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Ritualizing Fandom: An Interactive Ritual Chain Perspective on Influence Generation in Fan-Remix Communities

Jiaying Duo

Media Department, Jilin International Studies University, Changchun, China
daioio20@outlook.com

Abstract. Classic media IPs sustain their digital afterlife through fan-generated derivative works, constituting a defining phenomenon of contemporary participatory culture. Yet, on decentralized platforms like TikTok, the mechanism underlying influence divergence among fan-remix creators from million-follower head creators to sub-10,000-follower tail creators remains a "black box" lacking systematic quantitative understanding. This study proposes an integrated "IRC" , emotional energy co-creation consolidation" model grounded in Interaction Ritual Chains (IRC) theory. Drawing on 4,420 comments from Empresses in the Palace fan-remix accounts on TikTok, we employ LDA topic modeling and word cloud analysis to compare interaction ritual characteristics across three creator tiers. Findings reveal that head creators cultivate highly concentrated "shared focus of attention" through in-depth character relationship analysis knowledge co-creation positive feedback loop; middle creators stimulate emotional co-creation through community maintenance creators rely on instant scene-based emotional resonance sustaining low-barrier participation through emotional co-creation. This study operationalizes IRC theory in digital fan culture contexts and provides text-level quantitative evidence for understanding the influencer marketing ecosystem.

Keywords: Interaction ritual chain, Fan remix culture, Influence of short videos, Classic TV fan culture, Participatory culture

1. Introduction

1.1. The longevity of classic IPs and the rise of "remix culture"

Whether it is Star Wars fan fiction or Harry Potter fan films, Japanese anime derivative works, or K-pop fan mashups, fan-generated derivatives have become an essential part of the worldwide participatory culture [1]. In the age of decentralized algorithm-based media distribution, the old media IPs are surprisingly vital in the "long-tail", where a piece of work, years after its original publication, stays relevant to the audience due to its presence as a fan-remixed work on social networking sites, which creates a specific "nostalgic distribution" cycle. However, a serious issue arises: in fragmented interaction settings, how do various creators transform isolated fan interactions into a stable influence? This question has major theoretical and practical implications in terms of the digital opinion leader ecosystem and participatory culture.

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The 2011 Chinese classic court drama Empresses in the Palace remains popular on TikTok and Bilibili, more than a decade later, producing large volumes of fan-remix material, including character dissection, narrative rehashing, funny dubs, and comic adaptation all of which are part of an active remix content ecosystem. Fan-remix makers have become important figures in this ecosystem, but strong tier differentiation is becoming apparent: top creators have millions of followers and their content focuses on nuanced character relationship analysis; mid-level creators, who have 100,000 to a million followers, have a high response rate as they specialize in particular characters or themes; small creators, less than 10,000 followers, are dependent on disjointed imitation and rapid emotional triggering.

1.2. Lack of quantitative understanding of how interaction rituals drive influence

Even though such a stratification of tiers has been noted extensively empirically, the underlying generative mechanism of this stratification (i.e.,interaction text characteristics differ among creator tiers and how such differences lead to the consolidation of influence through feedback loops) is an uncharted black box [2, 3] the most common approaches used by existing IRC empirical studies are surveys or qualitative observation, which do not involve large-scale quantitative text-based data [4, 5]. Methods of text mining of LDA topic modeling, sentiment lexicon analysis, and social network analysis can technically be used to measure the four components of IRC but have not been applied systematically to fan-remix communities.

1.3. Research questions

Based on the identified research gap, this study addresses two core questions:

RQ1:How can the characteristics of interaction rituals be measured quantitatively by text mining methods and what are the variations in the thematic distribution and lexical features according to the creator tiers?

RQ2:Do these differences drive influence consolidation through differentiated feedback loops?

Theoretically speaking, this paper extends IRC theory to digital fan communities and integrates it with value co-creation theory (S-D Logic) by presenting an integrated model of co-creation consolidation [6, 7]; in terms of methodology, it builds a text-mining operationalization framework of the four elements of IRC, which offers methodological means to make the shift between theoretical concepts and quantifiable indicators; and in practice, gives examples of data-driven interaction strategies to platform managers and content creators.

2. Literature review & theoretical framework

2.1. Interaction ritual chains theory and digital transformation

According to Interaction Ritual Chains theory (Collins), it is suggested that in order to achieve successful interaction rituals, four constituent elements are necessary, namely co-presence of participants, exclusion of outsiders, shared focus of attention and shared emotional experience, which when properly integrated produce emotional energy and promote group solidarity. The four elements in the digital media environment have been subjected to a series of transformations over time.

Re-Definition of Co-Presence. The use of digital media including bullet comments, real-time comments, and hashtags provide greater sense of virtual co-presence compared to conventional

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forums. Joo et al., who incorporated IRC theory into the study of tourism, observed that the manifestation of co-presence in online contexts was as spatiotemporal synchronicity of interaction behaviour instead of physical bodily co-presence, and that a comment density of one or more comments per minute could substitute the assumption of physical co-presence that is made by Collins [2].

Group Boundary Symbolization. In open TikTok platforms, the basis of group boundaries is no longer based on physical exclusion, but on symbolic exclusion via in-group jargon and memes. The study conducted by Tornberg and Tornberg of the white supremacist web-based community Stormfront indicated that digital communities develop group boundaries using particular symbol systems that serve as emotional refuges [5]. Patrik and Anton also brought forward the idea of dark emotional energy, which explains how negative emotions become reified by ritualized contact into the symbolic core of group identity [8].

Active Development of Shared Focus of Attention. The classic IPs give a shared narrative base, but the approaches to the subject matter adopted by individual creators greatly affect the level of focus and the depth of the subject matter. Through the research conducted by Meng et al., it was discovered that livestreaming interactions produce emotional energy due to the IRC processes, which indicates the leading role of digital interaction rituals in the psychology of users [4].

Diversification of Common Emotional Experience. Yang et al. combined the IRC theory with the SOR model, which confirmed the positive impact of the interaction ritual factors on user interaction behavior and the positive moderating effect of emotional energy [3]. The present research also suggests that emotional energy operating in the digital environment can be divided into two kinds: head fans are gaining cumulative identity recognition, and tail fans are gaining transient emotional resonance this differentiation is the underlying cause of influence divergence.

2.2. Influence and calue co-creation in fan communities

Creator tier classification lies at the core of the present research. Summarizing the available literature, creator tiers may be divided into four dimensions, including followers number, originality of content, interaction rate, and monetization potential. Pan et al., in their meta-analytic review of the effectiveness of influencer marketing, observed that micro-influencers have higher levels of engagement with particular products [9]. Hudders et al., considering social media star commercialization, developed a conceptual framework of the strategic use of influencers, separating the value creation paths of various types of creators [10] . Hughes et al. established that brand engagement strategies are highly affected by creator engagement strategies [11]. Syrdal et al. uncovered the mechanisms by which language style influences user engagement behavior [12]. It was verified by Rungruangjit and Charoenpornpanichkul that micro-influencer-created content has special benefits in establishing the brand evangelism [13] .

According to these studies, this research categorises fan-remix creators by three levels of popularity: Head (one million followers or more), Middle (100K-1M followers) and Tail (less than 10K followers).

The theory of value co-creation is providing an important theoretical supplement to the way interaction rituals are converted into long-term power. Kamboj et al., verified that interaction quality has a positive effect on co-creation behavior by playing a mediating role in psychological empowerment [6]. Liao et al. have concluded that brand community value has a positive impact on value co-creation behavior via user engagement [7]. The present research redefines user interaction behaviors as three kinds of value co-creation namely, knowledge co-creation, emotional co-creation, and community co-creation.

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2.3. Text mining as a method for measuring social rituals

The current research in IRC is mostly based on surveys or qualitative observation but lacks extensive quantitative text-based empirical research [4, 5]. Text mining, LDA topic modelling, sentiment lexicon analysis, and social network analysis are technically capable of quantifying the four elements of IRC, but have not been rigorously used to analyze fan-remix societies [14]. The text mining is used as the operationalization bridge between theoretical concepts and quantifiable indicators as part of this study.

3. Methodology

3.1. Data collection

The data used in the study were gathered through TikTok, a time series of 2021-2024. The Bazhuayu web scraper was applied to collect the data by searching the targeted content using keywords. There were three data streams that were gathered, which included; user data (111 remix accounts of Empresses in the Palace, which involved user ID, nickname, number of followers, likes received, and number of videos), comment data (4,420 comments containing content, timestamp, likes, and creator ID), and video data (78 videos on the topic containing title, likes, comments, and shares).

The creators were separated into three levels depending on the number of comments they made. Comment counts were chosen as the main stratification variable since the number of comments is much more indicative of active cognitive involvement and written communication than passive indicators like likes or views, which are the most significant sources of information to an IRC analysis. In the sample, total comment volume followed a very strong power-law distribution: head (at least 500 comments, 1 account, 14.7 percent of all comments), middle (between 100 and 499 comments, 11 accounts, 38.5 percent) and tail (less than 100 comments, 24 accounts, 46.8%). The head account, named Ping Jie Movie had the largest number of comments (650 comments) in the data set and the topic of this account focused on refined character relationships analysis and emotion interpretation - similar to the usual head creator characteristics. To guarantee the quality of the data and reduce the impact of low-engagement comments, the top 50 comments by like count were selected per each of the 78 videos.

3.2. Operationalization of IRC variables

The four major parts of IRC are measured based on quantifiable text mining measures, which are as follows: co-presence is measured as comment density and temporal synchronicity index ,standard deviation of the interval between comment timestamps,smaller values imply greater temporal clustering and more intense virtual co-presence; group boundaries are measured as in-group jargon frequency and exclusive symbol use rate. The exclusive symbol lexicon was developed by two steps: manual coding, two coders were asked to manually code 15 nicknames created by fans and specific words used in the community based on a list of high-frequency words and reached an inter-coder reliability of 0.87; frequency threshold filtering, the terms that appeared at least ten times in the whole corpus and only in fan-remix settings were kept; shared focus of attention is measured as LDA topic consistency and Herfindahl-Hirschman Index of topic concentration (HHI =i si2, where si is the probability share of the i-th topic; close-to-one scores indicate greater concentration); shared emotional experience is measured as sentiment lexicon analysis score and emoji use frequency.

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3.3. Analytical methods

Data analysis comprised four tiers, progressing from descriptive to inferential.

Initial analysis of the word cloud and descriptive statistics. To segment the Chinese words jieba segmentation was applied, and after the stop-word removal with the help of the Harbin Institute of Technology stop-word list, the most frequent words were selected to create the word clouds and the distributions of interaction indicators per each tier.

The second point is LDA topic modeling. Feature extraction was done by using the CountVectorizer . Coherence score evaluation was used to determine the number of topics: it was searched on 2-15 topics, and the peak of the coherence score was achieved at 0.412 with 6 topics. Twenty repetitions were made; document-topic distributions were obtained, tier-level aggregation was done to find the average distribution of probabilities across 6 topics in each tier, and inter-topic cosine similarity was computed to determine the level of topic discriminability.

Thirdly, statistical significance testing. A Chi-square test of independence was used in order to determine if the difference in cross-tier topic distribution could be statistically significant, and one-way ANOVA was used to compare per-topic probabilities between the three tiers.

Fourth, social networks analysis. Comment reply relationship-based interaction networks were created and network density, clustering coefficient, and reciprocity were calculated in order to measure the structural features of group solidarity.

4. Results

4.1. Thematic landscapes of remix content

Word cloud analysis gave a textual intuition to the dimension of IRC theory called the shared focus of attention. The content of comments was extremely focused on the central characters and plot lines of Empresses in the Palace : namely, "child" (202 occurrences), "Chun Yuan" (187 occurrences), and "Hua Fei" (165 occurrences) as high-frequency words that indicated the centrality of the analysis of character relations in the fan-remix discourse. Characters with roles of power like "Emperor" (91 occurrences) and "Empress Dowager" (73 occurrences) were also often represented because of a joint focus on the power hierarchy of the court. The emergence of the fan-invented nicknames of Fat Orange (79 occurrences) and Little Fruit Li (31 occurrences) indicated the development of an internal symbolic system of the fan community - these nicknames are not official names of the characters in the original text of *Empresses in the Palace* but rather symbolical designations of the community members, which provides immediate textual proof of the construction of group boundaries.

4.2. Comparative analysis

The LDA topic modeling showed that there are six topics with high discriminability: Topic 1 character relationships and fate (Chun Yuan, child, Hua Fei); Topic 2 remix adaptation and intertextual association; Topic 3 scenario and character relations (Hua Fei, Gui Ren, scene); Topic 4 stories and court conspiracy (anti-Qing restoration, Su Peisheng);Topic 5 character fate and emotional restoration (Prince, restoring favor, butterfly); Topic 6 character connection (Fat Orange, Chen Jianbin, Emperor).

To a ritual theoretician [15], these subjects are more than simply descriptive tags: Topics 1 and 5 are an elaborate form of processing of the concept of shared focus of attention - fans are not just

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discussing characters actions but creatively participate in the process of emotional healing and changing the fate of the characters which is a ritualistic behavior of gaining emotional energy by reconstructing the narrative; Topic 2 is symbolic capital across work with group boundaries - by connecting Empresses in the Palace with other works, fans demonstrate insider cultural capital and conduct boundary maintenance; Topics 3 and 6 represent immediate activation of the concept of shared emotional experience of emotions towards particular scenes and actors performances act as the points of entry into the ritual performance.

The clear core pattern was observed: higher tier, more focused topic distribution; lower tier, more scattered. The fan comments by the head creators had a probability of 0.521 in regard to Topic 1 which is significantly greater compared to Middle and Tail, $\chi^2(10) = 34$, $p < 0.001$. On the other hand, tail creator fan comments displayed a 0.409 probability on Topic 3 (plots scenes), which is significantly higher than Head (0.167), ANOVA $F = 34$, $p < 0.01$.

The HHI index also measured this difference: Head HHI389, Middle HHI 287, and Tail HHI 194, which indicates that the topic concentration of head creators is roughly two times that of tail creators. These differing patterns indicate the underlying principle of the process of generating influences: head creators shape strong concentration of shared focus of attention among fans, who are made to participate in the deep analysis of character relationships, by influencing the creation of knowledge as a form of co-creation behavior , fans are not simply consumers of content but producers of meaning together; tail creators depend on an immediate emotional affinity with certain scenes, prompting them to behave emotionally as part of a co-creation behavior , their participation barrier is low but they do not have continuous knowledge building [6].

4.3. Lexical characteristics and community boundaries

The lexical diversity of Head creator fan comments was much higher compared to Tail (TTR52, ANOVA F87, p0.01). Such lexical richness can be thematically associated with Topic 1: detailed examination of intricate character interactions requires a more diverse vocabulary which includes concepts including power dynamics, maternal sacrifice or emotional manipulation that are mostly present in the head creator comment threads. On the other hand, tail creator comments are less lexically diverse, with formulaic emotional language, repeated use of emojis, and meme-based communication, as expected, due to their dependence on instant emotional co-creation instead of long-term cognitive involvement [12].

Fan-created tiered nicknames supported the tiered nature of group boundaries even more: the rate of in-group jargon usage among head fans (12.3%) was about three times higher than that of tail fans (4.2%), and middle fans were intermediary (8.7%). The frequent employment of exclusive symbols denotes the formation of "group boundaries", dense symbols, sharp boundaries, and a stronger sense of belonging, where the ritual effect is the concentration of emotional energy [5].

5. Discussion

5.1. The mechanism of influence consolidation

The main results of the present research indicate three different ways of influence consolidation, which are together forming a progressive consolidation mechanism of the IRC-based fan-remix influence ecology [15].

The main creators are cognitive-driven knowledge co-creation positive feedback loop. Deep discussion attracts head creators with excellent character relationship analysis, increasing symbolic

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capital, which encourages more high-quality remix creation - a self-perpetuating cycle of cognitive value symbolical capital re-creation investment. We find that Topic 1 represents 52.1 percent of head creator comments, where HHI =0.389, which shows that head creator fan interaction has been focused on the cognitive level of deep engagement [6].

Middle creators: relational-based community loyalty closed loop. Middle creators develop emotional connections by interacting at high rates of response, which turns into long-term involvement and emotional co-creation, a cycle of relational response, group membership and community loyalty.Fairly even topic allocation among middle creators is indicative of their diverse contributions in community sustenance [7].

The creators of tails have a mobile way of accessing tiers based on emotions. Tail creators use discontinuous emotional stimulation to become access points to possible fans - an emotion resonance , instant involvement, tier access route. Other tail creators are able to move up into the middle tier through the optimization of interaction strategies.

The three pathways create a complementary niche structure: Head is symbolic capital and cognitive value, Middle is community belonging and emotional connection, and Tail is emotional resonance and low-barrier entry [10, 11].

5.2. Theoretical implications

The current research expands the IRC model in three dimensions. Firstly, digital substitution of the concept of co-presence: the indicator of comment density and temporal synchronicity may replace the idea of physical co-presence by Collins; the use of bullet comments and live reply will be more effective in creating virtual co-presence than conventional forums [2]. Secondly, symbolization of group boundaries: the raw statistics on the frequency of in-group jargon use indicate that on open-ended platforms, group boundaries are not enforced through physical but symbolic exclusion,clearer boundaries tend to result in more intense emotional energy. Thirdly, emotional energy differentiation: head fans develop cumulative identity recognition whereas tail fans develop transient emotional resonance [3], this differentiation is the underlying cause of influence divergence.

In addition, the presented work poses a theoretically interesting question: Is algorithmic recommendation also a component of the interaction ritual? Fans can collectively feel proud when they see their preferred creator being recommended to other people by an algorithm, which is a form of vicarious recognition that provides a new source of emotional energy specific to algorithmic media contexts. The "algorithmic emotional energy" (different than the dyadic emotional entrainment described by Collins) is an encouraging path in which IRC theorization might go [15].

The suggested IRC emotional energy value co-creation behavior influence consolidation integrated model, which links IRC theory and value co-creation theory [6, 7], is the theoretical link in terms of understanding the phenomenon of how emotional energy can be transformed into a more sustainable influence.

5.3. Practical implications for creators

This paper indicates that the quality of interaction ritual might be better to predict the long term value of a creator compared to quantity of interaction, with regard to platform managers. Platform algorithms should be able to optimize on including IRC-related measures, i.e. topic focus and in-group jargon frequency, to the recommendation system, rather than relying on superficial engagement statistics.

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Tail creators can mimic the features of middle-tier interaction rituals among content creators by enhancing in-group jargon use and topic focus so that the tier mobility is achieved [13].

In case of brand marketing, individualized approaches must be in line with specific types of value co-creation: cooperation with Head creators leads to cognitive value, with Middle creators - to community belonging, and with Tail creators - to emotional resonance [10-12].

6. Conclusion

According to the Interaction Ritual Chains theory , this paper has examined systematically 4,420 comments posted by Empresses in the Palace fan-remix accounts on TikTok using the LDA topic modeling and text mining techniques, which identified the interaction ritual characteristics among creator tiers and their mechanisms of influence consolidation. Major results are: The four elements of IRC could be quantified by means of text mining indicators like density of comments, frequency of in-group jargon, HHI topic concentration and sentiment analysis score; there are substantial cross-tier differences in the distribution of topics in interaction text and its lexical characteristics; three ways of influence consolidation are formed by differentiated feedback loops. There is also a limit of single platform data, small sample size, and one head creator accounts. Future studies might involve multi-platform cross-IP comparison studies, monitoring the dynamic movement of creators tiers and the experimental design testing of value co-creativity mediation between IRC and influence.

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