

Study on the mechanism of CP fan participation on their purchasing behavior: take Detective Academy as an example

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ABSTRACT

The aim of this study is to explore how CP fans' engagement styles influence their purchase decisions in the Famous Detective Academy, and to further explore and analyse the rationale behind the role. Using a number of theoretical frameworks, including emotional identity and social identity, this study exposes how fans' purchase decisions are influenced in terms of emotional engagement and social interaction. It is found that CP fans establish an emotional bond through emotional empathy towards the programme characters, which in turn inspires purchase intention; on social platforms, interaction and collective identity both enhance fans' willingness to buy and drive their purchasing activities. Through in-depth analysis of fans' behavioural patterns, this study successfully constructs a mechanism model describing how fans' engagement behaviours affect purchase decisions in emotional identity and social identity, and reveals the commercial transformation of the entertainment industry, thus promoting the common influence of fan economy, CP culture and other social identities.

KEYWORDS

CP culture; fan behaviour; purchase decision; fan econ

1 Introduction

CP culture (Couple Pairing Culture) originated from the Japanese ACGN (animation, comics, games, novels) circle, with the popularity of the Internet, this culture has spread rapidly around the world, and gradually infiltrated into film and television dramas, variety shows and other forms of entertainment. CP culture through the virtual couples or celebrity couples, inspired by the fans of the emotional identity and attention. By pairing virtual couples or celebrity couples, CP culture inspires fans' emotional recognition and concern, forming a specific fan base. In puzzle programmes, such as Detective Academy, the integration of CP culture not only enhances the emotional resonance of the audience, but also promotes the programme's market influence and economic benefits through the active participation of fans. The purpose of this paper is to explore how the participation behaviour of CP fans in Famous Detective Academy affects their purchasing decisions, and to construct a model of the influence mechanism by adopting a qualitative analysis method and combining case studies, literature review and practical observation, in order to provide a theoretical basis and practical guidance for the programme producers and brand merchants in terms of their marketing strategies.

2 Theoretical Basis and Literature Review

2.1 Theories and classifications of fan participation behaviour

Fan participation behaviours refer to the various forms of activities shown by fans in cultural production, consumption and social interaction, and these behaviours play an important role in the fan economy. According to the theory of fan culture and the theory of participation culture, fan participation behaviours can be divided into several types such as emotional participation, interactive participation and economic participation. Emotional participation refers to fans' deep emotional connection with idols or works through emotional identification and idealisation, etc. This emotional investment drives fans' loyalty to idols and their desire to buy their related products. Interactive engagement, on the other hand, involves fans interacting with idols, other fans or brands on social platforms, and participating in the activities of the fan community through such behaviours as commenting, liking and retweeting, thereby further enhancing social identification. This engagement allows for an interactive relationship between the fan and the brand or programme, which in turn facilitates the formation of a purchase decision. Economic participation is mainly manifested in fans' direct support for idols or their related brands through purchasing goods, participating in rewarding, donating and other behaviours. Economic participation is not only an extension of fans' emotional participation, but also an external manifestation of fans' identity, in which fans express their support and love for idols through economic behaviours.

The motivation of fan behaviour mainly comes from factors such as emotional drive, social demand, and cultural identity. Cao Rui (2020) found that fans' emotional and social identities significantly enhanced their intention to consume related products. Emotional drive motivates fans to establish an emotional level of connection with their idols, social demand motivates fans to actively interact on social platforms, and cultural identity allows fans to express a sense of

belonging to a specific culture in their purchasing behaviour. These engagement behaviours have different degrees of influence on purchase decisions, with emotional engagement enhancing purchase propensity, interactive engagement boosting brand loyalty, and economic engagement driving consumption behaviours. Therefore, fans' participation behaviours are not only a reflection of their emotional needs, but also become an important force to promote consumption and economic benefits. And early studies focused on emotional purchase and social purchase behaviours, emphasizing that the emotional connection between fans and idols is an important factor in prompting fans to engage in consumption (Smart, 2018).

2.2 Links between the theory of buying behaviour and the fan economy

Theories of consumer buying behaviour include two main aspects: rational and emotional buying. Emotional buying theory points out that consumers' purchasing decisions are not only influenced by rational factors, but also driven by emotional factors. Emotional purchasing usually stems from consumers' emotional recognition of a brand or product, especially among groups with close emotional ties, and fan groups are typical emotionally driven consumers. Social purchasing theory, on the other hand, emphasises that consumers' purchasing decisions are often influenced by social interaction, especially in social platforms and fan communities, where fans' purchasing behaviours are often driven by factors such as social identification and group influence.

CP fans' purchasing behaviour is facilitated by a combination of both emotional engagement and social identification in the context of the fan economy. CP fans are deeply emotionally invested in their idols or characters, and this is particularly evident in their emotional purchasing process. This emotional identification makes them more loyal to the brand and the product, which leads to an increased willingness to purchase. In addition, social shopping behaviours further contribute to the formation of purchase decisions through interaction and communication between fan groups. Using emotional and social interactions to shape a distinctive consumption habit is the core value of the fan economy. Researchers have found that fan groups can not only promote the popularity of idols or brands, but also form a stable consumption pattern by purchasing related products and participating in brand interactions, etc. (Wang, 2022). CP culture, as a core part of the fan economy, can further promote the popularity of related brands and products in the market, and stimulate the fans' desire to purchase through emotional resonance and identity recognition. So CP culture not only pulls the growth of fan economy, but also shapes a unique consumption pattern of fan groups.

3 Analysis of the programme "Famous Detective Academy" and CP's fan base

3.1 Programme characteristics and audience targeting

Famous Detective Academy is a variety show with deduction, entertainment and intellectual challenges as its core content. The basic structure of the programme covers plot design, task assignment, teamwork and puzzle solving sessions. Viewers can experience the fusion of entertainment and intellectual challenge through the interaction of the characters and the advancement of the plot of the programme, which is a blend of many ways of deduction, successfully igniting the enthusiasm and interest of viewers' participation. The interaction of the characters in this programme naturally builds a bond between them, thus gaining emotional resonance among the many viewers.

Famous Detective Academy has a target audience of teenagers and adults, especially those aged 18-35. This group usually shows a strong interest in logical deduction, plot layout and relationships between characters, and they are used to participating in the programme's discussions and interactions on social media. According to the relevant viewing statistics, the programme's ratings and interactions are high, and the fan base in particular is very active on social media platforms. A deep emotional bond has been established between these fans and the characters of the programme, which in turn forms the basis of CP fans.

The programme's blend of entertainment and intellect, with a good combination of deductive tasks and interpersonal relationships, has succeeded in attracting a large audience, especially young people. In addition, the interactions between the characters in the programme have laid a solid foundation for the CP culture. Audiences formed CPs for the characters in the programme and posted self-created CP videos on social media, thus increasing topic discussion and bringing out deep emotions, further stimulating participation.

Through the above analysis, the programme has successfully shaped the foundation of CP culture by combining its

Table 3-1 Audience Age Groups and Programme Viewing and Interaction Data

age groups	Ratings (%)	Interaction rate (%)	Main points of interest
18-24	35	50	Reasoning, Character Relationships, CP
25-30	40	55	Plot design, reasoning interaction
31-35	25	45	Fun programme, character interaction

featured content and the interests of young viewers, which further promotes the emotional commitment and consumption behaviour of the fan base.

3.2 CP characterisation and dissemination methods

Famous Detective Academy is one of those shows where CP characterisation is mainly done through the show's elaborate design combined with the actors' interactions. This programme shows the strong chemistry between the artistes through the combination of well-designed episodes and character setting, reasoning tasks and interactive sessions, creating the illusion of a virtual couple to the audience. For example, in the plot of tacit co-operation tasks and emotional conflicts, the interactions between the artists naturally attracted the audience's attention, and the fans began to emotionally attach themselves to these characters, thus forming the initial development in CP culture.

Through the artistes' authentic interpretations and the deepening interactions in the programmes, fans have formed cp groups for the artistes in order to support their emotional needs, and they have become the focus of discussions and pursuits. Social media has become the main communication channel for these CP combinations. Fans can share exciting moments and interactive discussions at any time during the programme, and post secondary creations, pairing diagrams, character analyses and other related content through social media platforms such as Weibo, WeChat, and Jittery Yum, which further promotes the dissemination of CP culture. Especially when the programme is broadcast, often the attention of related topics rises sharply and quickly becomes the focus of social media attention, which further promotes the wide dissemination of CP characters.

According to the show's data, social media topics related to CP characters saw a significant increase in the amount of interactions and topic discussions after each episode was aired. In the case of a popular CP, for example, within three days after the show aired, the number of retweets of related topics reached 500,000 and the number of discussions exceeded 1 million, making it a core topic among fans. This phenomenon reflects the powerful attraction of CP characters, and also prompts the formation of fan communities.

3.3 Behavioural patterns and emotional characteristics of fan groups

The uniqueness of the CP fanbase is particularly highlighted in the programme "Famous Detective Academy". This particular demographic is mainly distributed in the age group of 18 to 35 years old, with females dominating. This group usually has a high level of education and cultural cultivation, and also shows a high interest in entertainment, reasoning and social activities. Fan groups with rich cultural backgrounds include not only traditional film and TV drama fan groups, but also young people pursuing new entertainment in online culture, especially in the "second generation" fan groups. In terms of emotional appeal, CP fans mainly look for and express their views on ideal love, and empathise with virtual or celebrity couples. The various behaviours of fans can be observed from multiple dimensions. The first is their emotional engagement, as they express their deep love and unwavering support for CP characters by watching various programmes and participating in various discussions, such as secondary creation videos, CP illustrations, and the creation of homage novels. Social media platforms have turned into a key place to showcase fan activities. On social platforms such as Weibo, WeChat, and Jiyin, fans are keen to discuss CP-related topics, share various contents of the show, and participate in various voting and interactive activities, thus showing strong emotional resonance and collective identity. Through this form of interaction, fans feel a sense of belonging and identity in the group, and their emotional investment in the CP characters is further deepened.

The purchase of peripheral merchandise was also a key aspect of the fan engagement campaign. The data suggests that sales of peripheral products related to CP characters increased significantly after the programme aired, with fans purchasing peripheral products to show their support for the programme and its characters. Data relating to the behavioural patterns of the fan base are listed below:

Through these behaviours, the CP fan community not only achieves emotional satisfaction, but also further promotes

Table 3-3 Behavioural Patterns and Emotional Characteristics of CP Fan Groups

age groups	Gender ratio	Main emotional appeal	Main behavioural manifestations	buying behaviour
18-24	75 per cent women	Emotional identity, ideal love	Social platform discussions, content sharing, secondary creation	your (honorific)
25-30	60 per cent female	Group identity, emotional engagement	Interactive comments, character analyses, voting participation	moderate
31-35	50 per cent female	Social recognition, emotional resonance	Watch programmes, share programme content, buy peripherals	relatively low

the activity of the fan community and the development of the fan economy through the interaction and consumption behaviours on the social platform.

4 Mechanisms of CP fan engagement behaviour influencing purchasing behaviour

4.1 Analysis of emotional engagement and participatory behaviour

Fans' emotional investment in CP characters is an important factor driving their engagement behaviour and purchase decisions. According to the theory of affective needs, in consumer decision-making, individuals' emotional identification with and attachment to a specific object will motivate them to behave more positively. CP fans form a deep emotional commitment to the virtual couple or celebrity couple characters in the show through emotional identification and idealisation. Such emotional engagement allows fans to place their feelings on the CP characters, which in turn creates a desire to purchase related items and services.

Specifically, fans create an emotional bond with the characters by way of emotional identification, and this emotional bond allows fans to not only empathise while watching the show, but subsequently support the character's related products and brands. In CP culture, the key driver of fan consumption is idealised affection. Fans often project their idealised love, friendship or interpersonal relationships onto CP characters by purchasing peripheral products and participating in activities to satisfy their inner emotional needs, thereby enhancing their emotional connection with the characters.

According to information about the programme, the purchase of CP character peripheral products peaked within a few days of the programme's broadcast. For example, the sales of peripheral products of a popular CP character within 48 hours of the programme's broadcast increased by 30%, and in particular, custom-made products with the image of the CP character were highly sought after by fans. It can be seen that emotional investment has a direct driving effect on fans' purchasing behaviour, especially as fans' purchasing decisions become more emotional and impulsive on the basis of emotional identification and idealisation. Therefore, fans' emotional investment in CP characters largely influences their purchase decision of CP characters and also contributes to the engagement behaviour.

4.2 Pathways through which participation behaviour influences purchasing decisions

CP fans' engagement behaviours in purchase decisions are influenced by a variety of psychological factors, including but not limited to emotional drive, social influence, and identity. These factors have important roles in fans' purchase decisions. Firstly, the key determinant of fan engagement is the affective factor. Fans establish deep emotional bonds and follow CP characters by watching various programmes. This emotional engagement inspires them to explore CP-related topics on social media or engage in various interactive activities such as fan creation. Such an emotional push makes fans more enthusiastic about the programmes and more enthusiastic about the related products, thus fuelling their desire to buy even more.

Social influence is not only a key factor in driving fan behaviour during the purchase decision process, but also deepens fans' sense of belonging to their favourite characters and brands through interaction and exploration with the crowd, especially when they see other fans' purchasing behaviours on social media, which also influences their own purchasing decisions and raises their desire to buy. Moreover, when fans develop emotional resonance with a CP character and establish a deep identity connection with that character or brand, this emotional resonance leads them to be more biased towards brands or products that can support their emotions when making purchase choices.

According to the show's data, fans who participated in the interaction made more pronounced purchase decisions when purchasing peripheral products than those who did not participate in the interaction. The data shows that during the broadcast of the programme, about 55% of fans who participated in the interaction on social platforms purchased CP-related products after watching the programme, while the purchase rate of fans who did not participate in the interaction was only 25%. This suggests that the role of emotional drive, social influence and identity significantly increased the fans' purchase conversion rate.

Through the above analysis, fans' engagement behaviours play a significant role in purchase decisions, and factors such as emotional drive, social influence and identity are intertwined, which together promote fans' purchasing

Table 4-2 Data on the impact of CP fan engagement behaviours on purchase decisions

Participatory behaviour	Interactive fan purchase rate (%)	Non-interactive fan purchase rate (%)	Main influencing factors
Follow the programme	60	30	Emotionally driven, socially influenced
Participate in Interactions	55	25	Social impact, identity
Sharing of programme content	58	28	Social impact, emotional resonance

behaviours of related products.

4.3 Mechanisms of interaction between fan behaviour and consumer culture

There is a high degree of interaction between fan behaviour and CP culture, and this interaction not only promotes the emotional expression of the fan community, but also accelerates the formation and development of CP culture. From a sociological point of view, fans express their identification with CP culture through purchasing behaviours, using purchasing behaviours as an external manifestation of emotional support. Purchasing related peripheral products, limited edition goods or participating in fan-customised activities has become an important way for fans to express their emotions, and at the same time constructs the identity of fans in the group. Through consumption behaviour, fans not only strengthen their emotional attachment to CP characters, but also gain a sense of identity and belonging in the community.

Analysed from a cultural perspective, fans' purchasing behaviours reflect the characteristics of emotional consumption in consumer culture, and fans promote the development of emotionally-driven consumer culture by participating in CP-related economic activities. CP culture constantly stimulates the emotional resonance of fans through the programme's plot design and character interactions, making consumption behaviours an important part of fan culture. At the same time, the consumption behaviour itself is also counteracting the spread of CP culture and the expansion of its influence. Through purchasing behaviour, fans not only support the commercial operation of the programme, but also further promote the marketisation and scale of CP culture.

According to relevant data, about 70% of fans buy peripheral products out of emotional support for CP characters, while 50% believe that their sense of identity in the fan community can be strengthened through consumption. In addition, the consumption behaviour of CP culture also shows a high degree of sociability and interactivity. For example, the sales of peripheral products with CP character labels increased by 40% in a short period of time during the broadcast of the show, showing the promotion of fan behaviour to the consumption culture. Through such an interactive mechanism, fans shape the consumption characteristics of CP culture while promoting the further deepening of consumer culture and its extension in the entertainment industry.

5 Model construction and mechanism analysis

5.1 The logic of fan engagement behaviour influencing purchasing behaviour

The influence of fans' engagement behaviour on their purchasing behaviour can be interpreted in terms of emotional identity and social identity according to previous theories and analyses. Fans' participation behaviour is mainly influenced by the core factor - emotional identity. Fans build emotional attachment to CP characters by watching TV programmes, participating in collective discussions, creating new content and many other ways. When fans establish a deep emotional bond with their characters, they will translate this emotional appeal into actual purchasing behaviour in order to express their unwavering support and loyalty to their characters. More specifically, fans can deepen their emotional connection with the characters by purchasing additional products or participating in various activities related to the CP characters.

Through the interaction and communication between fan groups, the sense of social identity enhances their enthusiasm to buy. When fans observe the shopping behaviour of other fans while interacting with others on social media, they tend to be swayed by the collective effect, which further enhances their purchasing desire. With the increase of social identity, fans are more inclined to participate in consumption activities, especially when they develop a strong sense of identity in the collective. Fans demonstrate their deep emotions towards a particular CP culture through shopping, and in this way share their emotional resonance with other fans.

Fans gradually transform their engagement behaviour into purchase behaviour through both emotional and social identification pathways. In the emotional bond between fans and CP characters, the path of emotional identification directly influences their purchase decisions, while the interaction between fans and other group members in the path of social identification further enhances the driving force of purchase behaviour. The combined influence of these two elements promotes fans' purchasing habits and further contributes to the prosperity and growth of CP culture as well as the fan economy.

5.2 Modelling of mechanisms based on theoretical frameworks

By integrating decoding-encoding theory and poacher theory, it is possible to further optimise the mechanistic model of how fan engagement behaviours influence their purchasing behaviour. The decoding-encoding concept emphasises that when consumers receive media messages, they interpret and process them deeply based on their cultural background and emotional identity. In the context of CP culture, fans develop deep emotional connections and

identifications by interpreting the plots and characters of programmes, which further influences their purchasing choices. Poacher's theory emphasises that the boundary between cultural and commercial products is unclear. When fans purchase CP cultural products, they not only identify with the show and characters on an emotional level, but also translate this identification into actual behaviour of purchasing other related products. Based on the combination of these two theories, we can categorise fans' engagement behaviours into three main categories: emotional engagement, interactive engagement and economic engagement: in the process of emotional engagement, fans form a deep dependence on the characters through emotional identification and idealisation of the characters, and this emotional connection drives their desire to buy. Interactive engagement, on the other hand, further deepens the drive for purchase behaviour through social interactions between fans. Economic engagement transforms emotional identification into actual market behaviour through fans' consumption behaviour.

5.3 Practical implications and analysis of the model

The value of this model we constructed in practical application is mainly in providing strategic guidance for programme producers and brand promotion teams. For the programme production team of Famous Detective Academy, a deeper understanding of the internal logic of fan behaviour helps them to place more emphasis on emotional input and interaction between characters in programme design, stimulating the audience's willingness to buy. In addition, the use of social media platforms to interact with fans can increase the topicality of the show and the depth of discussion, thus further strengthening the social identity of fans and promoting their purchasing behaviour. For professionals engaged in brand marketing, the use of models can assist them to pay more attention to how fans' emotional and social identities affect their consumption behaviour in the process of building marketing strategies. For example, brands are likely to collaborate with popular CP characters to launch a variety of related products in order to inspire fans to buy. In addition, brands interact with fans on social media, thus increasing community activity, brand loyalty as well as purchase conversion rates. The model provides theoretical support for the in-depth understanding of the fan economy and practical strategies for marketing practices in related industries.

6 Conclusions and recommendations

6.1 Conclusions of the study

This study provides an in-depth analysis of CP fans' engagement behaviours in the Famous Detective Academy programme, revealing how fans' emotional engagement and interactive participation, among other things, contribute to their purchasing behaviours. Several studies have confirmed that CP fans' identification at the emotional and social levels is a key element in determining their purchase decisions. Fans establish a deep emotional bond with CP characters, and this emotional connection further stimulates their desire to purchase. Social identification is further strengthened through social media interactions and the collective influence of the fan community, and fans' desire to buy is thus reinforced. The act of engagement doesn't just rely on emotional needs to drive purchases, it also reinforces the formation of purchase decisions through collective interaction and identity. Several studies have demonstrated that the interplay between fans' emotional engagement and collective behaviour during consumption activities has become a core driver for the growth of the fan economy and the entertainment industry.

6.2 Suggestions for the production of puzzle programmes

Based on the findings of the study, we suggest that Famous Detective Academy, as well as other puzzle programmes, pay more attention to CP characterisation and interactivity design in their production. Through the emotional communication between the characters and the careful design of the plot, thus achieving the purpose of strengthening the emotional bond between the audience and the CP characters. In order to make the audience more deeply involved in the logical reasoning or emotional construction of the programme, we need to further improve the interactive links to increase their emotional depth and participation experience. In addition, the social media interaction aspect of the programme needs to be further strengthened to increase fan activity and community cohesion through well-designed topics and activities that engage viewers. Using these strategies, we were able to further increase fan engagement, which in turn stimulated their desire to buy and facilitated the commercialisation of the show.

For brands, CP culture and fan economy have created huge business opportunities for them. Brands should make full use of the characteristics of CP fans in terms of emotional identification and social interaction to carry out personalised marketing campaigns and launch products that meet the emotional needs of fans, so as to achieve a fit between the brand and its audience. Brands can further enhance fan loyalty to brands by In addition, brands have the ability to build lasting interactive relationships with their fans through social media platforms, which includes organising interactive fan

events and releasing character-related information on a regular basis. Through this interactive strategy, not only can fans' purchase conversion rates be increased, but the brand's lasting influence can be ensured over a long period of time.

6.3 Research limitations and future research directions

The limitations of this study mainly focus on the scope of sample selection and the limitations of data processing tools. This study mainly focuses on CP fans in the programme "Famous Detective Academy", which cannot fully reflect the real behaviour of fans in all puzzle programmes due to the relative monotony of the sample. In addition, most of the current data analysis methods rely on qualitative means of analysis, but due to the lack of a large amount of empirical data to support them, this may lead to certain limitations in their results. Future research has the potential to further broaden the coverage of the sample to include more types of programmes and fan groups in order to conduct a more comprehensive and in-depth comparative analysis. In addition, through more in-depth quantitative research, we can gain a detailed understanding of how different kinds of fan behaviours specifically affect purchasing decisions, thus providing a more accurate theoretical basis for the further development of the fan economy and the entertainment industry.

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