

# Online Subculture Gravity Model: Expanding the Hook model of Chinese Youth Online Subcultures

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**Abstract.** This study constructs the online subculture gravity model to systematically analyze the mechanisms underlying Chinese youth's progressive and persistent involvement in digital subcultures. Based on the Nir Eyal's Hook Model, this study analyzes typical online subculture phenomena (e.g., ACG, fan communities, e-sports, social media culture, and online slang), and constructs the online subculture gravity model. Specifically, this study reconstructs the youth participation process as a cycle shaped by triggers, emotion-driven, reward feedback and reinvestment mechanisms. More specifically, this model explains how the coupling of algorithmic push and emotional vulnerability stimulates initial involvement, then deepens participation through social, informational and psychological multidimensional rewards. Thus, with the continuous increase of time, money, identity and emotional investment, youth are gradually locked into the subculture ecosystem of algorithmic screening and commercial manipulation. Therefore, this study reveals how symbolic participation interfaces with economic value extraction. Consequently, this study not only advances the development of Hook model by integrating behavioral models into social digital analysis, but also illuminate how youth identity is constantly constructed within subculture cycle.

**Keywords:** Online Subcultures; Online subculture Gravity Model; Hook model; Youth.

## 1. Introduction

Chinese online subcultures are a supplement and expansion of the dominant culture, rather than a direct confrontation with it. In recent years, as the proliferation and intensification of these online subcultures in the fields of technology, social culture, and business, they have gradually aroused increasing interest in academia. Nevertheless, despite rising academic attention, current research remains relatively fragmented and case-driven. In other words, there is still a lack of theoretical explanation for how youth are initially attracted to online subcultures and why they continue to participate in depth. Especially, few studies have systematically explored the psychological and social mechanisms behind this sustained Involvement.

In order to analyze the mechanism of youth involvement in online subculture, this study will attempt to construct an online subculture gravity model. Specifically, according to the Nir Eyal's Hook Model, this new model regards youth immersion behavior as a multi-stage and self-reinforcing process. This multi-stage includes four stages: "trigger, action, reward, and reinvestment". This new model not only reveals how emotional stimuli, platform functions and social structures work together, but also how youth maintain their continuous Involvement and long-term involvement in online subcultures. Therefore, the current study could add to existing literature by exploring this issue in more depth. This not only extends the Nir Eyal's Hook Model into the field of cultural and media research, but also deeply analyzes how youth identity is constructed, negotiated and disciplined in the context of platform society in China.

## 2. Development and Application Fields of the Hook Model

### 2.1 The Core Propositions of the Hook Model

The subculture Gravity Model of Online Culture is constructed based on the Addiction Model, which was proposed by American scholar Nir Eyal. The hook model was proposed by American

scholar Nir Eyal (2014). The core idea of this model is that it takes four stages for users to develop product usage habits, which are trigger → action → reward → investment (see Fig 1). Those four stages are closely interrelated: (1) Trigger—This stage captures the audience's attention and prompts the next action;(2) Action—This refers to the user's most immediate and instinctive behavior in anticipation of a reward;(3) Reward—Variable rewards are key to maintaining long-term user interest;(4) Investment—After receiving a reward, the user invests time, energy, or even tangible resources into the product[1]. In essence, the hook model creates a continuous behavioral cycle. Through this cycle, users become addicted to the product without even knowing it, and gradually become loyal users.

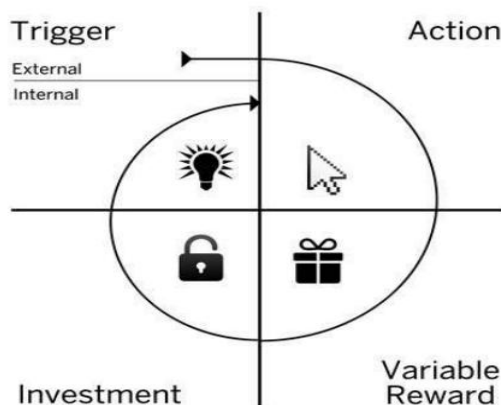


Fig 1 The Hook Model

The hook model has attracted wide attention from scholars. For instance, Petticrew's marketing findings suggested that breweries could strategically apply a push-and-pull trigger to reshape and promote consumer purchasing behavior[2]. Similarly, in a study on user Involvement, Jian Tang proposed that variable reward mechanism served as a primary driver of long-term user Involvement[3]. What's more, Barak Li bai emphasized that the companies should constantly adjust product design to fit the evolution of users' action habits, and the adaptability formed after investment is the key factor to attract users' continuous investment[4]. Obviously, the hook model has been widely used in practice, and its theoretical value has been reflected in various fields. However, the hook model's theoretical implications will go far beyond commercial applications. Therefore, based on this hook model, the current study will propose an online subculture gravity model, which aims to explain how youth are immersed in the online subculture.

## 2.2 Online Subculture as an Application Field of the Hook Model

In recent years, Chinese researchers have increasingly investigated these subculture formations, particularly considering the entanglement with commercial capital, thereby signaling a shift toward a "post-subculture" research paradigm. For example, He Wei traced the developmental trajectory of ACG culture, and then suggested that the influence of ACG culture is no longer limited to the business and entertainment fields, but increasingly permeates into individual subjective cognition and a wider social value system[5]. Furthermore, Deng Jian has demonstrated that how the logic of capital deeply infiltrated the gaming ecosystem via in-game marketplaces, not only disrupted existing power hierarchies, but also undermined the potential once associated with MMORPGs (Massive Multiplayer Online Role Playing Games)[6]. Similarly, Hu Yong and his colleagues argued that fandom culture, within the digital media landscape, has evolved into a symptomatic formation such as a "mirror city", which reflects the entangled dynamics of media, technology, capital, subjectivity, and societal structures[7]. In short, although the existing researches have provided detail description of individual subculture phenomena, there is still a lack of systematic discussion on the structural logic behind them, especially the motivation mechanism behind youth participation. Therefore, this study is based on the hook model, and deeply analyzes the multiple internal and external driving factors which affect the youth's involvement in online subculture.

### 3. A Hook-Based New Perspective: the Interpretation of Youth Involvement in Online Subcultures

Furthermore, the theoretical value of the hook model goes far beyond its initial scope. Specifically, Nir Eyal uses numerous practical examples in his book *Hooked: How to Build Habit-Forming Products* to illustrate how the four-step addiction cycle (i.e., trigger, action, reward, and investment) can be applied across different products and services. For instance, Facebook uses external triggers (e.g., push notifications and like alerts) to prompt user actions, provides uncertain variable and unpredictable rewards (e.g., likes and comments), and encourages users to invest by prompting content uploads and interaction. Therefore, this deepens users' emotional connection to the platform and promotes users to repeated involvement. Moreover, Nir Eyal not only demonstrated how the addiction model can be applied across different platforms, but also analyzed the underlying mechanisms how Facebook attracts users. This offers a new perspective for applying the addiction model. In other words, use it to explain the marketing mechanisms of a product. In this sense, the addiction model can help the public understand how product design influences users' behavior and their rational perception of products. Therefore, this study attempts to expand the traditional application scope of the addiction model, and analyze the process mechanism of how youth interact with online subcultures. What's more, based on the underlying framework of the hook model, this study takes several current classic online subcultures (e.g., ACG, fan communities, e-sports, social media culture, and online slang) as cases, then analyzes how youth gradually get involved in these subcultures. Moreover, this study constructs a four-stage process gravity model of youth involvement in online subcultures. Ultimately, this gravity model will not only deeply analyze the process of how youth become involved in those online subcultures, but also deeply explore the influencing factors in this process.

### 4. The Online Subculture Gravity Model: Analyzing the Process of Youth Involvement in Online Subcultures

In the online subculture system, commercial, consumption, entertainment, technology and other ideologies begin to infiltrate subculture competitively. Based on the hook model's core propositions, Under the phased driving of various factors such as the online platform economy, individual emotions, social environment, and intelligent algorithms, the process of youth getting involved in online subculture is also through four stages: from "trigger" to "action" "variable reward" and finally "continued investment". Ultimately, this spontaneously forms a complete cyclical model, which regards as the Gravity Model of Online Subcultures (Figure 2).

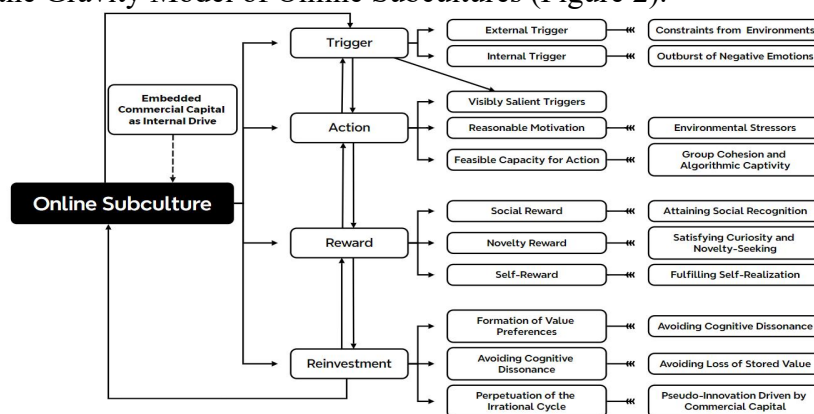


Fig 2 Gravity Model of Online Subcultures

#### 4.1 Trigger Stage: The Logical Starting Point of Youth Involvement in Online Subcultures

The purpose of online subculture to attract "newbies" is no longer simply to expand the "spiritual homeland", but more importantly, it serves to inject "fresh blood" into the "capital machine" behind

it to generate economic value. Besides, although online subculture is a collective phenomenon, its “creators” and “opinion leaders” are a minority. Therefore, most of participants are attracted by online subculture through external trigger and internal trigger. On the level of external triggers, youth primarily encounter online subcultures through their environmental influences. On the one hand, the objective environment such as an online platform is an external trigger factor. To capture “attention” and obtain attention economy, online platforms will push various online subcultures to youth to attract their attention. On the other hand, the subjective environment such as social relational is also an external trigger factor. Whether in the virtual or the real world, individuals are embedded in certain social relationships. As Marx stated, “The essence of human is not an abstraction inherent in each single individual. In its reality, it is the total of all social relations.”

On the level of internal triggers, youth primarily encounter online subcultures through their emotion influence. Previous study has shown that “emotion, especially negative emotion, is a powerful internal trigger that can significantly affect an individual’s daily life”[8]. Similarly, past study has found that social pressures often drive young people to construct “emotional islands” of self-isolation, the stress of their everyday life forces them to retreat. The reason for the above research results may be that the “accelerated society” makes youth confronted with great competitive pressure, and some young people are too idealistic expectations for their future goals, which results in the separation between ideals and reality, even leads to negative emotions. What’s more, these negative emotions often generate feelings of slight pain or anger, and prompt them to engage in unconscious coping behaviors at certain moments. Fundamentally, the initial trigger for youth to engage in or be influenced by online subcultures is their desire to escape discomfort and seek emotional solace. Over time, through the combined influence of external and internal triggers, youth gradually establish a stable and frequent connection with a specific online subculture.

#### **4.2 Action Stage: Multiple Driving Forces for Youth to be Involved in Online Subcultures**

After being triggered by online subcultures, young people will be driven by multiple factors to further involve in such online subculture activities. Why do they continue to take the next action? Nir Eyal who based on Fog’s behavioral model, argued that this may be because trigger, motivation, and ability are three factors of youth addictive behavior[9]. Specifically, after being triggered, environmental pressure and the accessibility of the internet together shape the motivation and ability of youth to continue to participate. Fog’s research showed that core motivations for youth to act were to pursue happiness and escape pain, to pursue hope and escape fear, and to pursue social identity and escape rejection[10]. Based on this framework, when youth face their personal and societal pressures, and encounter a disjunction between ideals and reality, those above “reasonable motivations” were naturally emerged. Similarly, past research has shown that when youth had to face intense job-seeking pressure, they were more likely to choose activities that relieve nerves and empty their minds for leisure and entertainment due to the fear of the unknown, anxiety about adaptation and avoidance of stress [11]. Thus, when youth find a spiritual home and gain recognition through emotional expression, they acquire a reasonable and internally justified motivation which could integrate them into online subcultures.

What’s more, online communities are shaped by the convenience of digital networks, the personal interests of youth, and the algorithmic recommendation systems. On the one hand, the convenience, immediacy, and efficiency of the internet make the participation of youth in online subcultures highly access. On the other hand, algorithmic recommendation systems even intensify both the algorithmic captivity and the homogeneity-driven aggregation of subculture groups. Previous research has shown that the precise delivery of information in smart media continued users’ original views and confined them to a homogenous cocoon of information[12]. Therefore, algorithmic recommendation systems not only reinforce the boundaries of online group formation, but also deepen the segmentation of subcultures. All these characteristics make the online subculture easy to implemented. In conclusion, under the combined influence of triggers,

motivations, and abilities, online subcultures exert a powerful gravitational on youth, and draw them into participation even prompt a range of unconscious behaviors.

#### **4.3 Reward Stage: Youth are Involved in the Reward Vortex of Online Subcultures**

Fundamentally, youth become involved in online subcultures because these subcultures fulfill various psychological needs. Psychologist B.F. Skinner has argued that the variability of stimuli increases the likelihood of repeating the same behavior[13]. Within online subcultures, young people receive social rewards, novelty rewards, and self-rewards. These three types of rewards are not mutually exclusive, while they may be acquired independently or simultaneously. On the one hand, youth involve in online subcultures not only to form social connections, but also continuously explore and pursue entertainment content which aligned with their interests, at the same time, they gain both social and novelty rewards. Psychologist Erik Erikson has noted that adolescence was a critical period during which individuals seek group identity and develop intimate relationships, desire affirmation even supports from others[14]. However, due to the intervention of commercial capital, the value orientation of today's online subcultures is driven by the pursuit of high click-through rates, continually catering to the public's preference for superficial and emotionally stimulating content. Thus, the shallow and fragmented content of online subcultures satisfies youth curiosity, while it also contributes to value disorientation and a range of associated issues.

On the other hand, youth involvement in online subcultures also reflects the process of accumulating subculture capital. British sociologist Sarah Thornton first introduced the concept of subculture capital. Today, this is akin to gaming skills in e-sports culture. The members who with superior gaming abilities tend to gain greater recognition. In some cases, once sufficient subculture capital is accumulated, it can be converted into economic capital via virtual equivalents. Thus, this drives youth to continuously pursue and accumulate subculture capital, thereby satisfying their needs for self-actualization and self-reward. Finally, these diverse forms of reward meet youth demands for social recognition, novelty, and self-actualization, even enable them to build various social networks through online subcultures. However, those youth also gradually become trapped in the powerful gravitational whirlpool of online subcultures.

#### **4.4 Reinvestment Stage: The Irrational Cycle of Deep Youth Involvement**

Although young people have already invested a significant amount of time, money, and energy in the pursuit of rewards under both internal and external drives, what truly draws them into deep and prolonged involvement in online subcultures is the deeper stage of reinvestment. Previous studies have shown that the more individuals invested in something, the more likely they were to perceive it as valuable[15]. For example, a survey on the alienation tendency of online subcultures has found that nearly 60% of respondents agreed with statements such as "I prioritize entertainment and don't care whether it's superficial or vulgar", "I greatly enjoy online carnivals and humorous banter" and so on. Those statements reflect traits of entertainment, consumerism, and revelry[16]. To obtain continuous rewards, the past studies shown that young people often maintained an irrational cognitive attitude, remaining deeply engaged in their respective subcultures. They may even alter their preferences and value systems to conform to a specific online subculture, thereby avoid cognitive dissonance. What's more, online subcultures provide the conditions for youth to invest "stored value" in them. This may be because the integration of commercial capital and the upgrading of communication media have changed the single stored value form of traditional subculture. For instance, various character figurines and cosplay costumes in ACGculture. The more stored value young people invest in a particular subculture, the more attention and services they receive in return. In turn, this increases their dependency on reinvesting in that subculture.

In addition, most these diverse forms of stored value are brought about by the online subculture of commercial capital, which not only plunges young people into it, but more importantly, they also allow various commercial capital to profit from it. As has been stated in previous study, commercial capital deliberately constructs the so-called style of 'subculture' and strategically positions itself as

the ‘core’ of specific youth group, to gain their recognition, thereby shaping the evolution of subcultures[17]. Therefore, the next trigger of online subculture is often commercial capital. While the homogeneous circle of online subcultures is constantly reinforced, it also carries out “pseudo-innovation”. The bottom line is, youth are more and more deeply involved into an irrational cycle.

## 5. Conclusion

This study analyzes typical online subculture phenomena (e.g., ACG, fan communities, e-sports, social media culture, and online slang), and constructs a gravity model of online subcultures. This model is used to understand how Chinese youth become involved in the online subculture. Based on Nir Eyal’s Hook Model, the gravity model reinterprets the process of interaction between youth and online subcultures. In this process, there is a behavioral loop of trigger-action-reward-investment, which is a deep involvement process with progressive stages. Furthermore, this model shows that digital platforms, emotional states, and algorithmic mechanisms together constitute the initial triggers, which shapes the motivation and ability of actions in the social technology environment. Then, multi-level reward mechanism maintains their continuous participation, and cognitive and economic reinvestment ultimately traps young people into a structural abyss of self-circulation. Thus, the model reveals the sociocultural logic and business logic behind youth involvement in subcultures. In conclusion, this study shows that online subcultures serve is not only a symbolic spiritual sanctuary, but also a structural space shaped by algorithmic technology and commercial capital, in which youth are both empowered and disciplined.

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## References

- [1] Eyal N. Hooked: How to build habit-forming products[M]. Penguin Uk, 2014.
- [2] Pettigrew M, Maani N, Pettigrew L, et al. Dark nudges and sludge in big alcohol: behavioral economics, cognitive biases, and alcohol industry corporate social responsibility[J]. The Milbank Quarterly, 2020, 98(4): 1290-1328.
- [3] Tang J, Prestopnik N R. Exploring the impact of game framing and task framing on user participation in citizen science projects[J]. Aslib Journal of Information Management, 2019, 71(2): 260-280.
- [4] Libai B, Bart Y, Gensler S, et al. Brave new world? On AI and the management of customer relationships[J]. Journal of Interactive Marketing, 2020, 51(1): 44-56.
- [5] He Wei. From otaku to erciyuan: reviewing studies on the youth’s subculture from the perspective of the archaeology of knowledge[J]. Journal of Journalism & Communication Studies, 2018, 25(10): 40-59+127.
- [6] Deng Jian. MMORPG Online game criticism —— A historical examination of the history of game coins and game utopia[J]. Shanghai Journalism Review, 2020, (07): 16-26.
- [7] Hu Yong, Liu Chunyi. Metaphors of reality: social symptoms behind the fanquan culture[J]. Journalism Research, 2021, (08): 65-79+119.
- [8] Eyal N. Hooked: How to build habit-forming products[M]. Penguin Uk, 2014.
- [9] Eyal N. Hooked: How to build habit-forming products[M]. Penguin Uk, 2014.
- [10] Fogg B J. A behavior model for persuasive design[C]//Proceedings of the 4th international Conference on Persuasive Technology. 2009: 1-7.

- [11] Li Li, Tong Jingjing. The online public sphere in the digital age: pan-entertainment crisis and its educational governance[J]. Education Research Monthly, 2023, (08): 49-56.
- [12] Tang Zi Qian, Yuan Yao, Wang Weixia. From information cocoon to multiple empowerment: research on the generation mechanism of knowledge divide and Its governance paths[J]. Information Studies: Theory & Application, 2024, 47(06): 68-75+59.
- [13] Skinner B F. Contingencies of reinforcement: A theoretical analysis[M]. BF Skinner Foundation, 2014.
- [14] Erikson E H. Identity and the life cycle[M]. WW Norton & company, 1994.
- [15] Eyal N. Hooked: How to build habit-forming products[M]. Penguin Uk, 2014.
- [16] Chen Lin. A public survey on the “alienation tendency” of Internet subculture[J]. People’s Tribune, 2020, (08): 66-71.
- [17] Jiang Jianguo, Chen Xiaoyu. The generation, evolution and social implications of Chinese Internet subculture[J]. News and Writing, 2024, (05): 94-104.