Viewers' Consumption Intentions in the Live Game Streaming Context

Research-in-Progress

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Abstract

Live-streaming in the game industry have grown fast and is becoming popular as a form of online entertainment. However, a key issue has yet received less attention: why people around the globe spend their time on watching other playing games? Why viewers would be willing to subscribe or donate money to a streamer? To fill the research gap, this study examines how emotional attachment and group identification influence viewers' continuous watching, donation, and subscription intentions based on the theoretical lens of common identity and common bond. Specifically, the crucial roles of para-social interaction with the streamer and co-viewers as antecedents of identity- and bond-based attachment are also investigated. An empirical research with a sample of viewers with live game streaming spectating experience will be conducted. This study has important implications for both researchers and practitioners, especially for streamers in the live game streaming context.

Keywords: Live Game streaming, donation, subscription, continuous watching, group identification, interpersonal bond, para-social interaction

Introduction

Live-streaming in the game industry have grown incredibly fast and is becoming popular as a form of online entertainment. Broadcasting and watching gameplay online has changed people's viewing behaviors. Platforms like Twitch.tv, YouTube.com, AfreecaTV and Azubu.tv, which brings together tens of millions of people who watch billions of minutes of games each month (Wingfield 2014), have attracted the attention of most users (Stohr et al. 2015) and researchers (Sjöblom and Hamari 2016). In 2017, Twitch.tv had 292 billion total minutes watched and 14.2 billion chat messages sent, with 2.2 million unique streamers (Twitch 2017). By 2013, 45 million unique viewers a month followed and shared their gaming experiences on Twitch.tv (Gamezone 2015).

Chen and Lin (2017) pointed out that live-streaming media is likely to become part of the audio and video mainstream as well as the social mainstream in the future. It have been considered more engaging than other media such as video games, online shopping, and webcasts due to the experiences of immediacy and immersion they provide (Haimson and Tang 2017). One of the most prominent examples is Twitch.tv which provides the opportunity for content creators (also called "streamers" or "broadcasters") to broadcast user generated live video content and react to viewers' comments just-in-time. And the audience, the media consumer, has the option to communicate with the streamer or other participants through a live chat. In addition, the usage of Twitch.tv is free of charge. But viewers can subscribe to a specific streamer (with standard subscriber rate of $4.99/month) to get the stream's special emoticons. Then the subscriber is shown by a special icon to differentiate those who do not subscribe in chat. Viewers can also donate extra money to support his favorite streamer. In Twitch.tv, over $25.3 million were raised for different charities in 2016 (Gros et al. 2017).

Past studies revealed a considerable number of players who favor watching games on a livestream rather than playing themselves (Cheung and Huang 2011). With its strong reliance on participative engagement, even single-player games become a social activity (Consalvo 2017). While live-streaming and another forms of broadcast entertainment (tradition TV, radio, online video) share some similar features, however, for many users, live-streaming is a more manifold and holistic communication channel, particularly due to the possibility of interacting with the media hosts and other audience. Sjöblom and Hamari (2016) point outs that live streaming services take these participatory aspects one step further as the interaction is taking place in real time. While television spectating has largely been considered to be a unidirectional activity, games are commonly perceived as a multi-directional activity requiring active user participation.

Despite the prevalent use of live streaming by steamers and viewers, a key issue has received less attention: why people around the globe spend their time on watching other playing games? Why viewers would be willing to subscribe or donate money to a streamer? We focus on those watching rather than those who stream. We define *consumption in the live-streaming context* as a multi-dimensional constructs including *continuous watching, subscription, and donations.* When individuals make a payment or donation in the live streaming context, they usually do not receive direct commensurate tangible benefits (Savary et al. 2015). Given that donation and subscription are important for the success of live-streaming context, very few studies investigate this phenomenon yet and most extant literature pays their attention on viewers' intention to watch (or watch continuously). We are curious what motivate viewers to pay for live streaming services. Empirical research investigating live-stream consumption intention still lags in three aspects that motivate our study.

First, researchers have investigated factors influencing viewers' motives to watch somebody else to play game (Gosling and Crawford 2011; Gros et al. 2017). While viewers do not need to pay to watch games on a livestream, an understanding of users' motivation behind donation and subscription in live-streaming context is important for practitioners and researchers to help businesses to unleash their potential. Andersson and Szanto (2015) explore how a professional streamer can live just by playing computer games. However, while viewers are not getting anything substantial for being a "subscriber" and it's merely a way to support the streamer or get some access to things like private chat and emoticons. Thus, it remains unclear why viewers decide to commit a monthly subscription for $4.99 or donate money to the streamer.

Second, most past researchers consider live stream as a new form of online entertainment based on uses *and gratifications theory* (Gros et al. 2017; Sjöblom and Hamari 2016). Thus, *v*iewers' motivation is driven by gratifications the audience gains. In contract, from the relationship perspective, research has well established that individuals often develop relationships with figures of the media, including celebrities, and even fictional characters (Horton and Wohl 1956; Rubin and McHugh 1987). In addition, according to Park et al.'s (2010) extension of self-expansion theory, attachment was found to have strong motivational and behavioral implications, because an individual who is deeply attached to a person or object is more likely to invest in that object to sustain or strengthen the relationship with it. However, to date, interactions with the streamer and other viewers are currently under-studied from a social or psychological perspective in the context of live streaming.

Third, research has suggested that live streaming has some of the characteristics of a community since a live-stream can also be interactive (Chen and Lin 2017). However, the dynamics and patterns of social interactions in Twitch.tv may reveal an unexpected picture. In fact, the interaction between streamers and viewers may exhibit in a unidirectional and one-to-many pattern, especially when viewer size exceeds a certain amount. Since viewers number in massive live streams are so large that they regularly excess 5,000 live spectators, an information overload is serious in the chat which makes communication overwhelming and unreadable.

In sum, despite the considerable volume of studies on live-game streaming, it is recognized that viewers' media consumption intentions still remains a very under-researched area. Through the theoretical lens of common identity and common bond, this study examines how emotional attachment and group identification influence viewers' media consumption intention. Specifically, the

crucial roles of para-social interaction with the streamer and co-viewers as antecedents of identity- and bond-based attachment are also investigated.

Theoretical Background

Live Game Streaming Services

In the live game streaming context, it involves both streamers (players) and audience (viewers) to co-create their game streaming experience thought social interaction. Online live streaming services like Twitch.tv allow game audience to connect online and participate from nearly anywhere in the world. Gosling and Crawford (2011) position gamers as a type of fan audience, and Twitch's streamer may become a "new breed of Internet celebrity," with substantial amount of dedicated fans who tune in daily to watch them play. Fans can access to all the information about these channels and have the opportunity to communicate with celebrities (streamers). The presence of a large spectating audience generates more attention to the game, drive sales of the game, increase advertising revenue, and even improve the experience for the players themselves. Glas (2015) suggests that game audience experience gameplay vicariously. Twitch.tv therefore is a platform for streamers to stream themselves by playing games to attract popularity to achieve the status of "micro-celebrity."

As video game streaming is a new phenomenon, not much research has been conducted within the area. Hutchins (2008) attempt to define and describe the phenomenon in the World Cyber Games context. Research has been done on the social implications of video game streams (Hamilton et al. 2014), the e-sports aspect of video game streaming (Cheung and Huang 2011), as well as the connection between e-sports streaming and broadcasting (Scholz, 2011). However, as yet, academics and practitioners alike lack sufficient understanding on why game audience consume (watch, commit a monthly subscription, or donate money) live game streaming.

Theory of Group Identity and Interpersonal Bond

Research on donation has studied why people give or donate by applying the attachment theory (Wan et al. 2016). It is developed to explain interpersonal bonds that connect an individual with a specific target. Attachment can be a stronger indicator of a willingness to undertake more demanding tasks than other factors (Park et al. 2010). Attachment has been found to influence a variety of behaviors, such as paying a price premium, and promoting positive word-of-mouth (Johnson and Rusbult 1989). Wan et al. (2016) suggests that users who donate to content creators want to help the creators to achieve their mission, or encourage them to provide high-quality contents. In the donation literature, a number of fund-raising and alumni donation studies have shown that attachment to the university can be a significant predictor of donation (Thomson et al. 2005). The relationships between donors and organizations in terms of attachment, trust, commitment, and identification influence the donation behavior (Sargeant et al. 2006). Attachment to a specific target such as a person or object affects one's allocation of emotional, cognitive, and behavioral resources to the target. In the fan-celebrity relationship context, Stever (2011) revealed that once a fan develops an attachment to a celebrity, her proximity-seeking system will be activated as if she is in a relationship with a romantic partner.

Common identity and common bond theory holds that attachment in groups arises in two ways (Ren et al. 2012). It assumes that individuals join groups driven by either strong personal connections with other members or by the interest in the group as an entity. According to the theory, the attachment to a live-stream can be explained in terms of common identity or common bond. In the first manner, bond-based attachment works through interpersonal relations with people. In Twitch, viewers may feel attached to a streamer in part because of the para-social relationship they have developed with him or her. By contrast, identity-based attachment holds when people feel connected to a group's character or purpose as a whole (Hogg and Turner 1985). For example, viewers may identify with the cause the other members espouse through the constant interaction in the chat room.

We intend to approach the common identity and common bond theories in the live-streaming context by analyzing the patterns of interaction, their causes, processes and outcomes. However, to date

relatively little research has been done to explore how these social interactions manifest in the context of live streaming.

Para-Social Interaction (PSI) Perspective

Prior research in the consumption motives of live game streaming stressed the potential of social media technology for two-way communication and a more balanced relationship between media hosts and audience (Wan et al. 2016), thereby enhance their overall experience. However, the uni-directional nature of live streaming services is largely ignored. Stever and Lawson (2013) observed that many interactions through social media sites still remained mostly one-way. This one-way mediated relationship is a *para-social relationship*, which Horton and Wohl (1956) defined as an ''illusion of intimacy'' that an individual may feel toward a media host (including radio hosts, celebrities, twitch.tv streamers, etc.). Although the mediated persona may not be actually aware of the viewer, the viewer can sometimes come to believe, feel, and act as though the persona is aware of the viewer. The emergence of connecting with media personalities through live game streaming has sparked a new area of academic research on PSI. Stever and Lawson (2013) argued that PSI is an appropriate theoretical framework for studying the one-sided relationship between celebrities and fans. This same argument can be extended to live game streaming environments. Viewers in Twitch.tv feel as if they "know" the streamer and form bond over time through constant exposure to the stream. Repeated exposure can elicit similar feelings of relationship enhancement as traditional media. As this "relationship" continues to develop, the viewer will start to see the streamer as a trusted friend.

Similar to the interaction between a viewer and a streamer, the user in the live streaming context "meets" with other users in the chat room. Over time, the user may feel close to other users through these "meetings". Lessel et al. (2017) describes "The quality of the chat streams changes to something like the roar of a crowd in a stadium." Thus, it is difficult for viewers in a live stream to experience real meaningful interaction with other audience which exceeding a certain number of live spectators. However, as the number of "meetings" increase, the imaginary closeness is enhanced, and the user deliberately maintains this online friendship. Therefore, the para-social relationships among viewers develop over time and ultimately become an important part of their daily life. Overall, we posit that viewers in the live streaming context form imagined friendship-like relationship with two different targets, that is, the streamer and the other audience, at the same time.

Conceptual Framework and Hypotheses Development

We developed a research model to understand factors that influence customers' media consumption behaviors. Our proposed model is depicted in Figure 1.

Interpersonal Bond and Media Consumption Intentions

Theory of self-expansion suggests that users' emotional attachment has strong motivational and behavioral implications. Emotional attachment to the streamer is defined as the emotion-laden bonds and connections with a streamer that reflects a viewer's affective commitment and desire to maintain and strengthen the relationship with the streamer. It is a feeling of oneness that drives the individual to invest in the product or service to sustain or strengthen the relationship. An individual who connects him/herself to a target is more likely to engage in demanding behaviors such as constant participation, which involve expending more resources (e.g., time, energy), continuance intention, or even providing financial support (e.g., donations, subscriptions) (Wan et al. 2016).

In consumer–celebrity relationship, previous research suggests that emotional attachment plays an important role in explaining consumer and fan behavior (Stever 2011). For example, Ilicic and Webster (2011) revealed that consumers respond more strongly to endorsements by celebrities to whom they are emotionally attached than those to whom they are not emotionally attached. In addition, in the donation context, it has been shown that donors are willing to donate to organizations they trust and are committed to (Sargeant et al. 2006). Therefore, emotional attachment can produce a positive influence on the viewers' intention to invest in the streamer to sustain or strengthen the

relationship. Therefore, we infer that increased attachment to the streamer will lead to a set of intentions such as continuous watching, donation, and subscription. Therefore, we hypothesize:

H1. Emotional attachment to the streamer is positively related to continuous watching intention

H2. Emotional attachment to the streamer is positively related to donation intention

H3. Emotional attachment to the streamer is positively related to subscription intention
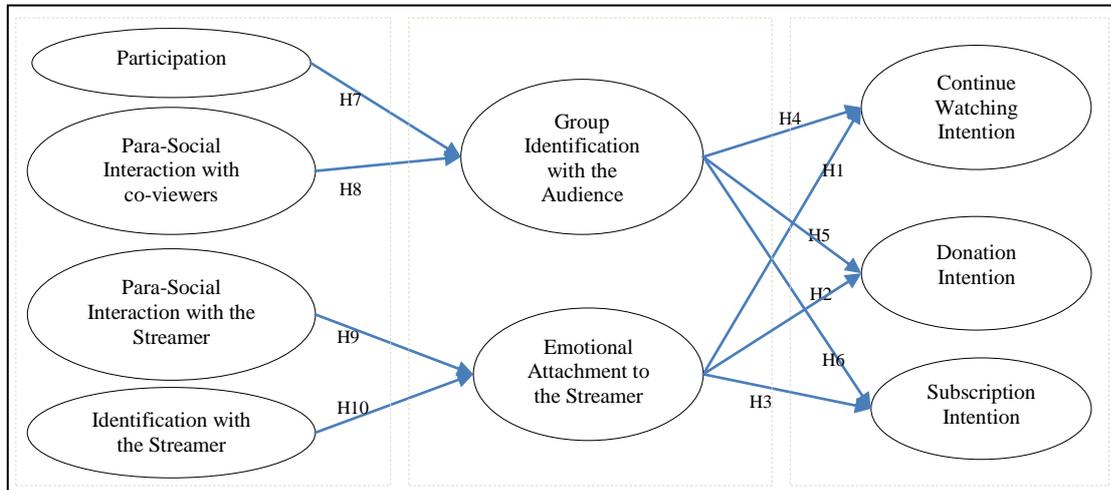
Figure 1. Research Model

Group Identity and Media Consumption Intentions

Social identity theory assumed that self-concepts are partially defined by certain social groups where we obtain the sense of oneness or belongingness, as well as involving values (Ashforth and Mael 1989). People often remain multiple identities in varying salience. Hence, they tend to classify themselves into various social categories that they identify with, and develop social identifications which depict the oneness or belongingness to certain social categories (Ashforth and Mael 1989). This social identification process is mainly served as a self-defining way to achieve self-consistency, self-esteem, and self-enhancement (Bhattacharya and Sen 2003).

In the live streaming context, the notion of identifying the self with a group (i.e., identity-based attachment) is analogous to that of a viewer's connecting him or herself with his or her audience group. In order to maintain their favored social identities, viewers' identifications with other group members would lead to in-group favoritism and corresponding results such as enhanced commitment, intragroup cohesion, and group support behaviors (Ashforth and Mael 1989; Bhattacharya and Sen 2003). Keh and Xie (2009) suggests that identification is effective in promoting commitment to long-term relationship maintenances. In consequence, a member may identify with other audiences if he/she perceives the fit of values and beliefs between the group and him/herself. Therefore, based on the previous discussions, this study posits that the greater the identification of audience group, the more the user is willing to contribute the stream by continuous watching, donation, and subscription. Therefore, we hypothesizes,

H4. Group identification with the audience is positively related to continuous watching intention

H5. Group identification with the audience is positively related to donation intention

H6. Group identification with the audience is positively related to subscription intention

Antecedents of Emotional Attachment

While PSI may be "pseudo-social", individuals may form strong para-social relationships through proximity seeking to form strong attachments. People in parasocial relationship often report the feeling of intimacy and closeness and define media personas as "real friends" (Xiang et al. 2016). In turn, this friendship-like relationship will increase personal attachment, relationship investment, and

loyalty toward media figures (Xiang et al. 2016). Rubin and McHugh (1987) found that the stronger the parasocial relationship, the greater the importance attached to the relationship. Recently, studies have expand the scope of PSI from mass media into online context (Powell et al. 2011), especially in social media practices such as micro-blogs and Social Network Sites (Cohen and Tyler 2016). Studies have found that viewers who experience more para-social interaction are inclined to be more emotionally attached to and identified with media personas (Frederick et al. 2012). Therefore, we infer that PSI a viewer perceived may increase the emotional attachment with the streamer.

H7. PSI with the streamer is positively related to emotional attachment

Cohen (2001) defines identification is "a mechanism through which audience members experience reception and interpretation of the text from the inside, as if the events were happening to them." It is "the act of imagining oneself in the place of another person (Rosengren and Windahl 1972)" and a process in which viewers imagine themselves as the character and replace their personal identity with the identity of the character (Cohen 2006). For wishful identification, people may desire to emulate or become like the figure with which they identify, either in general terms (e.g., as a role model for future action, or identity development), or in specific terms (e.g., imitating a particular behavior). Identification involves sharing characters' experiences and a desire to be like them.

During the identification process, viewers put themselves in the place of the streamer and vicariously participate in the streamer's experience. It can produce positive outcomes such as increasing interpersonal connections, elevating satisfaction, and reducing loneliness and alienation (Wann 2006). Thus, it seems likely that the ability and willingness to "step into the shoes" of a streamer while viewing will contribute to the development of a bond beyond the viewing situation. Research has found that perceived overlap between self-image and organizational image will make one psychologically attached to and care about the organization, which motivates them to commit to the achievement of the goals, willingly exert more effort (Tuškej et al. 2013). We argue that if viewers have a sense of identification with the streamers, they will like the streamers more and want to build closer relationships with him/her. Therefore, we hypothesize the following:

H8. Identification with the streamer is positively related to emotional attachment

The significant characteristic of live-streaming is to provide viewers opportunities to interact with various other viewers in the chatroom. Thus, communication among viewers is enhanced and PSI among viewers are encouraged as if they were friends in real life. Consequently, viewers who perceive the existence of audiences and experience PSI with co-viewers may regard co-viewers as intimate friends because they pay attention to viewers' suggestions and care for the viewers' feelings.

Para-social relationships have been found to influence brand group collective memory and reference group acceptance in the offline environment (Tsiotsou 2015). PSI involves identifying strongly and taking an interest in the media character; developing group identification with the fan-group and building respect for the media character's problem-solving ability (Auter and Palmgreen 2000). In the same vein, we infer that experience of PSI with co-viewers a viewer perceived may increase the identification with the group. Thus, the following hypothesis is proposed:

H9. PSI with the audience group is positively related to group identification.

Social identity theory posits that a sense of identification with a social group is developed from its functionality to the extent that the community meets members' needs, motives, and desires (Dholakia and Bagozzi 2004). This functional view of a social group indicates that members' motivations for participating are important antecedents to developing group identification (Dholakia and Bagozzi 2004). Dholakia et al. (2004) empirically found that motivational antecedents (e.g., purposive and entertainment motives) led to stronger identification with the virtual community. Therefore, we anticipate that group identification is strengthened as a viewer's participation increases in the stream to express their own inner beliefs (value-expressive). Thus,

H10. Participation is positively related to group identification

Expected Contributions

Our study fills this important gap by investigating the motivation of viewers to provide voluntary monetary contributions to the streamer, using services such as Twitch. Due to the fact that theory of common identity and common bond are yet to be discussed in the live-streaming context, the present research makes the following contributions. **First**, this study extends the literature on donation behavior to live-streaming context, whereas previous research mainly focuses on charitable organizations and victims. **Second**, we extend the understanding of the viewers' media consumption intention using theory of common identity and common bond and examine the crucial roles of PSI with the streamer and co-viewers as antecedents of identity- and bond-based attachment in the live streaming context. It allows us to suggest ways in which practitioners can benefit from this understanding. With such an approach, it will be easier for practitioners to identify the factors that should be stressed in the live-streaming context.

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