

# *Research on the Influence Mechanism of New Media Users' Perceived Value on Sticky Behavior*

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**Abstract:** Under the background of "Internet plus" deepening and the whole industry informatization, the time for the integration of new media and industry has gradually matured. As a new form of communication with the Internet as the carrier, new media has incomparable advantages compared with traditional media. One of its basic characteristics is strong interaction. Using the new media platform to interact with users has become a new channel for many enterprises or organizations to understand users' needs and obtain the laws of consumption behavior. It not only brings new opportunities and challenges to enterprises and organizations, but also brings many topics for the research of users' information dissemination, management, mining and analysis. Based on sor theory, taking short video applications in the context of the Internet as an example, based on the original stimulus organism response model and combined with the perceived value theory, this paper analyzes the influencing factor model of short video application user perceived value on user stickiness, and discusses the impact of various value dimensions of short video applications on user stickiness, Finally, management suggestions for new media applications are put forward: increase user interaction to strengthen social attributes; Enrich content to enhance entertainment; Continuously motivate users to increase their sense of achievement; Improve the user privacy information protection mechanism, so as to increase user stickiness.

## **1. Research Background**

In the 21st century, science and technology have inserted the wings of dreams into the rapid development of communication media. The new media with digital technology as the core element has become an important carrier for people to obtain information, understand society, entertainment and leisure in their daily communication activities. Its rise has brought qualitative and quantitative adjustments to the communication industry market and industrial structure. Today, whether in media form or information dissemination activities, new media show strong vitality and competitiveness [1]. In recent years, the number of new media is increasing. How to enhance its user stickiness has become the key to the survival of new media. This paper aims to explore the relationship between the perceived value of new media users and its user stickiness, and find ways to improve the user stickiness of new media [2].

### **1.1. The Meaning of New Media**

The term "new media" first appeared in the 1960s. P. Goldmark, director of the Institute of technology of Columbia radio and television network, put forward the concept of "new media" in a plan put forward in 1967. In 1969, e. Rostow, chairman of the presidential Special Committee on American communication policy, used the word "new media" in many places in his report to President Nixon. Since then, the term new media has become popular in the United States and soon spread to the world. However, there is no uniform definition of new media. The author of this paper studies and arranges the relevant materials of scholars and industry at home and abroad, and believes that the definition of new media can be divided into two categories: industry definition and academic definition.

Firstly, it discusses the industry definition of "new media". Internationally, according to the fourth edition of the international standard industrial classification of all economic (ISIC) issued by the United Nations, radio, television, film, Internet comprehensive information services, software publishing, etc. are all classified under the category of information and communication. In China, according to the classification of culture and related industries (2018) issued by the National Bureau of statistics, "online new media" belongs to "other Internet information services" under the category of "Internet information services" [3]. Therefore, no matter from the international or domestic classification, new media belongs to a service under the information and communication industry. In academia, the definition of new media is vague and broad, and it is difficult to unify. Kuang Wenbo believes that new media is a communication form of information and services to users by using digital technology, through computer networks and other channels, as well as computers, mobile phones, digital TV and other terminals. Its characteristics are "digitization" and "interactivity", and he believes that interactivity is the essential feature of new media. Peng LAN believes that the characteristics of new media are digitization, integration, interaction and networking. P. Levinson believes that new media refers to those media on the Internet with user participation, such as blogs, microblogs, wikis and other websites. It is characterized by no top-down control structure, and the consumers of information are also the producers of information.

Based on the above points of view, the author defines new media as interactive and integrated media spread through computer networks and other channels, with intelligent devices as terminals and stored in digital form [4].

## 1.2. Characteristics of New Media

Compared with traditional media, new media has the characteristics of immediacy, openness, focus, massive information, low-cost global communication, convenient retrieval and integration. Digital technology and interactive communication are the essential characteristics of new media.

The so-called immediacy refers to the extremely fast communication speed of new media. Because new media usually use digital communication means such as the Internet, it can spread to a great range in a short time.

The so-called focus refers to that the user group of new media can be accurately subdivided. This feature enables new media to spread specific content to specific audience groups.

Convergence means that new media can use advanced technology to integrate a variety of single traditional media types to form a fusion media.

## 1.3. Type of New Media

At present, new media mainly includes network media, mobile media and the mobile Internet formed by the integration of the two, as well as other interactive digital media forms.

In the report on in-depth research and investment prospect prediction of China's new media industry from 2013 to 2017, the scope of the new media industry is defined as: network new media, mobile new media (mobile media, audio-visual media), digital TV, blog, chatwords, podcast, Wiki,

network literature, network animation, online games, e-books, e-magazines, network broadcasting SMS, MMS, mobile newspaper, mobile TV, etc [5].

The new media type studied in this paper refers to a platform that cooperates with enterprises to provide users with information exchange and entertainment services through mobile Internet, wireless communication network, satellite and other channels, and through computers, mobile phones and other terminals, such as professional functional new media platforms such as industrial information media websites and industrial information media applications.

## **2. Research on Viscous Behavior**

### **2.1. Concept and Measurement Index of User Stickiness**

There are several different perspectives to define stickiness. First, define stickiness from the perspective of website or its products and services, such as website stickiness, blog stickiness, game stickiness and so on. Paul (1999) defined stickiness as the ability to retain consumers and return them. Zott (2000) defined stickiness as the ability of websites to attract and retain consumers. Other researchers have proposed that stickiness, that is, consumer retention, is an invisible ability, which is mainly used to make consumers return continuously over a long period of time. Similarly, Judy (2007) proposed that stickiness is the ability of websites to retain online consumers and prolong their stay time each time. His research results combine stickiness with repeat purchase intention, and deeply discuss the problems and significance of stickiness research, which has become another important achievement in the field of stickiness research. Secondly, some researchers combine stickiness with consumer will and put forward the concept of stickiness based on consumer will. For example, researchers define game stickiness as the willingness of game players to come back repeatedly and prolong the duration of each online game. Some researchers also pointed out that online consumer stickiness is a characteristic of online consumers. Based on their cognition and emotion of the website, they do not change the nature of the website with their continuous access preference in the face of switching pressure or other factors. Some researchers directly look at stickiness from the perspective of consumer behavior and believe that stickiness is a way of behavior, that is, stickiness can occur only when the change of consumer behavior is realized. Among these researchers, Hallowell (1996) defined stickiness as a high-frequency behavior of returning to the website [6]. Li Dahui (2006) used the concept of stickiness in a study on the stickiness of consumer websites and proposed that stickiness is continuous use on the basis of frequent use [7]. In a research article on blog stickiness, Lia, F. and Whalley, J. (2002) used the concept of Li stickiness and defined blog stickiness as the time spent on the blog and the time spent on the blog [8]. Wu, Y.L., Lin, C.E. and Wu, H.S. (2007) believes that stickiness will increase users' access frequency and prolong access time, and that the flow characteristics of online consumers will promote stickiness [9]. The above definition of stickiness, no matter from what perspective, points to the transformation of consumers' online behavior. In fact, the measurement indicators such as frequency and time of use and pre factors such as heart flow all suggest the psychological changes associated with the emergence of viscous behavior. Therefore, the author believes that in a broad sense, stickiness is a change of behavior and psychological preference caused by external attraction. This change may occur on any occasion in people's life and is not absolutely related to consumption behavior or network behavior; In a narrow sense, stickiness is a behavioral and psychological change caused by consumers' excessive attention to a certain product and service. In this sense, sticky behavior is an overuse behavior with psychological changes formed by users on the basis of continuous use of the network [10].

## **2.2. Driving Factors of Viscosity and Its Research Significance**

Judy (2007) in an article on the antecedents of network stickiness, through empirical research, concluded that the stickiness intention of website users has an important impact on whether consumers decide to shop on the website. Therefore, the establishment of a stickiness website is the decisive factor for a successful website. She also pointed out that high-quality website perceived value (including website content, website information format and link infrastructure), consumers' positive attitude and high sense of trust towards the website contribute to the generation of consumers' sticky intention, which, once generated, will play a positive role in promoting the generation of transaction intention. Her research results have been recognized by many researchers. Other researchers have proposed that trust, information quality and website availability affect the credibility of websites, which will establish a positive correlation with the generation of network stickiness. Wu (2010) empirically tested the important role of persistent motivation on player stickiness in his research. Some researchers have also studied the impact of demographic factors and confirmed the impact of personal factors, such as gender, type of network use (severe and mild) and personal factors such as experience and identity, on stickiness. At the same time, the impact of social factors (perceived social impact) on stickiness and the impact of product quality on stickiness have also been confirmed. Xu (2010) proposed in his research that the perceived content value of the website affects online trust and online satisfaction, thus affecting consumers' repurchase intention, and concluded that stickiness is an important prerequisite for promoting repurchase intention. Wu (2008) pointed out in his research report on virtual community that if the participants of virtual community establish trust in the community, as the output variable of trust, stickiness will also be established at the same time. In the above research, the analysis of stickiness behavior from the perspective of consumers is rare, and the measurement of stickiness is also a problem that has not been deeply studied. The author believes that the analysis of stickiness from the perspective of consumers will contribute to the correct understanding of the formation mechanism of stickiness, and the correct understanding of the formation mechanism of stickiness will contribute to the accurate evaluation of stickiness, and finally establish a solid foundation for the understanding and evaluation of stickiness [11].

## **2.3. Analysis of Formation Mechanism of Viscous Behavior**

Sticky behavior does not appear in the user group from the beginning. Users' acceptance of new information channels has also gone through the process of trial, acceptance, adoption and continuous use. The focus of researchers also changes with the change of users' behavior. Combined with the above literature analysis, the formation mechanism of viscous behavior as shown in Figure 1 can be given [12].

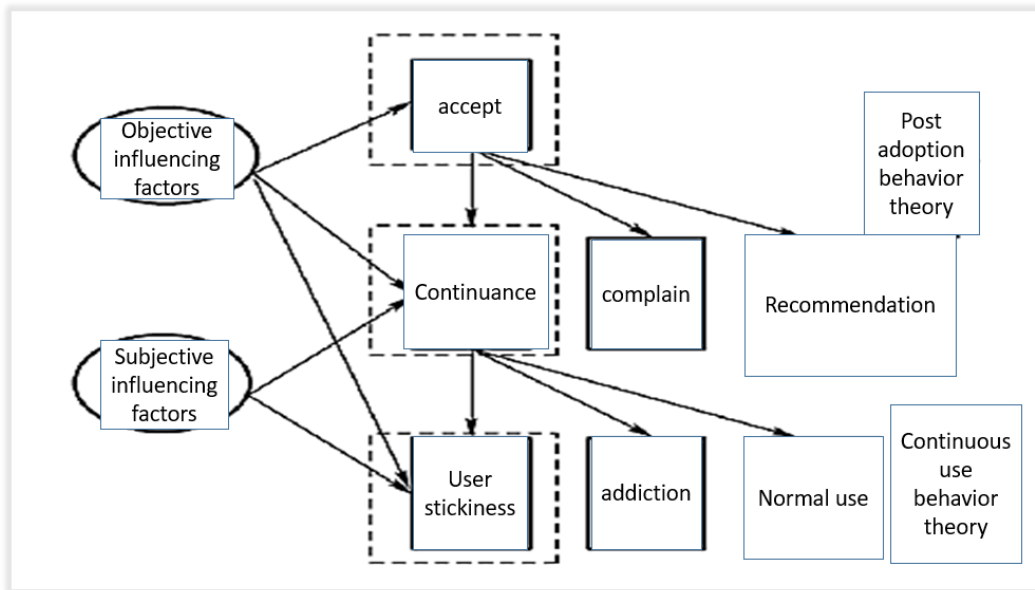


Figure 1: Formation mechanism of user stickiness.

As can be seen from Figure 1, the user's acceptance of new media is a gradual process. In the process of determining the adoption, some objective factors such as usefulness, ease of use and skills will affect the user's adoption decision. Once the user decides to adopt, the behavior after adoption will be affected not only by the above objective factors, but also by some subjective factors such as satisfaction, trust, interest and habits. There are three kinds of behavior choices: continuous use, complaint and recommendation. At this stage, if the user further decides to use continuously, several different behavior results will appear under the joint influence of the above subjective and objective factors and situational factors (such as heart flow, structure embedding, etc.). One is normal continuous use, that is, the new media will be used as an information source and entertainment tool without affecting the normal life state, The result of this application is the same as users' information and entertainment tools such as newspapers and television, which helps users get external information, life entertainment and moderate leisure. Addiction is the result of another extreme application [13]. As mentioned earlier, the result of this application seriously interferes with the user's normal psychology and life, and makes the user's life deviate from the normal track. The author believes that stickiness is a behavior result between normal use and addiction. It goes beyond the scope of normal use and has a certain impact on users' lives. However, compared with addiction, stickiness does not make users' lives fall into a pathological state as a whole, and the difference is that if the consequences of addiction are completely negative, stickiness has positive and negative effects, One is the positive effect that helps to establish a loyal relationship between users and enterprises, so as to reduce transaction costs, the other is the negative effect that can be intervened and transformed, and its intervenable and transformable characteristics are the purpose and significance of the author's research.

#### 2.4. Influencing Factors of User Stickiness

Scholars at home and abroad have done a lot of research on the influencing factors of new media user stickiness. Chien lung (2014) studied the impact of perceived information accessibility on microblog stickiness, and discussed the regulatory effect of community awareness on them. Li (2007) believes that the influencing factors of website user stickiness are website user attitude, trust in the website

and website content, which affect the formation of website user stickiness. Zhao Qing (2012) studied the formation mechanism of Internet user stickiness and believed that users' Expectation Confirmation, usefulness, satisfaction, use habits and other factors affect internet user stickiness [13]. Duan Feifei (2017) studied the influencing factors and mechanism of mobile game user stickiness, and believed that the flow experience is an important factor affecting mobile game user stickiness. In short, previous studies have discussed the influencing factors and mechanisms of network user stickiness from multiple perspectives, but did not pay attention to the impact of new media perceived value on new media user stickiness. Based on this, this paper studies the relationship between new media user perceived value and user stickiness behavior from the perspective of new media user stickiness.

### **3. Case study - Short Video Applications**

Short video application is popular at home and abroad because of its short and fine welding, easy production, strong participation and rapid dissemination.

In the past, the research on perceived value and users' willingness to continue to use is basically based on the combination of Expectation Confirmation Theory and perceived value theory, adding part of the dimensions of perceived value to the Expectation Confirmation model of information system for discussion. There is a lack of systematic research and Discussion on the relationship between perceived value and user stickiness. With the development of Internet technology, user privacy has attracted more and more attention. Short video applications based on personalized recommendation will collect and analyze users' information while realizing accurate push. Therefore, when studying the relationship between users' perceived value and users' stickiness of short video applications, users' privacy concern is an important factor [14]. Therefore, this case combines the perceived value theory with the stimulus organism response model to build a short video application user stickiness influencing factor model based on S-O-R paradigm. Firstly, based on the theory of user perceived value, the user perceived value is divided into perceived utility and perceived cost. The research model of this paper is constructed by introducing heart flow experience as the intermediary variable, privacy concern as the regulating variable and user stickiness as the dependent variable, as shown in Figure 2.

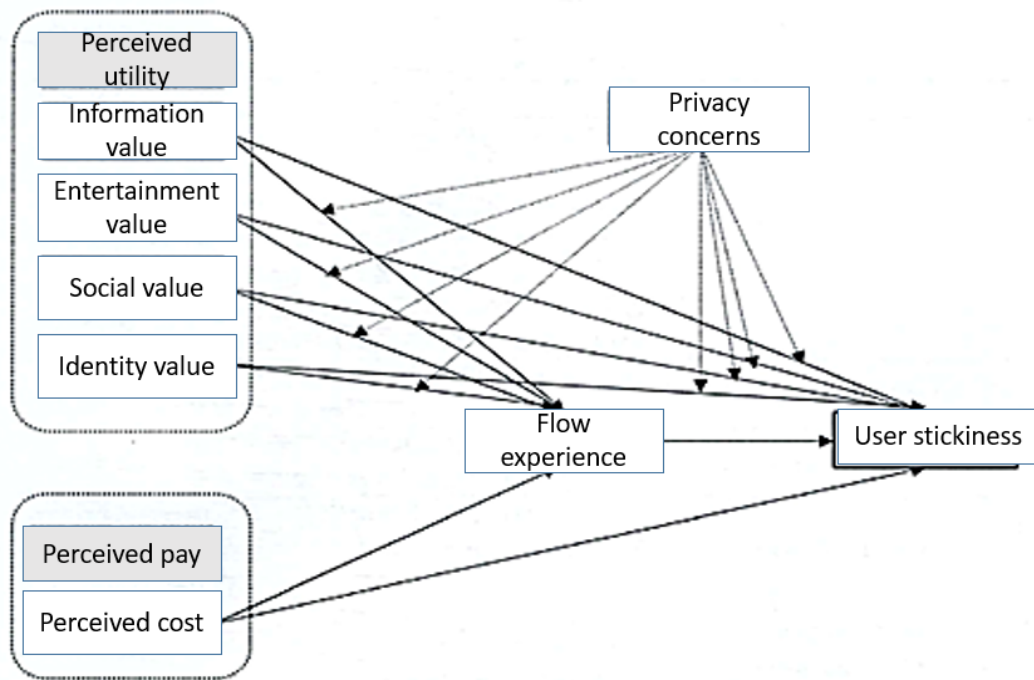


Figure 2: Relationship model between user perceived value and user stickiness in short video applications

### 3.1. Case Discussion

#### 3.1.1. Discussion on the Relationship Between Perceived Utility, Flow Experience and User Stickiness

In the study of the impact of perceived utility on users' flow experience, it is found that information value, entertainment value, social value and identity value all have a significant positive impact on users' flow experience. The influence degree of the four subdivided elements on the user's flow experience from large to small is: entertainment value, information value, social value and identity value. In the process of influencing users' flow experience, the impact of entertainment value and information value is more significant, because for users, the sensory experience brought by entertainment value is the most direct. In the process of use, users can quickly make users have an inner pleasure, which perfectly meets the entertainment needs of users in the fragmented era. For information value, short video, a "text + picture + video" information transmission method, is easier to be accepted by users than the traditional text and picture based information transmission method. The process of receiving information is more intuitive and visual, and can immediately bring users an excellent user experience. In contrast, social value needs to establish a stable social group, and identity value needs to realize a sense of self-achievement in the process of uploading works and interaction. They all need a process of continuous accumulation and strengthening. It takes a long period to have an impact on users' flow experience, so the impact is not significant enough. In the study of the impact of perceived utility on user stickiness, it can be found that information value, entertainment value, social value and identity value all have a significant positive impact on user stickiness. The degree of influence on user stickiness from large to small is: social value, identity value, entertainment value and information value. Social value and identity value have a great impact on user stickiness because with the increase of users' use time and use times, users' social needs on

the application will continue to strengthen, and the interpersonal relationships built on the application will continue to attract users to continue to use the application. At the same time, the personal works uploaded by users on short video applications will increase with the increase of the number of viewers, It will bring users a great sense of achievement, which will have a continuous impact on users' willingness to continue to use and continuously strengthen users' stickiness with the increase of the use time of short video applications. □

### **3.1.2. Discussion on the Relationship Between Perceived Cost, User Flow Experience and User Stickiness**

Perceived cost has a significant negative impact on user flow experience and user stickiness. This is because the time and money costs paid by users in the use process will reduce the user experience, thus reducing the user experience, reducing the user's willingness to continue to use, and having a negative impact on user stickiness.

### **3.1.3. Moderating Role of Privacy Concerns**

It is found that privacy concerns do not regulate the value of information and entertainment. This is mainly because for users, when experiencing the information value and entertainment value of short video applications, users are more receivers, belong to bystanders, and do not involve the display and disclosure of their own privacy information. Therefore, the level of users' privacy concerns does not play a regulatory role. Privacy concerns have a negative regulatory effect on social value and identity value. This is because when users conduct social activities and creation through short video applications, they will show their personal information to others. Therefore, if users pay high attention to privacy, they will reduce users' social will and creative will, so as to reduce the social value and identity value brought by short video applications to users, and finally reduce users' flow experience and user stickiness.

### **3.1.4. The Mediating Role of Flow Experience**

Information value, entertainment value, social value and identity value are the basic functions of short video applications. In the process of use, the stronger the perception of these functions to users, the higher the user's sense of pleasure in the process of experience, and finally attract users to continue to use and spontaneously recommend to friends around them, so as to increase user stickiness. The perceived cost will reduce the user's use experience, reduce the sense of pleasure, and affect the user's use stickiness. Therefore, these perceptions will indirectly affect user stickiness by affecting user flow experience.

## **4. Management Enlightenment**

### **4.1. Increase User Interaction to Enhance Social Attributes**

Through the above demonstration and analysis, we find that social attributes have a significant positive impact on user stickiness, and affect users' willingness and behavior to continue to use to a great extent. Therefore, it is of great significance for the operation of the new media platform to increase the interaction of users on the new media platform and strengthen the social network of users on the new media platform. For the strengthening of social attributes, we can start from the following two aspects.

(1) Promote the transformation of user comments to social areas. Through the process of understanding the students and friends around us, we found that we are very interested in the



comments under the new media platform. We express our opinions and say various jokes in the comment area. The appeal of the comments is no less than the video content. Therefore, the operators of the new media platform should fully tap the value of the comment area, launch more, attract users to participate in the discussion, and form a stable social area.

(2) Launch interest circle function. Use Internet technology to deeply mine user needs, establish user portraits, classify users according to their interests, push interested content for users, and form topic circles one by one. Guide users to establish interest circles according to their own preferences, where users can freely discuss topics they are interested in, send various animation expressions, and synchronously push their published videos and forward other interesting videos.

#### **4.2. Enrich Content to Enhance Entertainment**

In the process of influencing user satisfaction, perceived entertainment has the most significant impact. When users use new media applications, they have hedonic expectations and mentality. They relax and spend time through new media applications. Therefore, the richness and entertainment of new media content directly affect users' actual experience and use feeling.

(1) Attract stars and online celebrities to settle on the platform

Stars and online celebrities have a large number of fans. The new media application platform can attract stars and online celebrities to settle in and encourage them to produce excellent works. On the one hand, it can increase users for the platform, on the other hand, it can also enhance popularity for stars and online celebrities to achieve win-win results for both sides.

(2) Promote theme marketing and release the creativity of ordinary people

The new media platform can regularly launch video tags as the content theme of the platform, guide the trend, attract thousands of ordinary users to participate in the production of videos with the same theme, provide users with inspiration for creating videos, fully mobilize the enthusiasm of ordinary people and give full play to their creativity.

#### **4.3. Continuously Motivate Users to Increase Their Sense of Achievement**

For the new media application platform, user generated content is the basis of platform operation. Therefore, how to encourage users to continuously create high-quality content and establish a benign ecology between content producers and viewers is very key. Therefore, the platform must stimulate the enthusiasm of users to create spontaneously and continuously produce high-quality content, so as to improve user satisfaction and user stickiness [15].

(1) Optimize the content recommendation mechanism, make the high-quality content produced by users be browsed and paid attention to by more people through home page recommendation, topic recommendation and other ways, so that users can gain inner satisfaction and honor while gaining attention and affirmation, and help users achieve self-achievement.

(2) Optimize the product function and interactive interface of the application, and enhance the user's virtual inner sense of honor by introducing member system, point system, like ranking and so on.

#### **4.4. Improve the User Privacy Information Protection Mechanism**

(1) Relevant government departments shall improve relevant laws and regulations on privacy protection and standardize the user's personal information and user data involved in the use of Internet applications.

(2) The new media operation platform should pay more attention to and protect user information, standardize the collection and utilization of user data, make the process transparent and legal, and reduce users' anxiety about the disclosure of personal privacy information [16].

(3) Accurately perceive the sensitivity of users to personal privacy, actively guide sensitive users, and reduce users' concerns and concerns about personal privacy disclosure from the aspects of platform incentive and positive publicity of user information protection.

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