



# General Live Streaming Services Lead to New Uses and Gratifications

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**Abstract:** The uses and gratifications theory focus on the question, “What do people do with media?” instead of “What do media do to people.” Most prior gratifications researchers have concentrated on gratifications motivated by social and psychological needs. However, with the development of technology and the advent of Web 2.0, the results of early gratifications research might not cover the gratifications arising in the new digital age. So Sundar and Limperos developed an hypothesis stating that new technologies can create new gratifications, which include modality-based gratifications, agency-based gratifications, interactivity-based gratifications and navigability-based gratifications <sup>[1]</sup>. Therefore, on the basis of uses and gratifications theory, this paper seeks to explore the four types of new gratifications above taken from the general live streaming service platform DOUYU in China.

**Keywords:** new gratifications; new technology; live streaming; DOUYU; China;

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## 1. Introduction

Nowadays, social media have gained considerable popularity in China, as there are now about 200 online streaming companies. As a user-generated content platform, a live streaming service enables video construction and broadcasting in real time. As a type of new media, live streaming service has changed the traditional way of information interaction and people’s social lives. Live streaming service allows “unidirectional one-to-many communication” <sup>[40,2]</sup>. Moreover, different from other social media, live streaming services are synchronous, meaning that all interactions among different users happen at the same time <sup>[3]</sup>. Many previous works have studied live streaming services from different aspects, such as learning efficacy with live streaming video game platforms <sup>[4]</sup>, user behavior with live streaming game cast sharing sites <sup>[5]</sup>, and the copyright of live streaming sports broadcasting <sup>[6]</sup>. However, most prior works focused on topic-specific live streaming services such as Twitch (games), and general live streaming services, which do not cover specific topics but share daily life, have not received much attention<sup>[3]</sup>. An understanding of what motivates people to use live streaming services and what satisfactions people derive therefrom is too limited.

Uses and gratifications theory explores the “needs and satisfactions” that motivate people to actively select and use certain media. It assumes that users of media are goal-directed, which means that a specific media is selected to satisfy his or her needs <sup>[7]</sup>. Ruggiero states that, “Uses and gratifications has always provided a cutting-edge theoretical approach in the initial stages of each new mass communication medium” <sup>[3,8]</sup>. Therefore, uses and gratifications is suitable for the study of live streaming services, and in recent years new elements and critical opinions on this theory have continued to emerge. Sundar and Limperos argue that the theory is too audience-centered and it ignores the influence of technology <sup>[1]</sup>. They have explicated the possibility that technology can stimulate new gratifications and they have provided four new classes of gratifications: modality-based gratifications, agency-based gratifications, interactivity-based gratifications and navigability-based gratifications. These will serve for future studies. However, their argument is not dominant in the uses and gratifications literature, and has not been examined extensively.

Therefore, this paper studies a general live streaming service in China under the framework of uses and gratifications and it adopts Sundar and Limpers' classifications of new gratifications. DOUYU is used as a case study here. As a leader in the live streaming industry in China, DOUYU has nearly 30 million daily active users and 200 million monthly active users. Nearly 10,000 users are broadcasting their own programs through DOUYU every day. The number of users' everyday live comments on DOUYU reaches 1,500,000,000. This study randomly selected 15 users who use DOUYU and conducted in-depth interviews online. These interviewees include active and regular users.

## 2. Uses and gratifications theory

Uses and gratifications theory refers to "media as sources of influence amid other sources and sees media audiences as variably active communicators"<sup>[418,9]</sup>. It emphasizes that social and psychological factors are the origins of the motivations that engage people in particular media.

This theory has been widely used in the realm of mass communication. And in recent years, the uses-and-gratifications framework has been adopted to study traditional media as well as new media. For example, Papacharissi and Mendelson conducted an exploratory study of reality TV shows, and outlined reality entertainment, relaxation, habitual pass time, companionship, social interaction and voyeurism as gratifications<sup>[10]</sup>. Stafford, Stafford and Schkade derived three dimensions of internet use, including process gratification, content gratification, and social gratification<sup>[11]</sup>. Ku, Chu, and Tseng studied gratifications while using instant messaging and e-mail<sup>[12]</sup>. They found general gratifications such as relationship formation and maintenance, information seeking, amusement, style, and specific gratifications including sociability. Wei and Lo emphasized affection gratification and social utility gratification deriving from cell phone use<sup>[13]</sup>.

Based on prior work, most gratifications are identical and some as sought from new media can also be found from previous studies of traditional media. There is a problem of these studies being too audience-centered and ignoring the role of technology. Under the Web 2.0 environment, people have been enabled by easier ways of engaging in different new media and interacting. Ever more UGC platforms allow people to be active media users in terms of not only consumption but also production. Technology plays an essential role in facilitating these changes, but not much attention has been paid to that aspect. Apart from social and psychological elements, technology itself might also be able to generate new gratifications. "It is time that we broaden our focus beyond social and psychological origins of needs, and also consider potential influences of the perceived capabilities of the media technology upon our gratifications"<sup>[1]</sup>.

As a matter of fact, a few uses-and-gratifications researchers have criticized the limitation of uses and gratification theory and put a focus on the influence of technology. They found some specific new gratifications derived from the new medium. Lichtenstein critiques that uses and gratifications theory is premised on the assumption that people choose certain media according to the media's function to satisfy needs, but the needs that can be fulfilled by media differ from biological needs such as hunger and thirst<sup>[14]</sup>. It is difficult to define needs, because they only exist in people's minds. And frequent users of a certain medium are different from those infrequent users who never use the medium. Those infrequent users cannot expect the entertainment and needs satisfaction that the medium can provide. This supports the idea that not all media choices stem from the expectation that certain inner needs can be gratified by a specific medium. Therefore, medium can serve as a motivation for media use. And before Lichtenstein, Cutler and Danowski put forward the concept of process gratification<sup>[15]</sup>. They pointed out that content gratification is obtained from "the use of mediated messages for their direct, substantive, intrinsic value for the receiver", while process gratification is acquired from "the use of mediated messages for extrinsic values". In other words, people gain gratification from the process of using specific media rather than from the content. The psychological and social origins of media do not account for process gratifications. Content gratification might be presumed by users, while process gratification might not be expected, especially by infrequent users. In recent years, more researchers have supported the interaction between medium itself and gratification. Smock, Ellison, Lampe and Wohn studied Facebook and emphasized the interaction between technical features of media and user motivation<sup>[16]</sup>. Zeng identified five gratifications from MP3 players, four of which are

process gratification: control, companionship, status, and concentration<sup>[17]</sup>. Liu, Cheung and Lee stated that technology is the vital element that leads to users' gratification with microblogging<sup>[18]</sup>.

Even though the above-mentioned uses-and-gratifications researchers discovered the relationship between technology and gratifications and pointed out some new gratifications, there is a lack of categorizations for new gratifications in relation to technology. In light of previous studies and findings, Sundar and Limperos proposed four categories of new gratifications from technology, including modality-based gratifications, agency-based gratifications, interactivity-based gratifications, and navigability-based gratifications. These four categories will be elaborated as follows<sup>[1]</sup>.

**Modality-based gratifications**

Modality refers to the multiplicity of ways of presenting content through media<sup>[1]</sup>. Media can present content in many different ways, such as audio, video, picture, and text. Even if the content is the same, when it is presented by different modalities, what people perceive is different.

**Agency-based gratifications**

This type of gratifications is related to user-generated content. Nowadays, many user-generated content platforms allow everyone to be an agent or originator of content. However, ordinary media users usually comment, review and share instead of constructing original content. They help to build communities and share experiences with other people who have similar interests. So, people anticipate that media will have functions such that they can engage and be instructed at the same time.

**Interactivity-based gratifications**

Interactivity here refers to interactivity with the medium itself. The development and improvement of technology allow users to better interact with a certain medium. For example, Sundar and Limperos mentioned the interactive feature – drag<sup>[1]</sup>. When we use an online map, we use dragging to zoom in, zoom out and adjust direction. In this way, we can have better media experiences. Interactivity assures users' "intense engagement" with content<sup>[515,1]</sup>.

**Navigability-based gratifications**

Navigability refers to the technology affordance that "allows user movement through the medium"<sup>[516,1]</sup>. The internet is not just a flat surface; it is more like a space where people can browse, move and explore. The navigability-based gratifications are better exemplified when it comes to online video games. When people play video games, they expect game interfaces to be more like real space where they can have better user experiences. Moreover, another special navigability-based gratification is the scaffolding gratification. It means that media users expect warnings, reminders and being scaffolded before every checkout step on an e-commerce website, and if users are charged without scaffolds, they will complain.

**Table I shows the possible new gratifications provided by Sundar and Limperos<sup>[513,1]</sup>.**

Possible New Gratifications from Media Technology			
Modality	Agency	Interactivity	Navigability
Realism	Agency-Enhancement	Interaction	Browsing/Variety-Seeking
Coolness	Community building	Activity	Scaffolds/Navigation aids
Novelty	Bandwagon	Responsiveness	Play/Fun
Being there	Filtering/Tailoring	Dynamic control	
	Ownness		

Based on uses and gratifications theory, this paper examines the new gratifications from the live-streaming service DOUYU in China.

### 3. Methodology

DOUYU was founded in 2014 and has become the leader in China's live-streaming industry within three years. DOUYU started from video game live streaming, and has covered content including games, outdoors, entertainment,

music, sports, education, and so on. DOUYU has nearly 30 million daily active users and 200 million monthly active users. Due to the enormous popularity of DOUYU, this paper uses DOUYU as a case study of new gratifications that users can acquire from live streaming services and, because many researchers have sufficiently studied video game live streaming through different theories, this paper focuses on general live streaming content.

In-depth interviews were conducted to collect data because the author wanted to learn about DOUYU users' intuitive and detailed feelings to examine the new gratifications hypothesis. The purpose of this paper is to examine whether new technology is responsible for new gratifications, and what kind of new gratifications users can obtain. A total of 15 interviewees were randomly selected users of DOUYU who were interested in general live streaming content. Their user-levels ranged from 1 to 50 (the level is related to the time and amount spent on DOUYU). Six participants are female, and nine are male. Interviewees were asked questions such as why they use DOUYU, what kind of general live streaming content is their favorite, how often they use DOUYU, what they enjoy about live streaming service and so on. All interviews were conducted through DOUYU's online chat room, and each interview lasted at least 30 minutes.

**Table II presents basic interviewee information.**

No.	Gender	Level
1	Male	45
2	Male	39
3	Male	20
4	Female	10
5	Female	9
6	Male	30
7	Male	29
8	Male	50
9	Female	4
10	Male	33
11	Male	28
12	Female	42
13	Female	39
14	Male	31
15	Female	14

## 4. Findings

The author found that when interviewees were first asked why they use DOUYU and what they enjoy about live streaming service, their responses were identical. Almost all interviewees mentioned general gratifications such as killing time, entertainment, social interaction and so on. So the author asked more detailed questions and discussed the technology's influence on their choices. For example, the author asked why they chose live streaming service instead of other traditional media or social media, and in this way, they shared more detailed and different responses. The author found that the mentioned four types of new gratifications can be seen from their responses. Next, the findings will be discussed according to the four types of new gratifications, as follows (Some quotes presented below are translated by the author from Chinese to English):

### (1) Modality-based gratifications

a. Realism and being there. All interviewees mentioned that they use DOUYU because the modality of live streaming makes them feel more real and actually being there.

Interviewee 1 said, "Live streaming is close to my everyday life, the content is more real."

Interviewee 13 said: "I usually watch one live-streamer called Xiaowang every day. I have followed him for one half year. He is a taxi driver, and he broadcasts his everyday life and talks to followers. I feel like he is talking to me face to face."

Interviewee 3 said: "I like watching live-streamers because I think they are more real, they do not have to act any roles like actors, and they can bring us to experience their life, it is so interesting." Interviewee 3 also stated that when

he finishes work and feels tired, he prefers to use a live streaming service to watch others' real lives, which gives him the feeling of living another life different from his busy city life.

Other interviewees also expressed similar feelings. Realism and 'being there' gratifications are reflected in their responses.

b. Coolness and novelty. Coolness and novelty gratifications are appropriate for process use of the medium, while realism and being there gratifications have an instrumental purpose<sup>[1]</sup>. Coolness refers to having a rough idea of the content, while novelty refers to the uncertainty about the content and medium. Six interviewees mentioned that they browse the cover images of different live streaming channels. The titles will occasionally attract their interest; sometimes they are attracted because of the cover images of the live streamers. While other interviewees have followed many their favorite live-streamers, and they just wait for the notifications of their followed live-streamers. However, when they first used DOUYU, they also had the same experience as the other six interviewees.

### (2) Agency-based gratifications

a. Agency-enhancement and community building. As mentioned above, agency-based gratifications apply to the user-generated-content function of the internet. According to Sundar and Limperos, community-building gratification and agency-enhancement gratification are motivated by user-generated-content platforms, because users can serve as the origin of information individually and collectively<sup>[1]</sup>. This type of gratification is suitable for all user-generated-content platforms. Live streaming services are also user-generated-content platforms, so the agency-enhancement and community-building gratifications have already been testified theoretically and can be found in live streaming services. The interview results also showed that agency-enhancement gratification and community building gratification were obtained when using DOUYU. All users send live comments when they watch videos on DOUYU.

Eight of them have joined at least one chatting group founded by the live-streamers whom they follow. Additionally, DOUYU has a function called banka, which is similar to buying a membership in a club. When a user pays six yuchi (yuchi is the virtual token of DOUYU) for one live-streamer's channel, the user's profile picture will have a special sticker attached, which indicates that the user is the fan of the live-streamer. This banka function intensifies DOUYU users' community-building gratification as well as agency-enhancement gratification.

b. Filtering/Tailoring. Filtering is gratification that is stimulated by platforms that allow users to rate and choose their favorite content. Nearly 70% of the interviewees bought virtual gifts for live-streamers. Virtual gifts not only can be converted into cash by live streamers but also add popularity to live streamers on DOUYU. DOUYU has the PK function, which means two live-streamers compete who wins more virtual gifts within the required time. The winner can receive virtual rewards from DOUYU and gain more experience value for upgrading. Interviewee 8 said: "I often post comments and buy virtual gifts for my favorite live streamers, I want to make them become more popular and support them." Interviewee 4 said: "I haven't used DOUYU for a long time, so I often watch the hottest live-streamer who has won most virtual gifts and has most viewers." Some other interviewees also mentioned that when they help their favorite live-streamers gain more popularity or win the competition, they could feel gratified. DOUYU users' action of posting comments, sending virtual gifts, and helping one live streamer win a competition is to filtering their favorite content on this platform by themselves rather than by the platform.

### (3) Interactivity-based gratifications

a. Interaction. All interviewees mentioned that better interaction is one of the most important reasons that attract them to use DOUYU. Through the interaction with the medium of live streaming service, viewers can have better interaction with real people in real time. Interviewee 13 said: "I enjoyed posting live-comments and interact with live streamers. When I talk with my friends, I have to think and worry about if I use the right words, but when I interact with live-streamers on DOUYU, I can just relax and enjoy the interaction." Interviewee 10 said: "Live-streamers will read my names and say thank you to me after I sending virtual gifts, which makes me gratified and feel close with them." It's obvious that users communicate with real people in real time through their interaction with the DOUYU medium. Functions like live comments and virtual gifts are helping users to better interact with the medium in order to better

interact with real people.

b. Activity and dynamic control. DOUYU itself has many functions that trigger users to be active, exercise greater control and have more choices. Apart from games, DOUYU has another five categories, including entertainment, education, science, sports, and yanzhi, an attractiveness index that rates how good-looking somebody is. And each category has subcategories. Users have more content choices and can control the kind of content that is popular. Additionally, there are eight different kinds of virtual gifts on DOUYU. The most expensive one is called the “super rocket”. When a viewer sends a super rocket to a live-streamer, there will be a notification at the top of the DOUYU interface. All users of DOUYU can see the notification. Interviewee 8 said: “I followed a female live-streamer who has been broadcasting singing for a long time. And I often request songs and send virtual gifts to her.” Nearly 60% of interviewees stated that they are used to posting and watching the live comments at the same time, and when live-streamers do or say something interesting, they will send virtual gifts. These functions trigger users to be more active and have interactivity-based gratification during the participatory process.

(4) Navigability-based gratifications. Navigability-based gratifications are process gratifications that are obtained while users are using certain media. Sundar and Limperos proposed three kinds of navigability-based gratifications: browsing/variety-seeking, scaffolds/navigation aids, and play/fun<sup>[1]</sup>. According to the interview, only browsing/variety-seeking gratification can be found. As mentioned above, DOUYU has many categories and many different general live-streamers. Users can therefore browse and have more choices. Interviewee 7 said, “I browse whenever I open DOUYU to see if there’re any new live-streamers and what the most popular content of the day is.” Interview 9 said, “I know some people watch live streaming just to see their familiar streamers, but I like to browse and see what is popular and interesting just out of curiosity and for fun.” And some other interviewees also said that sometimes if they do not browse themselves, DOUYU will recommend some similar live-streamers to them when they are watching one live-streamer. In this way, they can browse these recommended live-streamers' channels. Even though navigability-based gratifications apply more to medium like video games, live-streaming services are also responsible for navigability-based gratifications like browsing gratification.

## 5. Discussion and limitations

This paper examines new gratifications from the live streaming service DOUYU in China and focuses on the new gratifications that are triggered by technology instead of psychological or social needs. The author adopted an interview method to collect data. The results show general gratifications are more easily perceived by users because these are driven by inner needs. But they do not prove that people use media for the same gratifications, or that technology cannot be an origin of new gratifications. To the contrary, technology plays an important role in shaping people's choices of certain media. From the medium-theory perspective, “changes in media, apart from messages, may alter the textures and forms of social life”<sup>[52,19]</sup>. This indicates that technology changes the way people unite and experience the world, which also motivates people to expect more from the medium itself. New modern media have enabled people to acquire new technological gratifications before people have realized it. Different from gratifications triggered by psychological and social needs, new gratifications driven by technology sometimes cannot be easily perceived by people. Not until these gratifications are absent do people come to realize that they are not satisfied. Just take the live comment of live streaming service as an example. After the appearance of this feature, people became used to watching videos, posting live comments and reading other live comments at the same time. Some people even feel unsatisfied when watching TV without live comments. This is because technology and new media have made people anticipate more from the medium. So when people feel tired or bored, and want to kill time or be entertained, they will choose to grab their cell phones instead of turning on the television. The results of interviews also prove that these interviewees use the live streaming service DOUYU because they can better interact with the medium itself. So the inference suggested by Sundar and Limperos, that technology itself could motivate new gratifications, is tenable<sup>[1]</sup>. And it has been proved by this paper that the modality-based gratifications, agency-based gratifications, interactivity-based gratifications and navigability-

based gratifications can be found from live streaming services.

However, it should be acknowledged that this study has some limitations. First, because time is limited, the author only interviewed 15 DOUYU users, which resulted in the small sample size. Second, all interviews were conducted through the DOUYU's online chat room. Therefore, the universality and veracity of this paper might be affected. Future studies should adopt more samples and conduct face to face interviews if permissible.

## 6. Conclusion

This paper demonstrates the possibility that technology could be responsible for the creation of new gratifications and examines four new types of gratifications from the live streaming service DOUYU in China. The results show that general gratifications and new gratifications triggered by technology can both be found through the use of live streaming services, but new technological gratifications play an important and decisive role in motivating people to choose live streaming services instead of other traditional media. The findings from this study indicate that uses and gratifications theory apply to the 21st century's new media as well. And future uses-and-gratifications researchers should not only consider psychological and social elements, but also take technological factors into consideration.

Deuze pointed out that we are living in media rather than with media<sup>[20]</sup>. Media are changing our thinking mode and life subconsciously. With the fast-changing media environment, uses and gratifications still play an important role in dealing with the question that why people participate in one certain media. But when we adopt this theory to answer this basic question, new concepts such as "interactivity, demassification, hypertextuality, asynchronicity and interpersonal aspects of mediated communication" should be incorporated<sup>[29,8]</sup>. These new concepts appear because of the development of technology, so that in the 21st century, uses-and-gratifications study should not only focus on social and psychological factors, but also on technological factors. And the categories of new gratifications (modality-based gratifications, agency-based gratification, interactivity-based gratifications, navigability-based gratifications) that are based on the different features of technology can be adopted as a useful framework for future studies.

## Reference

1. Sundar S, Limperos A. Uses and Grats 2.0: New Gratifications for New Media. *Journal of Broadcasting & Electronic Media* 2013; 57(4): 504-525.
- Wei R, Lo V. Staying connected while on the move. *New Media & Society* 2006; 8(1): 53-72.
2. García-García C, Galán J, Izquierdo R. Social Live Streaming tools for the development of Virtual Workshops. *Multidisciplinary Journal for Education, Social and Technological Sciences* 2017; 4(1): 37.
3. Scheibe K, Fietkiewicz K, Stock, W. Information Behavior on Social Live Streaming Services. *Journal of Information Science Theory and Practice* 2016; 4(2): 6-20.
4. Payne K, Keith M, Schuetzler R, Giboney, J. Examining the learning effects of live streaming video game instruction over Twitch. *Computers in Human Behavior* 2017; 77: 95-109.
5. Jia A, Shen S, Epema D, Iosup A. When Game Becomes Life. *ACM Transactions on Multimedia Computing, Communications, and Applications* 2016; 12(4): 1-24.
6. Kariyawasam K, Tsai M. Copyright and live streaming of sports broadcasting. *International Review of Law, Computers & Technology* 2017; 31(3): 265-288.
7. Katz E, Blumler J, Gurevitch M. Uses and Gratifications Research. *Public Opinion Quarterly* 1973; 37(4): 509.
8. Ruggiero T. Uses and Gratifications Theory in the 21st Century. *Mass Communication and Society* 2000; 3(1): 3-37.
9. Rubin A. M. Media uses and effects: A uses-and-gratifications perspective. In: J. Bryant, D. Zillmann, editors. *Media effects: Advances in theory and research*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc; 1994. p. 417-436.

10. Papacharissi Z, Mendelson A. An Exploratory Study of Reality Appeal: Uses and Gratifications of Reality TV Shows. *Journal of Broadcasting & Electronic Media* 2007; 51(2): 355-370.
11. Stafford T, Stafford M, Schkade L. Determining Uses and Gratifications for the Internet. *Decision Sciences* 2004; 35(2): 259-288.
12. Ku Y, Chu T, Tseng C. Gratifications for using CMC technologies: A comparison among SNS, IM, and e-mail. *Computers in Human Behavior* 2013; 29(1): 226-234.
13. Wei R, Lo V. Staying connected while on the move. *New Media & Society* 2006; 8(1): 53-72.
14. Lichtenstein A, Rosenfeld L. Uses and misuses of gratifications research. *Communication Research* 1983; 10(1): 97-109.
15. Cutler N, Danowski J. Process Gratification in Aging Cohorts. *Journalism Quarterly* 1980; 57(2): 269-276.
16. Smock A, Ellison N, Lampe C, Wohn, D. Facebook as a toolkit: A uses and gratification approach to unbundling feature use. *Computers in Human Behavior* 2011; 27(6): 2322-2329.
17. Zeng L. More than Audio on the Go: Uses and Gratifications of MP3 Players. *Communication Research Reports* 2011; 28(1): 97-108.
18. Liu I, Cheung C, Lee M. User satisfaction with microblogging: Information dissemination versus social networking. *Journal of the Association for Information Science and Technology* 2015; 67(1): 56-70.
19. Meyrowitz J. *Media Evolution and Cultural Change* In: J. R. Hall et al, editors. *Handbook of Cultural Sociology*. New York: Routledge; 2010. p. 52-63.
20. Deuze M. *Media Work*. Oxford: Wiley; 2013.