression of intention, which played a very important role in the daily life of the group or the cohesion of the group .

Inheriting Durkheim's and Goffman's related thoughts, and combining the theory of parody and symbolic interaction with related sociological and psychological theories, Randall Collins, an American sociologist, integrated macro and micro social theories in his book Interactive Ritual Chain published in 2004, and analyzed interpersonal behavior. Taking the situation as the starting point of theoretical exploration, he focused on the mechanism of the interactive ritual chain and established a causal interactive ritual chain model.

He believes that the interactive ceremony is a process that allows participants to pay attention so that they can perceive the micro-rhythms and emotions of each other's bodies. Its core mechanism is that participants have a high degree of mutual concern and emotional connection, so they form a sense of membership and emotional energy associated with their cognitive symbols, which can be used as new resources to participate in new interactive ceremonies, thus promoting the generation of a series of interactive ritual chain results. This study makes up for the gap in previous studies that only emphasized the concept and social function of the ritual, but lacked a systematic and comprehensive explanation of the operation mechanism of the interactive ceremony.

Under the influence of the theory of interactive ritual chain, foreign scholars analyzed and discussed the application of interactive ritual chain in practical situations from the micro-situation, and extended it to more macro issues such as economics and sociology. The research scope is wide, ranging from religion and philosophy to sports, economy, and other social fields, with fruitful research results. In recent years, some papers have been discussed in combination with tourism, psychology, and emotion.

Davide Sterchele applied interactive rituals to tourism research and pointed out that interactive ritual chains can make people produce good memories of tourism, and enriched the theoretical model of interactive ritual chains, making it more suitable for future research . David Boyns and Sarayh Luery investigated the generation of emotional energy problems in interactive ceremonies, conceptualized them and divided them into positive and negative directions, and discussed the influence of the group on positive and negative emotional energy .

2.1.2 The status quo of research at home

Due to the differences in cultural form and communication environment, the applied research on the interactive ritual chain in China started late, and the previous research mainly focused on the interactive ritual theory itself.

In 2006, Wang Peng and Lin Juren put forward that Collins' interactive ritual model was closely related to many sociological theories, and provided some thoughts for reasonable theoretical reference . In 2007, Zhang Jun and Chu Qing discussed the differences between traditional micro-sociology and macro-sociology on the basis of preliminary analysis and evaluation of interactive ritual chain theory .

The release of the Chinese version of Interactive Ritual Chain has brought this theoretical research to a new period in China. From 2010 to 2015, the elements in the interactive ritual chain theory were applied in various fields such as school education, network marketing, economic management, etc., to assist in solving explicit social problems. In 2005, Fang Liping used the interactive ritual chain theory to discuss the educational problems in school communication, which provided new thinking for the research of educational problems . In 2012, Lu Haojing used the interactive ritual chain theory to explore the role of individuals in social communication and analyzed the influence of virus marketing on individual communication and the behavior rules of online groups . In 2012, Li Qiao, and Wang Jianhua extended the application of the interactive ritual chain. They proposed that physical absence, different focus, and lack of emotional sharing would have an influence on the effectiveness and future development of farmers' business cooperation .

At present, most scholars focus on the social communication phenomenon in the network media environment. Since 2016, with the development of the Internet and the progress of the live broadcast platform, the phenomenon of physical absence has become more and more obvious. How to use the interactive ritual chain theory to explain this new phenomenon has become many scholars' explorative direction, and a large number of research results have emerged in this field, covering social media, fan culture, live videos, short videos, and so on.

In 2015, Yu Liufang proposed that users will have strong dependence on their interaction with social media for the needs of emotional and symbolic capital growth . In 2018, Ma Mengjiao analyzed the closed-loop network fan culture communication mode and its deep-seated communication system from the four elements of the interactive ritual chain . In 2020, Qiang Yuexin and Sun Zhipeng explored the formation mechanism and effect of the official live broadcasts with goods from the theoretical perspective of an interactive ritual chains . In 2022, Huang Yitao took the short video of bilibili cuisine as an example and summarized the characteristics of food culture video communication by using the interactive ritual chain theory .

To summarize, since the establishment of the interactive ritual chain theory, the research direction of foreign scholars has developed from the theory itself to the application of the theory in practical situations. Scholars in China have expanded from micro-theoretical research to the application of this theory in macro-social issues. In addition, with the development of the times and the progress of Internet technology, the exploration direction of this theory in academia is constantly updated.

2.2 Fitness live broadcast research

Nowadays, the live broadcast industry is developing rapidly. Its characteristics of real-time communication and interaction, which are not limited by time and space, are highly compatible with the elements of the interactive ritual chain, such as group gathering, group identification, focus of attention, and emotional state.

At present, the literature analyzing live broadcast from the perspective of interactive ritual chain theory has been established, but most of the research focus on the live broadcast of sports events, live broadcast with goods, and so on. In 2019, Pu Yingping showed the operative mechanism of live broadcast interaction of sports events from three aspects, that is, the components, content, and effect of interaction from the perspective of an interactive ritual chain . In 2022, Chen Qian analyzed the components of the interactive ritual chains in live broadcast scenes. Taking a case as an example, she made a preliminary exploration of the interactive process of Li Jiaqi's Taobao live broadcast .

Under the background that national fitness has become a hot topic during the COVID-19 pandemic, the popularity of the live broadcast industry has also brought new ideas to the development mode of national fitness. Some researchers have realized the importance of investigating live broadcast fitness from the perspective of interactive ritual chain theory, and the existing research on live broadcast fitness mainly focuses on its development status, strategy analysis, and development mode discussion. In 2022, Shi Yinyue put forward that the mode of live broadcast + fitness has serious problems of homogenization and nonstandard speech. In the future, we should raise the threshold of online coaching and pursue live broadcast differentiation .

In 2022, Long Huanyu and Zhong Liping deeply analyzed the current operation status and existing problems of live broadcast fitness and put forward the development direction of the industry in the post-pandemic era . In 2022, Fan Jing pointed out that under the upsurge of online fitness, there are still some phenomena such as pan-entertainment, blindly following the trend, and alienation of commercial interests, and it is urgent to find a development path that is not swallowed up by flow .

However, academia pays less attention to the fitness live broadcast interaction. As an exception, Guo Jinmeng analyzed the ritual interaction characteristics of live fitness from four aspects: common presence, access mechanism, the focus of attention, and emotional energy. However, it does not further analyze the interactive content and results of live fitness and lacks reflection on the interactive ceremony.

Real-time interaction between the anchor and the audience is a very important aspect of live webcasts. Therefore, in recent years, it has become more and more obvious to examine the interaction between the anchor and the audience in the context of an interactive ritual chain. However, the particularity of online live fitness interaction lies in the long-term characteristics of slimming and shaping itself, and the interaction between the two sides of live fitness also has certain psychological and temporal continuity.

Therefore, from the perspective of interactive ritual chain theory, this paper focuses on the real-time interaction between the fitness anchor and the audience, and analyzes the various elements in the interactive ritual chain and their results. Meanwhile, this study will also reflect on the interactive ritual of online live fitness and put forward development strategies.

3. Research methods

Taking case analysis as the breakthrough point, this paper discusses the live fitness interaction from the perspective of an interactive ritual chain by using the network ethnographic research method of participating in observation.

Case studies mainly focus on specific cases, and strive to grasp the information and situation of cases in a deep and comprehensive way, so as to understand their complexity, integrity, and contexts . Focusing on short video platforms such as Tik Tok and Aauto Quicker, Liu Genghong is regarded as the first anchor to become popular quickly because of live fitness . Its live broadcast interaction has certain representativeness in the field of online live broadcast fitness, so it is of great significance to take it as a research case. Network ethnography is a kind of participatory observation based on an online field survey, and its focus is to determine and investigate the survey objects through participatory observation of network fields . Through participatory observation, we can effectively pay attention to the interactive content, interactive process, and situation of live fitness in real-time.

From May 18th to September 6th, 2022, the author made a participatory observation in Liu Genghong's live broadcast room of Tik Tok platform, focusing on the real-time interaction between the fitness anchor and the audience, understanding their internal behavior under the cultural phenomenon of interactive rituals and investigating its interactive content and its results. At the same time, the present study also reflects on the interaction of live broadcast fitness.

4. Analysis of interactive rituals of fitness live broadcast

4.1 Components of interactive rituals

4.1.1 Group gathering: Virtual physical presence based on the Internet

In essence, ritual is a process of personal experience, that is, people physically gather in the same place to participate in the process of ritual. The premise of the formation of the interactive ritual chain is the coexistence of two or more bodies. In the Internet era, various media platforms have created a virtual scene, and the audience can enter the virtual scene at the same time and in different places, thus achieving the synchronic existence of individual bodies . Network live broadcast creates a virtual space through the live broadcast port, which gathers the anchor and the audience together, and at the

same time meets the audience's interactive needs. The audience can also witness how many people are participating at the same time, which creates a scene to watch with others. For example, the audience in the live broadcast room can participate in the interaction by sending bullet screens, giving gifts, liking, etc. to meet the individual's expression needs. Although it is not a face-to-face communication, sending text messages through the network realizes the sense of the physical presence of both parties, and enhances the mutual connection and communication between individuals.

4.1.2 Exclusion of outsiders: Audience group identity

Collins pointed out that a complete and successful interactive ceremony should define a range for the interactive participants, and the people in the interactive ritual are called insiders. Those who are not involved can be called outsiders . By dividing the boundaries of outsiders, on the one hand, it can ensure the orderly conduct of rituals, and on the other hand, it can better achieve the effect of accurate communication. Although the entry threshold of Tik Tok live broadcast room is lowered, in fact, the mode of the live broadcast room is a natural barrier. First of all, the interaction between the anchor and the audience takes place entirely in the live broadcast room, which results in the exclusion of users who have not entered the live broadcast room. Users can watch fitness activities when they enter the live broadcast room without logging into their accounts, but they cannot participate in interactive links such as sending likings and bullet screens in the live broadcast room, which realizes strict restrictions on outsiders. Secondly, the coach's stream aura can play a role, and users in the live broadcast room can be screened according to different user viscosities. The most important point is that the cognitive symbols with unique meanings in different live broadcast rooms, such as "cracking off fat", "paddling" and "practicing more" in Liu Genghong live broadcast room, can only be known by the internal audience, while the audience outside the live broadcast room, that is, outsiders, have a cognitive gap.

4.1.3 Mutual concern: The audience's mutual focus on reducing fat and shaping

Spontaneously paying attention to each other's focus is the key factor of the interactive ritual chain. The audience's common concern for an activity can lead to interactive behavior. In the process of interactive rituals, people can understand each other's ideas by participating in common activities, conveying and sharing information with each other . The partition of the live broadcast room for outsiders makes it a relatively closed environment, and the audience can easily focus on aerobics and other related symbols. Most of the interaction between the two sides revolves around content related to fitness. In the atmosphere created by the anchor's infectious language, rhythmic music, and driving body language, the audience unconsciously concentrated their attention, resulting in a common focus.

4.1.4 Emotional connection: The shared emotional state

When different people pay attention to something at the same time, they will be attracted by each other's feelings, which leads to emotional resonance. The success of the ritual requires a high degree of mutual attention and emotional connection, in order to achieve reasonable recognition . For example, Liu Genghong's wife ViVi is often lazy in practice. However, exercising to reduce fat is a process that needs long-term persistence, and the public often gives up because they cannot persist. Therefore, the appearance of this kind of character will resonate with the audience. Through live broadcast, a real-time communication mode, the audience's mutual emotional identity is enhanced, and to a certain extent, this emotion will migrate and be transformed into the recognition of the anchor's emotional identity, thus realizing emotional sharing and connection.

4.2 Interactive content analysis

Through live fitness, the communication and interaction that were difficult out of external reasons such as time and space in the past can be easily completed on the Internet, while the users of the Internet can achieve instant coexistence through close network nodes, thus constituting the basic elements of the interactive ritual chain.

Through participatory observation, the present study found that the interactive content between the two sides has a distinct function and feedback relationship. The anchor's language and body movements with strong interaction have achieved companionship to the users, while the mobile bullet screens express the feedback interaction of the users.

First of all, the language and body movements of anchors realize companion interaction. On the one hand, in the live broadcast room in Liu Genghong, "the fat at the waist is rattling off, and I want the mermaid line and vest line" and "you choose your clothes or vice versa", the admonishing slogan will make the audience feel guilty about not exercising, and quickly mobilize their passion for participation. On the other hand, when Liu Genghong and his wife practiced together, they teased each other and exaggerated body movements eased the boredom of exercising. While entertaining, they skillfully focused the audience's attention on fitness itself. Different from the traditional TV fitness or aerobics videos, the anchor's body movements, and language have a strong driving force, which can realize the audience's real-time feedback and give the audience company.

Second, the mobile bullet screen expresses strong virtual group interaction. The original meaning of bullet screen refers to the fire net formed by dense bullets on the battlefield, and it is extended to live broadcast, that is, the real-time comments published on the top of the screen and covering the original video. The audience can communicate their views, problems, or emotions by publishing written symbols, thus realizing interaction with the anchor . By summarizing and observing, the present study divides the contents of live broadcast bullet screens in Liu Genghong's live broadcast room into three categories. First, the interaction between audiences, such as "Liu Genghong's girls rush", and the bullet screen continues to develop around the topic of fitness. In the process of interaction, an opinion leader often urges other audiences to join in the discussion, and "speaking with the same voice" leads to collective recognition. Second, the fitness punching, such as the bullet screen of "the XX day of follow-up practice", is constantly updated, and most of them are long-term participants who give positive feedback. The third is the evaluation of some elements in the live broadcast, such as "how beautiful ViVi is today", and "what songs are played today", which reflects the audience's self-expression needs in the virtual social space. Therefore, compared with the general interactive ritual, the group emotion and information in the online live fitness interactive ritual are more interactive, and the content of the communication is richer and more diverse, which realizes the extension of emotional strength and the satisfaction of needs.

4.3 Results of the interactive ritual

When the various elements of the interactive ritual are efficiently integrated, and a high degree of mutual concern and emotional sharing is achieved, the individuals attending the ritual will also have corresponding effects. This study found that the interaction in live fitness meets the components of the interactive ritual chain. With mutual attention and emotional connection between the audience and the anchor, members will gain group unity. In this process, the individual's emotional energy is constantly accumulated, and then group symbols and moral sense are born.

Firstly, group participation obtains individual emotional energy. Individual emotional energy is self-confidence, enthusiasm, and positive action, while those who participate in group interaction will acquire emotional support . During the ritual, members communicate around a common focus, thus generating emotional resonance and forming a common emotional experience. For instance, if ViVi cannot participate in aerobics because of injury, the audience will ask "why didn't Sister ViVi come" and "ViVi should have a good rest". When Liu Genghong mentioned that it is not easy to take aerobics, reminded everyone of the essentials, and encouraged them to stick to it, the audience would send a bullet screen saying "the coach worked hard" and "it is not easy". Liu Genghong also encouraged everyone to stick to it, participated in fitness, and increased their emotional energy.

Secondly, group interaction produces group unity. When an activity attracts the attention of the audience, stronger cohesion is possible . At the beginning of the live broadcast in Liu Genghong, the first bullet screen sent by the audience is "punching in" and "coming". At the end of the live broadcast, the audience will send "being here at 7: 30 tomorrow night" and so on. This kind of group interaction

will make the audience feel a strong sense of unity. The goal of the audience's personal fat reduction and shaping is strengthened in group interaction, and its significance lies in that audience's identity is gained, while the boundaries with outsiders become clear. The audience not only gained high emotional energy but also strengthened their sense of belonging to the group, thus promoting long-term group unity.

Thirdly, sharing group symbols promotes group identity. As a kind of "sacred thing", group symbols are respected by people who are full of group cohesion, and they will defend symbols from being despised by outsiders or betrayed by internal members . An anchor is a symbol that can stimulate the audience. Taking Liu Genghong as an example, in the field of fitness live broadcast, as a symbol, he has been recognized by society and has a certain symbolic significance. As the focus of attention with emotional connection, symbols are not limited to the situation of short emotional intensity. Language symbols created by Liu Genghong are also part of group symbols. Simple and powerful slogans, such as "come on", "one more time" and "the fat around the waist clicks off", can effectively drive the audience's passion, make them recall their initial intention of burning fat and shaping, and strengthen their sense of group identity, so as to persist.

Fourthly, maintaining group symbols and unity produces a sense of morality. Collins believes that when someone tries to destroy group symbols, they will be criticized by other internal members. At the same time, moral sense will inspire group members to maintain group symbols and produce group unity . If the audience makes some remarks that discourage individual enthusiasm or disrespect the anchor, other participants will refute them for the purpose of maintaining group symbols, and arousing strong group unity to ensure the smooth progress of the interactive ritual.

5. Discussion and conclusion

This paper mainly focuses on the real-time interaction between the fitness anchor and the audience. Through the analysis of the components, contents, and results of the interactive ritual in the live broadcast room, it is found that the audience formed a stable group unity through spontaneous punch-in and interaction in the comment area. Group symbols formed by anchors and body language not only enhance the emotional energy of individuals but also deepen people's sense of identity in the ritual.

It is also found that the relationship between the anchor and the audience cannot achieve an equal relationship in the theoretical sense. In the live broadcast room, there is interaction stratification between the anchor and the audience. In the live broadcast room, the anchor is not only a participant, who actively interacts with the audience, but also a controller of the rhythm and process of the live broadcast room, and plays a leading role in the whole interaction process. The audience is in a state of passive participation in interaction and unequal interaction status.

Meanwhile, there are some practical problems in live fitness. On the one hand, some fitness anchors lack the teaching mechanism, and the effects of fitness on individuals are different due to the difference in individual physique, standardization, and intensity of movements, so the risks brought by it are uncontrollable. On the other hand, there are some phenomena such as pseudo-science popularization and playing pornographic edge ball among live fitness anchors. Therefore, in the specific practice, the platform should strictly carry out the qualification examination of the fitness anchor, and the anchor should strictly demonstrate the professionalism of the action. Simultaneously, the platform should control the direction and tone of the live broadcast room, and the anchor should continuously output truly bright and valuable content to form a long-term interactive relationship.

In addition, it is worth pointing out that the network ritual is a brand-new situation. In this situation, group participation is disembodied, virtual, or as an extended medium for people to participate in the ritual of the situation. The audience is not physically present, but real-time interaction satisfies the requirement of being present in person and contributes to the result of interactive rituals. This virtual presence enriches and extends Collins' theoretical connotation to a certain extent. This paper

discusses the interactive ritual elements and mechanisms of live online fitness, and more interactive connotations and mechanisms under the new network situation need to be further analyzed.

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