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Effects of Video Game Streaming on Consumer Attitudes and Behaviors

A thesis

presented to

the faculty of the Department of Mass Communication

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Master of Arts in Professional Communication

by

Lisa Brianne Foster

May 2016

Dr. Robert Andrew Dunn, Committee Chair

Dr. Stephen Marshall

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Keywords: video game streaming, user-generated content, video game marketing, consumer research

ABSTRACT

Effects of Video Game Streaming on Consumer Attitudes and Behaviors

by

Brianne Foster

Video game streaming has introduced to consumers a new method of creating branded content. Popular streaming platforms receive millions of broadcasters and viewers every month, and the current examines the influence of this type user-generated content on consumer attitudes and behaviors. The goal of this study is to understand how video game streams function as a marketing tool. To investigate this, a quantitative survey was designed and measured participants' video gaming habits and their perceptions of credibility, usefulness of content, group identification, and purchase intention. Heavier gaming habits were found to be positively related to perceived credibility in a user-generated stream condition. Group identification and stream familiarity were found to be positively related to perceived credibility. These findings hold implications for using video game streams as a marketing tool, as heavier gamers were found perceive user-generated streams as a credible source of information.

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CHAPTER 1

INTRODUCTION

Video game streaming has become a popular source of video game information and entertainment, as it allows viewers to see actual video gameplay in real-time. Attracting more than 100 million unique viewers each month, *Twitch* (2016a) is arguably the most popular streaming platform. *Twitch* (2016a) gives video gamers a platform to broadcast feed of their own video game play, which can include commentary from the streamer in the form of voice only or a composited video featuring the streamer. Each stream also has its own chat room, where viewers can interact with other viewers and the streamer. *Twitch* (2016a) can be considered a social media, describing itself as a social video platform for gamers.

Game streaming has introduced a new method to consumers for creating branded content (Holt, 2016). Positive, organic, and brand-centric content generated by consumers, such as game streams, is believed to positively influence brand equity and consumer attitudes towards the brand (Tuten & Solomon, 2015). Game developers benefit from the marketing streaming provides. Walker (2014) labeled streaming as a form of crowdsourcing by the video game industry, as streamers are essentially providing marketing for video game titles through their streams and blurring the boundaries between consumer and producer (Bauer & Gengenhuber, 2015). However, the most popular streamers can earn income by partnering with *Twitch* (2016) and receiving a portion of ad revenue, sponsorships, and subscriptions and donations from stream viewers (Aaron, 2015).

Twitch (2016a) and other streaming platforms are popular sources for consumers interested in video games to gather game-related information Streaming platforms have managed to achieve significant engagement levels with video game titles, as millions of people are

engaging with video games in real time through playing and spectating (Smith, 2014). Social streaming platforms facilitate brand engagement by allowing consumers to create branded content and socialize around that content. Highly engaging consumer-generated content that is distributed through social media is valuable to brands (Tuten & Solomon, 2015). Video game companies should begin incorporating streams into their digital marketing strategy if they have not already, because streams can highly influence consumers' product-purchasing decisions (Pearson, 2014). For example, within the first week of the release of *Call of Duty: Advanced Warfare* (2014), developed by Sledgehammer Games, High Moon Studios, and Raven Software there were 75,000 unique broadcasters, 6 million viewers, and a total of 327 million minutes watched on *Twitch* (2016), making it the most streamed console game, at that time, on *Twitch* (2016) during its first week of release (Evangelho, 2014). This is significant because video game publisher Activision had 6 million unique earned brand impressions. Streaming could potentially influence consumers' decision to buy a game, and every game stream acts as an advertisement for the game (Harper, 2013).

Streaming is becoming increasingly popular as the technology and software to broadcast game footage is accessible to anyone who owns a computer or the newest generation of gaming consoles. Sony's PlayStation and Microsoft's Xbox have made broadcasting game footage simple with the inclusion of streaming-enabled technology in the PlayStation 4 and Xbox One, which was predicted increase *Twitch* (2016) traffic and time spent on the site (Ewalt, 2013). According to *Twitch's* (2016b) 2015 Retrospective report, over 1.7 million unique broadcaster streamed in 2015, and over 241 billion minutes were spent watching streamed content. All content on *Twitch* (2016a) is not strictly video gameplay, however, the majority of content is game-related in some way, whether it be from game developers/publishers, video game media

sites, conventions, eSport tournaments, and charity events.

It is evident that video game streaming exposes millions of viewers to branded video game content, and facilitates social interactions between users across the world. However, little research exists on whether or not this branded content affects consumer behavior. The objectives of the current study are to determine whether video game streams influence purchase intentions of viewers, and to assess how video game streams function as a form of marketing for video game titles. Literature on this phenomenon is limited, and this study will help gain insights into the effects that video game streams have on viewers' attitudes and behaviors, and where video game streams fit into a digital marketing strategy.

CHAPTER 2

LITERATURE REVIEW

In order to fully understand the influence of video game streams on viewers, literature from different areas were reviewed. First, prior research on the effects of user-generated content on consumer attitudes and behavior will be examined. Next, literature on stream types, stream communities, and viewer types will be discussed. Research on video game player types will also be reviewed, along with previous and current video game marketing efforts. Finally, a possible theoretical standpoint will be considered.

User-Generated Content

While little research exists on the effects of video game streaming on consumers' purchase intentions, research has found that user-generated content (UGC) is considered a credible and reliable source of information among consumers (Flanagin, Hocever, & Samahito, 2013; Heinonen, 2011; Zhu & Zhang, 2009). Researchers have also compared the effects of UGC and marketer- and professional-generated content on consumers' perceptions, attitudes, and behaviors (Goh, Heng, & Lin, 2011; Flanagin et al., 2013). Popularity of UGC and the products at the center of UGC have also been found to influence consumers' perceptions of the message and product (Zhu & Zhang, 2009). This section will review relevant research of variables that influence consumer perceptions of UGC, the influence of UGC compared to content created by marketers and professionals, and the effects of the three types of content on consumer behavior and attitudes.

Credibility

Several variables have been found to influence the perceived credibility, reliability, and trustworthiness of UGC among consumers. Flanagin et al., (2013) found that group identification

is a determining variable in consumers' perceived credibility of UGC, and willingness to act on the information learned. The researchers had undergraduate students visit a social media site containing user-generated content, and examined how group identification affected the students' willingness to contribute information to site and how credible the students perceived the UGC to be. Findings suggested that the students found information contributed by others similar to them more credible, and are more likely to act on the given information. Students were also more motivated to contribute information if they knew users would be similar to them. These findings are significant and noteworthy for the current study because audiences who play games may be more likely to perceive streams as an accurate portrayal of the video game if they identify with the streamer. Heinonen (2011) also found that consumers perceived UGC to be a reliable source of information, and sought UGC for product information, to collect factual information, share information and experiences, news surveillance, and applying knowledge. UGC was determined to be a reliable source to get opinions of products, and the researcher concluded that as the influence of UGC increases, the influence of marketing communication decreases. If these conclusions stand true, video game streams may be a more influential form of marketing compared to traditional marketing content developed by the brand.

Consumers' experience with Internet has also been found to affect perceived credibility of UGC. To understand how online consumer reviews impacted video game sales, Zhu and Zhang (2009) collected data from player reviews on a popular gaming site. Online reviews were found to be more influential for consumers who had greater experience with the Internet, as users with more Internet experience are better able to determine if the information is reliable and credible compared to consumers with little Internet experience. Applying this finding to the context of video game streams, it is possible regular stream viewers may be better able to

accurately determine reliability and credibility of streams compared to those who have less experience viewing video game streams.

UGC v. Professionals

While UGC has been found to be a reliable, trustworthy, and credible source among consumers, researchers compared how UGC and professionally-generated content functions with consumers. Goh et al., (2013) compared the effects of content generated by the brand and UGC on consumers' purchase intentions in the context of social media. The researchers examined interactions on an apparel retailer's social media page, observing posts and comments made by consumers and the brand. First, the researchers found that engagement with brand communities on social media affected consumers' purchase behavior. UGC and content generated from the brand differ in that consumers used both informative and persuasive techniques to influence other consumers, whereas brand-generated content primarily used persuasive techniques to influence consumers. UGC was found to be 22 times more effective in persuading consumers. However, since the two types of content function differently for the consumer, the researchers suggested that marketers should find the right combination of both types of content for an effective marketing strategy.

Researchers have also studied the influence of professional opinions on consumer attitudes and behaviors. Cox and Kaimann (2014) compared the influence of reviews from both professional critics and regular consumers on video game sales by collecting data for 1,480 games from the review site Metacritic. Contradictory to other findings on UGC and word-of-mouth advertising, the researchers found that reviews from professional critics had a greater effect on consumer behavior than consumer reviews and attributed this finding to the possibility that reviews from professional critics are often available before the release of a video game.

Consumer reviews, however, are only available after the game has been released. Another possible explanation is that content generated by professionals are neither considered user-generated nor market-generated. Content generated by professionals may have its own influence on consumers' perceptions, attitudes, and behaviors.

Research has also found that consumers become more critical of advertisements if given information signifying the creator of the ad (Steyn, Ewing, Herrden, Pitt, & Windiwsh, 2011). To understand how source effects influence consumers' perceptions of advertisements, the researchers played the same advertisement for six test groups, but the ads were labeled differently to test for the influence of source effects. Groups were given labels that signified the ad was either created by consumers or professionals. The researchers found that respondents were more critical of the ad when they were given information that signified who created the ad and their motivation for creating it, and respondents were less critical when the label did not signify the creator or motive. Results did not suggest that consumers were more critical of consumer ads than professional ads or vice versa. For the current study, it will be critical to provide participants with information signifying to who created the content to earn a more critical response from participants.

Popularity

Popularity of consumer-generated advertisements have been found to influence consumer behavior. Steyn et al.,(2011) also examined the influence of popularity on consumers' perceptions of advertisements. Participants who viewed the ad with a label signifying that the ad was unpopular consequently evaluated the ad more negatively, whereas ads that were labeled as popular were evaluated more positively. In relation to the current study, it could mean that

popular streams may have more of an influence on viewers' purchase intentions than less popular streams.

Not only does popularity of the UGC influence consumer attitudes, but the popularity of the advertised product also affects consumer attitudes. Dhar and Chang (2009) examined the impact of UGC on album sales by observing the amount of blog chatter that was generated regarding the album, prior to the album's release date. A positive correlation was found between the amount of blog chatter and album sales. Whether the artist was signed to a major label or not was also a predictor of album sales, where artists signed to major labels sold more albums than those signed to independent labels. The researchers attribute this finding partly to the popularity of the artist, and suggest that record labels use blogs as a predictor of future album sales.

Research has also found that UGC has influenced sales of less popular video games more so than popular video games (Zhu & Zhang, 2009). These studies hold important implications for the video game industry. The amount of Internet chatter surrounding video game titles before their release date may help predict sales. Streaming may also more positively influence sales of less popular or lesser-known game titles compared to more popular titles.

Streaming

Little research exists on the effects of streamed video game content on consumers' purchase intentions, but researchers have studied the characteristics of streams and streamers, and spectators' motives for viewing streams. The following section will review existing literature on stream and streamer characteristics, as well as viewers' motives for watching streams.

Stream and Streamer Characteristics

Understanding the various types of streams and streamers is important when examining how consumer behavior is potentially influenced. Researchers have identified three types of

streaming communities: eSports, Let's Play, and Speedrunning (Smith, Obrist, & Wright, 2013). The most popular live-streaming community is the eSports community, where viewers watch highly competitive matches or tournaments, often played by professional video game players who belong to professional leagues. eSports and professional gamers are often the center *Twitch* (2016) featured channels, where larger organizations broadcast tournaments, league games, or a daily show. The second most popular streaming community is Let's Play. Let's Play videos are often more casual than eSport, where the skill level of the player is not as important as the experience the streamer provides for viewers. Lastly, the third most popular streaming community is Speedrunning, which consists of players racing to beat a game in as little time as possible.

Different types of streamers exist within these streaming communities. Walker (2014) posited that streamers exist on a continuum from passive to active, where active streamers are those who invest time, money, and effort into their stream to create an engaging and entertaining atmosphere. Active streamers are those who have installed additional technology and software that enable special effects, commentary, and composited videos of the streamer. On the other end of the continuum lies passive streamers who broadcast their gameplay with minimum equipment necessary. Passive streamers are those who may simply broadcast their gameplay from their gaming console with no added effects nor commentary.

Motives for Viewing Streams

Streams function differently among viewers. To understand who viewers are and why they view video gameplay, Cheung and Huang (2011) collected data from viewers of Blizzard Entertainment's *StarCraft* (1998), a popular real-time strategy game and eSport. The researchers discovered several motives for viewing video game streams. Motives for watching streams

included, but were not limited to, learning about a game, socializing with the streamer and/or other viewers, and entertainment. These findings are mentionable and relevant to the current study, as they illustrate that streams act as a source of information for viewers interested in a game, and could possibly influence whether the viewer purchases a game.

Video game streams have also been recognized as platforms that facilitate socialization among those with shared identities, and communities build around streams that vary in size, from intimate to massive, and from amateur to professional (Hamilton, Garretson, & Kerne, 2014). Stream communities form around shared identities, and streams help facilitate interaction between those who share an identity. As Rodriguez (2015) stated, “gamers are passionate and have strong online communities” (para.18). Since research has found that group identification influences perceived credibility of UGC, group identification may be a variable that influences viewers’ perceived credibility of a video game streams.

Gamer Identities

When examining the effects of video game streams on viewers, it is also critical to define and understand the different types of gamer identities. Shaw (2012) sought to understand factors that determine if people who play games identify as gamers. Through interviews conducted with “hardcore gamers, casual gamers, and everyone in between” (p.32), the researcher found that other factors such as gender, race, and sexuality determined whether people who played video games identified as a gamer. Gender was shown to have more influence on who identified as a gamer than the other two variables. Males were more likely to identify as gamers. Negative connotations that surround the term ‘gamer’ also influenced how interviewees self-identified, as the term ‘gamer’ has been somewhat stigmatized in the past.

However, the stereotype of gaming is alleviating as video games are permeating more households (Rodriguez, 2015). According the Entertainment Software Association's (2015) annual report on sales, demographic, and usage data in the video game industry, 155 million Americans played video games in 2014 and \$22.41 billion was spent on games. Fifty-six percent of those players were male, and players aged 18-35 years old made up the largest percentage of game players. The data also showed that word of mouth and product reviews on video game websites influenced decisions to purchase video games. Marketing to gamers requires a new strategy, as the gamer audience is "extremely media literate and highly cynical about conventional marketing ploys...gamers are, by their very nature, proactive and think of themselves as different from their passive, TV-viewing parents and grandparents" (Farrand, Nichols, Rowley, & Avery, 2006, p.10).

Games and gamers can vary from casual to hardcore. Tuten and Solomon (2015) assert that casual games are easy to learn, easy to access, and require minimum skill levels and minimum time commitment. The Nintendo Wii has been labeled a gaming system for casual gamers, and games like *Guitar Hero* (2005) from Harmonix can be considered casual games (Juul, 2010). Mobile and downloadable games have also revolutionized casual gaming, such as King's *Candy Crush* (2012) and *Bejeweled* (2001) by PopCap Games, While easy-to-play game systems and games have distorted the lines between casual gamers and from hardcore gamers, hardcore gamers often spend many consecutive hours playing games, sometimes the same game (Loporcaro, Ortega, & Egnoto, 2014;PR Newswire, 2007). Hardcore games require a much greater time commitment, higher skill level, and are much more immersive. Ip and Jacobs (2004) differentiated between the two groups by measuring gaming knowledge and attitudes, playing habits, and buying habits among gamers. Hardcore gamers were characterized by having high

levels of knowledge about the video game industry and a desire for game-related information. The researchers also discovered that hardcore gamers find exhilaration in the process of defeating a game, engage in discussions about games in online forums, and take creative their own creative liberties by modifying or extending games. It is also believed that hardcore gamers are a small, elite segment of the gaming culture (Loporcaro et al, 2014).

Along with hardcore and casual gamer identities, Neys, Jansz, and Tan (2014) identify a third type gamer identity: the heavy gamer. The researchers measured gamers' Gamer Identity Strength (GIS), where gamer identities were assigned based on the number of hours played per day and number of days played per week. On average, hardcore gamers were discovered to play video games 26 hours per week, heavy gamers played approximately 18.5 hours per week, and casual gamers spent approximately 9.5 hours per week playing video games. Hardcore gamers played games on approximately six days in a week, heavy gamers played on approximately five days per week, and casual gamers played on approximately 3.5 days per week.

It is important to keep in mind that game types and gamer identities exist on a continuum, and each gamer does not neatly fit into a category. Juul (2010) notes that some gamers who would typically be considered casual, play casual games for lengths of time that mirror hardcore habits. Also, some video games are neither considered casual or hardcore, but exist somewhere in the middle. Open world and non-linear games such as *Grand Theft Auto V* (2013) by Rockstar Games and *Skyrim* (2011) by Bethesda Softworks allow casual and hardcore players to essentially do whatever they want in the game, and play the game for however long they desire.

Marketing in the Video Game Industry

It has been illustrated that different gaming audiences exist within the video game culture, therefore it is also critical to examine how each market is being reached by the video game industry. Several studies have yielded results that holds managerial implications for marketing to the different types of gamers in the video game industry. Video games should be marketed to gamers based on their gaming habits, attitudes, and experience with video games. Ips and Jacob (2004) suggest that the marketing to gamers should not only be based on whether they are casual or hardcore, but each group's attitudes and experiences should also be taken into consideration when marketing video games.

While attitudes and experiences are valuable, researchers have found that different types of gamers prefer different genres of games. After studying casual and hardcore gamers' genre preferences and gratifications in gaming, Scharnow, Festl, Vogelgesang, and Quandt (2015) found that strategy games were the most popular among all types of gamers. However, the researchers ascertain action and shooter games were more highly-preferred by hardcore gamers, while puzzle and card games were preferred more by casual gamers. Similarly, Loporcaro et al., (2014) believe that hardcore gamers tend to play first-person shooter games, violent games, and games with a formidable main character, and are least likely to play puzzle games, family games, or games with a non-intimidating main character. Fritsch, Voight, and Schiller (2006) also characterize hardcore players as playing real-time strategy games such as *League of Legends* (2009) from Riot Games, online multiplayer role playing games like *World of Warcraft* (2004) from Blizzard Entertainment, and first-person shooters such as *Counter Strike: Global Offensive* (2012) by Hidden Path Entertainment and Valve Corporation.

Types of genres preferred were also found to be dependent on age and gender (Scharkow et al., 2015). Older gamers mostly preferred puzzle and card games, while younger gamers displayed stronger preferences toward all other genres. Young male players showed stronger preferences towards action and shooting games, while older females preferred puzzle and card games. It was also discovered that males in general preferred strategy, sport, simulation, and action games more so than females. Researchers have also reiterated that motives to use games vary among gamers, and the motives dictate what types of games are played, Kim, Park, Kim, Moon, and Chun (2002) identified sociability and entertainment the two most prominent motives in playing online games. Gamers were motivated to play multiplayer and role-playing games because they allow players to socialize. Shooting games were primarily played because they entertained the player. Simulation games were played for both social and entertainment purposes. This information is useful to marketers of online games, as the researchers suggest that marketers should seek to understand consumer motives and what motivates consumers to play specific types of games.

While gamers should be targeted by marketers based on gaming habits, motives, experiences, attitudes, and preferences, it is also important to understand how the video game industry is utilizing consumer-generated content as a marketing tool. As previously stated, online reviews have been found to be more influential for less popular games, perhaps because of the absence of information on less popular games (Zhu & Zhang, 2009). The researchers suggest that marketers of less popular games should invest more resources into online consumer reviews. Also, while consoles are now offering games that are only available digitally, consumers seek information online regarding the products and “it is therefore crucial for niche product producers to devote their marketing effort to online review systems when they take advantage of online

channels to sell their products” (p.28). Kimura (2015) examined the effects of word of mouth advertising, traditional advertising, forward serialization, and backward serialization on video games series sales. The researcher defines forward serialization as an instance in which the first game in a series influences first-week sales of the second game, and backward serialization as an instance in which sales of subsequent games in a series affect sales of the first game. Word-of-mouth advertising on social media was found to be more influential for the first game in a video game series, and was unlikely to affect sales of the second game title. Sales of the second title were more heavily influenced by forward serialization and traditional advertising. Kimura (2015) suggests that marketers create social media campaigns to generate word-of-mouth advertising for the first title in a game series, but use traditional advertising strategies to promote a second title in a series. These findings hold implications for the current study, as streams could act as a form of word-of-mouth advertising for video games. Streamers could potentially act as reviewers for video games that influence consumers’ purchase intentions.

Theoretical Framework

Elaboration Likelihood Model

Elaboration Likelihood Model (ELM) can be used to understand consumers’ attitudes towards streams, and their purchase intentions after viewing streams. ELM suggests that different methods of persuasion should be used depending on whether the elaboration likelihood of the communication interaction is high or low, and “as an issue or product increases in personal relevance or consequences, it becomes more important and adaptive to forming a reasoned and veridical opinion” (Petty, Cacioppo, & Schumann, 1983, p.137).

There are two routes of processing that are used for high and low elaboration likelihood, which are the central route and peripheral route, respectively. Audiences viewing persuasive

messages using the central route to persuasion exert a high amount of cognitive effort to process the message by referring to prior experience or knowledge regarding the subject and carefully scrutinizing all evidence presented (Bryant & Oliver, 2009). The peripheral route to persuasion is used when audiences exert little cognitive effort when viewing a message, and “simple cues in the persuasion context can influence attitudes” (p.135). Cheng and Ho (2015) define the central route to persuasion as argument quality, and the peripheral route to persuasion as source credibility.

Many researchers have used the framework of ELM to guide their studies, but little research exists on the persuasive effects of video game streams on viewers’ willingness to buy the video game. However, researchers have employed ELM to study the effects consumers’ perceptions of UGC. Source effects such as creator of ads and the motive for creation have been found to affect the peripheral route to persuasion, and consumers became more critical of ads when they were given clues as to who created ads and the motive for creation (Steyn et al., 2011). Consumers are less critical of ads if the creator and motive are unknown, however, several factors have been found to influence consumers’ perceptions of UGC and the effects of UGC on consumers’ behavior and attitudes. After performing a content analysis on 1000 online restaurant reviews, Cheng and Ho (2015) concluded that the peripheral route, or source credibility, was more useful to consumers than the central route, or argument quality, when reading online restaurant reviews. The researchers also found that trustworthiness and expertise influenced perceived credibility. The more followers’ reviewers had, the more trustworthy they were perceived to be. Reviewers that demonstrated a high level of expertise were also perceived to be more useful. Even though source credibility was found to be more important to consumers

compared to argument quality, perceived usefulness of a review in terms of argument quality was positively correlated with the number of images and words used.

These findings are consistent with Wu and Wang's (2010) findings that indicated source credibility in electronic word-of-mouth communication influences consumers' brand trust, brand attitudes, brand affection, and purchase intention. The researchers examined the influence of rational and emotional appeals contained in electronic word-of-mouth advertisements and source credibility on consumers' brand attitudes. The degree of product involvement was also found to influence consumers' perceptions of a message, where messages with rational appeals that use the central route to persuasion are more effective for consumers with high product involvement. Neither rational nor emotional appeals were found to have a significant difference on consumers' brand attitudes with low product involvement.

ELM and the routes to persuasion can be applied to the current study to understand if video game streams influence consumers' purchase intentions. The central route to persuasion requires consumers to have prior knowledge and experience regarding the product, and consumers require more evidence than simple cues before forming an attitude towards the product. It is possible that video game streams are a credible source of information among gamers, whereas the peripheral route may be more influential among casual or non-gamers. Gamers may be more apt to form an attitude towards a video game after viewing a user-generated stream that displays different aspects of the video game. On the other hand, casual or non-gamers who are less involved with video games may be more influenced by traditional advertising or brand-generated content.

CHAPTER 3

HYPOTHESES AND RESEARCH QUESTIONS

Reviews of relevant literature illustrates that user-generated content (UGC) is often perceived as more credible, reliable, and trustworthy compared to content created by the brand (Heinonen, 2011). The objective of the current study is to learn if video game streams has the potential to influence consumer behavior and attitudes. To learn how viewers will perceive the streams, it is important to learn each viewer's gamer identity and how each identity can be influenced.

It is critical to identify types of gamers when seeking to learn how video game streams affect their purchase intentions. Researchers have established casual, heavy, and hardcore as primary gamer identities. On one end of the continuum lies casual gamers who tend to play games that are easy to learn, easy to access, and require minimum skill levels and time commitment (Tuten & Solomon, 2015). Casual gamers spend the least amount of time playing games compared to the other types of gamers, averaging 9.5 hours of gameplay per week (Neys et al., 2014). Gamers who play more than casual gamers but less than hardcore gamers have been classified as heavy gamers, who tend to average 18.5 hours of gameplay per week. Finally, at the end of the continuum lies the most extreme gamers, or hardcore gamers. Hardcore gamers tend to average 26 hours of gameplay per week, and usually play games that are highly immersive and require a substantial time commitment and skill level (Neys et al., 2014; Tuten & Solmon, 2015). The current study will examine the effects of user-generated and marketer-generated video game streams on non-gamers, casual gamers, heavy gamers, and hardcore gamers.

Drawing from Elaboration Likelihood Model (ELM), it is reasonable to suggest that heavy and hardcore gamers will find the UGC more credible, reliable, and trustworthy. Heavy

and hardcore gamers may reason using the central route of persuasion, which requires consumers to have experience and knowledge of the product (Bryant & Oliver, 2009). Heavy and hardcore gamers may also require that streams require more evidence of the game before forming an attitude about it. These gamer types may find the user-generated stream more useful in forming their attitudes towards the game and purchase intention by perceiving the user-generated stream to provide more evidence compared to the marketer-generated stream. On the other hand, casual and non-gamers may take the peripheral route to persuasion, which does not require much cognitive effort and consumer attitudes can be influenced by simple cues. Since these gamer types, have little to know knowledge and experience with video games, they may find the marketer-generated stream to be more credible, reliable, and trustworthy. It is also possible that the marketer-generated stream will more highly influence casual and non-gamers' attitudes and purchase intentions. Thus, the researchers pose the following hypotheses:

H1: Heavier gaming will be positively related to credibility in the user-generated condition.

H2: More casual gaming will be positively related to credibility in developer-generated condition.

H3: Heavier gaming will be positively related to the perceived usefulness of content in the user-generated condition.

H4. More casual gaming will be positively related to the perceived usefulness of content in the developer-generated condition.

H5. Heavier gaming will be positively related to purchase intention in the user-generated condition.

H6. More casual gaming will be positively related to purchase intention in the developer-generated condition.

While researchers have found consumers often find UGC more credible, reliable, and trustworthy compared to MGC, other variables have been found to affect consumers' perceptions of UGC. Group identification has been shown to influence perceived credibility of UGC, where those who are able to identify with UGC creators perceive the creator to be more credible (Flanagin, et al., 2013). Video game streams have been recognized by researchers as a platform for community and socialization, where those with shared identities can connect (Hamilton et al., 2014). If viewers are able to identify with the streamer, they may perceive the streamer to be more credible, reliable and trustworthy. Therefore, the researchers pose RQ1:

RQ1: Will group identification influence perceptions of credibility?

Consumers' experience with Internet has also been found to affect perceived credibility of UGC (Zhu & Zhang, 2009). Consumers who have more Internet experience are able to more accurately determine if UGC is credible, reliable, and trustworthy compared to those with less experience. Applying this finding to the current study, one could suggest that viewers who are familiar with video game streams will perceive them to be more credible, reliable, and trustworthy compared to viewers who are unfamiliar with video game streams. Therefore, the researchers pose RQ2:

RQ2: Will video game stream familiarity influence perceptions of credibility?

CHAPTER 4

METHOD

In order to examine the influence of video game streams on viewers' perceptions of credibility, usefulness of content, and purchase intentions, an online experiment and survey were designed. The survey consisted of three parts. First, participants were asked to indicate their video gaming habits and stream familiarity. Next, participants were assigned to one of two experimental conditions by watching either a user-generated stream or developer-generated stream of a popular video game title. Finally, participants were asked questions about their perceptions of credibility, usefulness of content, and purchase intention after having viewed the stream.

Participants and Procedure

Convenience sampling was used to gather participation from students at a medium-sized southeastern university. The survey was built using *Qualtrics Survey Software* (2016), and participants from undergraduate psychology and communication courses were recruited using *SONA* (2016). Survey respondents were given a notice of consent before beginning the online survey. Respondents indicated that consent was given by continuing with the survey. The online survey was created and made available between Feb. 24, 2016 and Mar. 23, 2016. Students were awarded extra credit points in courses as compensation for research participation.

A total of 111 participants began the online survey, however, 24 participants did not complete the survey. Of the 87 participants who completed the survey, 29 were male (33.3%) and 57 were female (65.5%). Age of respondents ranged from 18 to 45 years old, with a mode of 19 years of age. Participants completed an online survey that consisted of three parts. Part one contained questions that measured the participant's video gaming habits and stream familiarity.

Part one also contained two demographic questions concerning age and gender. In part two of the survey, participants viewed a five-minute pre-recorded stream of Treyarch's *Call of Duty: Black Ops III*, (2015). Participants were assigned to one of two conditions by either viewing a user-generated stream from the streamer Pootie33, or a stream from the game's developer Treyarch. The streams can both be classified as "Let's Play," and each stream displayed the game content. Part three contained questions that measured perceptions of credibility, usefulness of content, and purchase intention. Part three also contained items that measured group identification.

Measures

Days of Video Games Played

To understand how frequently participants played video games, four multiple-choice items were adapted from Kollock (2004). Participants were asked to indicate the typical number of days in a week they played video games. Participants who indicated they typically play video games less than once per week were asked to estimate the number of times they played video games per month. Participants who indicated they typically played less than once per month were asked to estimate the frequency of video game play per year. Participants were then asked indicate how long their typical playing session lasted, and the genres of video games they most often played. These questions are displayed in the appendix.

Stream Familiarity

Two items were developed by the researchers to measure how familiar participants were to video game streams, and how frequently participants watched video game streams. Participants were asked to indicate whether they have ever watched a game stream. Those who indicated they had viewed a game stream were then asked to describe how frequently they viewed video game streams. Stream familiarity questions are displayed in the appendix.

Usefulness of Content

Drawing from Yang, Zhou, and Zhou (2005), five Likert-scale items were used to examine participants' perceptions of the usefulness of the content contained in the game stream. Participants were asked to indicate the extent to which they agreed or disagreed with each statement, where 1=strongly disagree and 7=strongly agree. Two statements inquired about the relevance and helpfulness of information contained in the game stream to a potential buyer of the game. Two items inquired about the accuracy and valuableness of information in terms of the game itself. The last item inquired about whether or not the stream contained enough information to help make a decision about purchasing the game. Chronbach's alpha (1951) was used to determine the reliability of the scale. The usefulness of content measures were reliable with a reliability coefficient of $\alpha=.85$. The usefulness of content section is displayed in the appendix.

Credibility

An 11-item survey containing semantic differential scales were used to measure perceived credibility of the streamer by participants (Wu & Wang, 2011). Participants were asked to rate the source from one to seven in the following categories: expertise, experience, knowledge, qualification, skill, dependableness, honesty, reliability, sincerity, trustworthiness, and popularity. Chronbach's alpha (1951) was used to evaluate the reliability of the scale. The items measuring credibility were reliable with a reliability coefficient of $\alpha=.90$. Items used to measure credibility are displayed in the appendix.

Group Identification

Four Likert-scale items were adopted from Kim (2014), which were used to assess whether participants identified with the streamer. Participants were asked to indicate the extent to which they agreed or disagreed with each statement, where 1=strongly disagree and 7=strongly

agree. The statements measured how much participants identified with the streamer in terms of thoughts, behaviors, similarity, and likeness. Chronbach's alpha (1951) was used to determine the reliability of the scale and was found to be reliable with a reliability coefficient of $\alpha=.95$. The group identification section is displayed in the appendix.

Purchase Intention

To measure whether or not participants already own or play the video game, the researchers developed two yes-or-no questions. Participants were asked to indicate if they currently own or have previously owned the game, and if they currently play the game or have previously played the game. Four Likert-scale items were derived from Wu and Wang (2011) to measure participants' intent to play and/or purchase the game in the future. Participants were asked to indicate the extent to which they agreed or disagreed with each statement, where 1=strongly disagree and 7=strongly agree. Chronbach's alpha (1951) was used to evaluate the reliability of the scale. The items measuring purchase intention were reliable with a reliability coefficient of $\alpha=.98$. The purchase intention section is displayed in the appendix.

CHAPTER 5

RESULTS

This study was aimed to examine the effects of video game streams on viewers' perceptions of credibility, usefulness of content, and their intent to purchase. 111 participants began the survey, however, 24 participants did not complete the survey. Of the 87 participants who completed the online survey, 29 (33.3%) were male and 57 (65.5%) were female. Ages ranged from 18-45 with a mode age of 19. For the experiment, 38 respondents were randomly assigned to the first condition where the developer-generated stream was viewed, and 49 participants were randomly assigned to the second condition where the user-generated stream was viewed. Table 1 illustrates the number of days of played video games per week, as indicated by participants.

Table 1

Frequency of Days of Video Games Per Week

	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	Less than once per week	29	33.3	33.3	33.3
	1	8	9.2	9.2	42.5
	2	7	8.0	8.0	50.6
	3	9	10.3	10.3	60.9
	4	7	8.0	8.0	69.0
	5	11	12.6	12.6	81.6
	6	4	4.6	4.6	86.2
	7	12	13.8	13.8	100.0
	Total	87	100.0	100.0	

Hypotheses Results

Credibility

H1 predicted that heavier gaming would be positively related to credibility in the user-generated condition. H1 was tested using simple linear regression analysis to determine the relationship between how many days a week a person played games and game stream credibility. Participants in the user-generated condition were analyzed and a significant positive relationship was found ($F(1,47) = 5.68, p = .02$), with an R^2 of .11. Thus, H1 was supported.

H2 predicted that more casual gaming would be positively related to credibility in the developer-generated condition. H2 was tested using simple linear regression analysis to determine the relationship between how many days a week a person played games and game stream credibility. Participants in the developer-generated condition were analyzed and no relationship was found ($F(1,36) = .01, p = .91$), with an R^2 of .00. Thus, H2 was not supported.

Usefulness of Content

H3 predicted that heavier gaming would be positively related to perceived usefulness of the content in the user-generated stream. H3 was tested using simple linear regression analysis to determine the relationship between how many days a week a person played games and usefulness of content. Participants in the user-generated condition were analyzed and no relationship was found ($F(1,47) = .21, p = .65$), with an R^2 of .00. Thus, H3 was not supported.

H4 predicted that casual gaming would be positively related to perceived usefulness of the content in the developer-generated stream. H4 was tested using simple linear regression analysis to determine the relationship between how many days a week a person played games and usefulness of content. Participants in the developer-generated condition were analyzed and no relationship was found ($F(1,36) = .49, p = .49$), with an R^2 of .01.

Purchase Intention

H5 predicted that heavier gaming would be positively related to purchase intention in the user-generated condition. H5 was tested using simple linear regression analysis to determine the relationship between gaming habits and perceived usefulness of content. Participants in the user-generated condition were analyzed and no significant relationship was found ($F(1,47) = 3.08, p = .09$), with an R^2 of .06. While H5 was not supported, the relationship between gaming habits and purchase intention in the user-generated condition did, however, approach significance.

H6 predicted that more casual gaming would be positively related to purchase intention in the developer-generated condition. H6 was tested using simple linear regression analysis to determine the relationship between how many days a week a person played games and perceived usefulness of content. Participants in the developer-generated condition were analyzed and no relationship was found ($F(1,36) = .09, p = .77$), with an R^2 of .00. Thus, H6 was not supported.

Research Questions Results

The research questions in the study sought to examine the relationship between group identification and stream familiarity on perceived credibility.

Group Identification

RQ1 asked whether or not group identification would influence participants' perceptions of credibility. To explore RQ1, the researcher conducting a simple linear regression analysis to determine the relationship between group identification and perceived credibility. Participants in both conditions were analyzed and a positive correlation was found ($F(1,85) = 10.04, p = .00$), with an R^2 of .11. Thus, it would appear that the more the viewer identified with the streamer, the more credible the streamer was perceived to be.

Stream Familiarity

RQ2 asked whether or not stream familiarity would influence participants' perceptions of credibility. To explore RQ2, the researcher conducted an independent sample t-test to determine if there was a significant difference between participants who had viewed game streams before and those who had not. The test revealed a marginally significant difference between the two groups ($t(85) = 1.97, p = .052$). Those who had viewed video game streams before ($M. = 4.91, S.D. = 1.04$) were slightly more likely to find them credible than those who had not ($M. = 4.51, S.D. = .77$). Thus, that participants who were more familiar with video game streams perceived the streamer to be more credible.

CHAPTER 6

DISCUSSION

Discussion of Findings

The goal of this research project was to examine the influence of video game streams on viewers' attitudes and behaviors. Specifically, the researcher sought to explore the effects of video game streams on perceptions of credibility and usefulness of content, and purchase intentions. The researcher also sought to understand the influence of group identification and stream familiarity on perceived credibility. The body of literature regarding the influence of video game streaming on consumers is limited. Thus, this study explores the effects of video game streaming on consumers' perceptions of credibility and usefulness of content, and purchase intentions.

H1 predicted that heavier gaming habits would be positively related to perceived credibility in the user-generated condition. A significant positive relationship was found to support H1. Heavier gaming habits have been defined as playing video games on an average of five days per week, averaging approximately 18 hours of gameplay per week (Neys et al., 2014). The current study found that participants who reported heavier gaming habits found the user-generated stream to be a more credible source of information. This finding is consistent with what one would expect to find using Elaboration Likelihood Model (ELM) as a framework, where heavier gamers likely found the user-generated stream more credible because of their experience and knowledge of video games. Because of this, it is likely that heavier gamers were better able to notice the streamer's skills and knowledge of the game, which positively influenced the streamer's credibility. This finding is also in line with past research on perceived credibility of user-generated content, where consumers tend to find product information in user-

generated content credible (Heinonen, 2011). Another possible explanation for this finding is that heavier gamers have been found to more highly prefer shooter games, and the stream featured in the experiment contained footage of a shooter game (Scharkow et al., 2015).

H2 predicted that more casual gaming habits would be positively related to perceived credibility in the developer-generated stream, however, no difference was found. Casual gamers have been defined as playing video games approximately three days per week and nine hours per week on average (Neys et al., 2014). Since casual and non-gamers do not have as much experience with video games, it is possible that more casual or non-gamers had no prior experience with or knowledge of the game or game developer. This could be explained by previous research that has found more casual games prefer strategy, puzzle, and card games (Sharkow et al., 2015). If the streamed game had a game of a genre that casual gamers were more familiar with, they may have perceived a stream from the brand to be more credible.

H3 predicted that heavier gaming habits would be positively related to the perceived usefulness of the content in the user-generated condition, however, results did not support this hypothesis. This could be explained by considering the streamer's skill level and knowledge of the game. The streamer demonstrated a high level of skill, and heavier gamers may have recognized that this was not an accurate portrayal of the average game player or game session. Another possible reason that heavier gamers did not find the content useful could be because the stream did not showcase the game's variety. The five-minute stream featured only one round of gameplay. Heavier gamers may have recognized that more details of the game were needed before conclusions about the accuracy, value, relevance, and helpfulness of the stream were made. Researchers have found that streams function differently among participants, therefore it

is also possible that participants did not perceive this stream as useful in making a purchase decision (Cheung & Huang, 2011).

H4 predicted that more casual gaming habits would be positively related to the perceived usefulness of the content in the developer-generated condition, however, no supporting evidence was found. The lack of knowledge and experience with the game and/or game genre could be one reason casual and non-gamers did not perceive the content to be useful. It is possible that this audience would not know what kind of information would be needed in order to make a decision about purchasing the game.

H5 predicted that heavier gaming habits would be positively related to purchase intentions in the user-generated condition. While a significant positive relationship was not found, the relationship was found to be approaching significance. Therefore, it is reasonable to suggest that heavier gaming could be positively related to purchase intentions in the user-generated condition. One explanation that a clear relationship was not found could be because heavier gamers have already purchased or played this game, and have no intention of purchasing or playing it again in the future. Another reason significance was not found could be that heavier gamers are already familiar with the game, and simply have no desire to play or purchase the game in the future. Past research has found that consumer purchase behaviors after viewing user-generated content on social media are influenced by engagement in brand communities, and user-generated content serves as more of an informative source of information rather than persuasive (Goh et al., 2013). It is possible that purchase intentions of participants in the current study could have been more influenced if they had the opportunity to actively engage with the stream community, and informative content by others and persuasive content by the game developer.

H6 predicted that more casual gaming habits would be positively related to purchase intentions in the game-developer condition. No evidence was found to support this hypothesis. Casual or non-gamers may not be interested in this game and/or have no desire to buy or play this game in the future. If the stream had shown a game of a genre that casual gamers have been found to prefer, they may have indicated otherwise.

Two variables were found to influence perceived credibility. The researcher was interested in examining the influence of group identification on perceived credibility. RQ1 asked if group identification would influence perceived credibility of the streamer, and evidence that group identification does influence credibility was found. Participants who indicated a shared identity with the streamer were more likely to find the streamer more credible. This finding is consistent with Flanagin et al., (2013), where participants found information contributed by someone similar to themselves more credible.

The researcher was also interested in examining the influence of stream familiarity on perceived credibility. RQ2 asked if stream familiarity would influence perceptions of credibility. Results suggested a possible significance between stream familiarity and perceived credibility. Those who have viewed video game streams previously may be more likely to perceive the streamer as a credible source of information. This finding would be in line with Zhu and Zhang (2009), who found Internet experience influenced perceived credibility. Those who are familiar with streams may be better able to determine the credibility of a stream because of their past experience(s) viewing streams. Simply knowing exactly what a game stream is and being able to identify how many views and followers a streamer has could help determine the streamer's credibility. Cues about the number of views and followers the streamers had were given to participants, which may have influenced perceptions of credibility.

Conclusion

The findings in this study hold several implications for marketing in the video game industry. Video game streaming should be incorporated into a digital marketing strategy in order to affectively reach heavier gaming audiences. Video gaming habits were found to positively correlate to perceived credibility of user-generated content, therefore, video game titles and genres that appeal to heavier gaming audiences may be influenced by user-generated content in the form of game streams. Game developers who wish to target heavier gamers could reach this audience through sponsoring user-generated streams, or featuring user-generated streams on their website and social media. Heavier gaming audiences should find this to be a credible form of marketing by the brand.

While the current study found that gaming habits were indicative of perceived credibility of user-generated streams, two factors were found to influence perceived credibility. Participants who indicated they identified with the streamer in terms of behaviors, similarities, and thoughts were more likely to perceive the streamer as credible. Previous research on video game streaming has found that streams serve as social platforms for those with shared identities to connect around a common interest (Hamilton et al., 2014). If video game streams are used as a marketing tool, it is critical that the streamer be similar to the target audience. The audience will believe the streamer to be credible if viewers perceive they share an identity with the streamer. Brand communities form around game streams when viewers share an identity with the streamer and other viewers, and therefore it is important for video game marketers monitor how the brand is being portrayed and how the community is engaging with the brand. Stream familiarity was also found to influence perceived credibility of user-generated streams, where those who previously viewed streams perceived the streamer to be a more credible source of information.

Video game marketers should be targeting frequent stream viewers through user-generated streams to promote their brand among.

Limitations and Future Directions

Several limitations were present in this study. Limitations include sample, sample size, measurement, and research design. First, the sample only consisted of undergraduate students at East Tennessee State University, which makes it difficult to make general conclusions about a larger population. If an audience consisting of students and non-students and a broader age group had been surveyed, results may have been different. While the age range varied from 18-45, most respondents were young students. Sample size was also a significant limitation. A larger sample size would have provided the researcher with a more reliable data set. There were also significantly fewer male respondents (33.3%) compared to female respondents (65.5%). Having more equal representation of each gender could have shown different results. Another limitation that was present was survey and research design, specifically that it required self-reporting from participants. Surveys that respondents must self-report rely on the honesty of participants, and require that participants understand directions and questions (Hoskin, 2012). Self-report questionnaires, especially online surveys, researchers give up much control of participants and can result in biases being reported and a lack of understanding by participants.

Future research should examine the influence of video game streaming on gamers across across age groups, education levels, and genders. This would include a wider variety of gaming habits, and different patterns may emerge. The present study measured perceived credibility among all types of gamers through user-generated content and content generated by a game developer, and found that heavier gaming habits were positively related to perceived credibility of user-generated streams. Future research should also explore the influence of two user-

generated streams, stream from an average, less popular gamer to one that is highly-skilled and more popular. The user-generated stream used in this study was from a highly skilled, popular streamer. Results may have been different if the streamer were less popular and less skilled. Future research should consider these variables when studying the influence of video game streaming on consumer attitudes and purchase behavior.

REFERENCES

- Aaron, J. (2015, March 27). How much can you make streaming as a professional video gamer? *Huffington Post*. Retrieved from http://www.huffingtonpost.com/jesse-aaron/how-much-can-you-make-str_b_6926362.html
- Bauer, R.M., & Gegenhuber, T. (2015). Crowdsourcing: Global search and the twisted roles of consumers and producers. *Organization, 22*, 661-681. DOI: 10.1177/1350508415585030
- Bryant, J. & Oliver, M.B. (2009). *Media effects: Advances in theory and research* (3rd ed.). New York, NY: Routledge.
- Cheng, Y.H. & Ho, H.Y. (2015). Social influence's impact on reader perceptions of online reviews. *Journal of Business Research, 68*(4), 883-887.
- Cheung, G., & Huang, J. (2011). Starcraft from the stands: understanding the game spectator. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 763-772. ACM.
- Cronbach LJ (1951). "Coefficient alpha and the internal structure of tests". *Psychometrika 16* (3): 297–334. doi:10.1007/bf02310555
- Cox, J., & Kaimann, D. (2014). The signaling effect of critics: Do professionals outweigh word-of-mouth? Evidence from the video game industry (No.10). *University of Paderborn. Faculty of Business Administration and Economics*, 1-18.
- Dhar, V., & Chang, E.A. (2009). Does chatter matter? The impact of user-generated content on music sales. *Journal of Interactive Marketing, 23*, 300-307. doi: 10.1016/j.intmar.2009.07.004

- Entertainment Software Association (2015). 2015 sales, demographic, and usage data: Essential facts about the computer and video game industry. Retrieved from <http://www.theesa.com/wp-content/uploads/2015/04/ESA-Essential-Facts-2015.pdf>
- Evangelho, J. (2014). Twitch metrics new barometer for success as ‘Call of Duty: Advanced Warfare’ boasts 6 million viewers. Retrieved from <http://www.forbes.com/sites/jasonevangelho/2014/11/13/twitch-metrics-new-barometer-for-success-as-call-of-duty-advanced-warfare-boasts-6-million-viewers>
- Ewalt, D. (2013). The ESPN of videogames. *Forbes*, 192, 36.
- Farrand, T., Nichols, D., Rowley, T., & Avery, M. (2006). Brands and gaming: Are you ready to play? *Young Consumers*, 7.
- Flanagin, A. J., Hocevar, K.P., & Samahito, S.N. (2013). Connecting with the user-generated web: How group identification impacts online information sharing and evaluation. *Information, Communication & Society*, 17, 683-694.
DOI:10.1080/1369118X.2013.808361
- Fritsch, T., Voigt, B., & Schiller, J. (2006). Distribution of online hardcore player behavior (how hardcore are you?). In *Proceedings of 5th ACM SIGCOMM workshop on Network and system support for games*, 16, ACM.
- Goh, K.Y., Heng, C.S., & Lin, Z. (2013). Social media brand community and consumer behavior: Quantifying the relative impact of user- and marketer-generated content. *Information Systems Research*, 24, 88-107. DOI:10.1287/isre.1120.0469
- Hamilton, W. A., Garretson, O., & Kerne, A. (2014). Streaming on Twitch: fostering participatory communities of play within live mixed media. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 1315-1324. ACM.

- Harper, E. (2013, April 2). Insiders explain how social media and video games are merging. *Sprout Social*. Retrieved from <http://sproutsocial.com/insights/social-media-video-games/>
- Hautz, J., Füller, J., Hutter, K., & Thürndl, C. (2013). Let users generate your video ads? The impact of video source and quality on consumers' perceptions and intended behaviors. *Journal of Interactive Marketing, 28*, 1-15. DOI:10.1016/j.intmar.2013.06.003
- Heinonen, K. (2011). Consumer activity in social media: Managerial approaches to consumers' social media behavior. *Journal of Consumer Behavior, 10*, 356-364. DOI:10.1002/cb.376
- Holt, D. (2016). Branding in the age of social media. *Harvard Business Review*. Retrieved from <https://hbr.org/2016/03/branding-in-the-age-of-social-media>
- Hoskin, R. (2012, March 3). The dangers of self-report. *Science Brainwaves*. Retrieved from <http://www.sciencebrainwaves.com/the-dangers-of-self-report/>
- Ip, B., & Jacobs, G. (2004). Segmentation of the games market using multivariate analysis. *Journal of Targeting, Measurement, and Analysis for Marketing, 13*, 275-287.
- Juul, J. (2010). A casual revolution. *Reinventing Video Games and Their Players*. Cambridge, MA: MIT Press.
- Kim, A. J. (2014). *Power of consumers: Examining the influence of brand-related user-generated content on consumer response*. Retrieved from ProQuest Dissertations & Theses Global. (1725161663).
- Kim, K.H., Park, J.Y., Kim, D.Y., Moon, H.I., & Chun, H.C. (2002). E-lifestyle and motives to use online games. *Irish Marketing Review, 15*, 71-77.
- Kimura, M. (2015). Effects for console game sales in japan market. *Asia Pacific Journal of Marketing and Logistics, 27*, 61-81. DOI: 10.1108/APJML-05-2014-0084

- Kollock, R.O. (2004). *The relationship between video game playing habits and reaction time in both males and females of different age groups*. Retrieved from Electronic Theses and Dissertations. (890).
- Loporcaro, J. A., Ortega, C. R., & Egnoto, M. J. (2014). The Hardcore Scorecard: Defining, Quantifying and Understanding “Hardcore” Video Game Culture. *Proceedings of the New York State Communication Association, 2013, 7*.
- Neys, J.L.D., Jansz, J. & Tan, E.S.H. (2014). Exploring persistence in gaming: The role of self-determination and social identity. *Computers in Human Behavior, 37*, 196-209.
DOI:10.1016/j.chb.2014.04.047
- Pearson, Z. (2014). Why Twitch is worth watching for digital marketers. Retrieved from <http://www.greenough.biz/blog/2014/08/why-twitch-is-worth-watching-for-digital-marketers.html>
- Petty, R. E., Cacioppo, J. T., & Schumann, D. (1983). Central and peripheral routes to advertising effectiveness: The moderating role of involvement. *Journal of Consumer Research, 135-146*.
- PR Newswire (2007, July 11). Nintendo continues to bridge the gap between core and casual players; from Wii fit to flash focus to Mario Kart, Nintendo shows everyone is a gamer. *PR Newswire*.
- Rodriguez, A. (2015). Gaming goes mainstream as stereotypes disappear. *Advertising Age, 86*, 43.
- Scharkow, M., Festl, R., Vogelgesang, J., & Quandt, T. (2015). Beyond the “core-gamer”: Genre preferences and gratifications in computer games. *Computers in Human Behavior, 44*, 293-298. DOI:10.1016/j.chb.2014.11.020

- Shaw, A. (2012). Do you identify as a gamer? Gender, race, sexuality and gamer identity. *New Media & Society, 14*, 28-44. DOI: 10.1177/1461444811410394
- Smith, R. (2014) Why Amazon should tread carefully in the wake of its Twitch.tv acquisition. Retrieved from <http://www.marketingmagazine.co.uk/article/1309986/why-amazon-tread-carefully-wake-its-twitchtv-acquisition>
- Smith, T., Obrist, M., & Wright, P. (2013). Live-streaming changes the (video) game. In *Proceedings of the 11th european conference on Interactive TV and video*, 131-138. ACM.
- Steyn P., Ewing, M.T., Heerden, G.V., Pitt, L.F., & Windisch, L. (2011). From whence it came: Understanding source effects in consumer-generated advertising. *International Journal of Advertising, 30*, 133-160. DOI:10.2501/IJA-30-1-133-160
- Tuten, T.L. & Solomon, M.R. (2015). *Social media marketing* (2nd ed.). Los Angeles, CA: Sage Publications.
- Twitch. (2016a). About Twitch. Retrieved from <http://www.twitch.tv/p/about>
- Twitch. (2016b). 2015 retrospective. Retrieved from <http://www.twitch.tv/year/>
- Walker, A. (2014). Watching us play: Postures and platforms of live streaming. *Surveillance & Society, 12*, 437-442.
- Wu, P.C.S, & Wang, Y.C (2011). The influences of electronic word-of-mouth message appeal and message source credibility on brand attitude. *Asia Pacific Journal of Marketing and Logistics, 23*, 448-472. DOI: 10.11/08/13555851111165020
- Yang, Z., Cai, S., Zhou, Z., & Zhou, N. (2005). Development and validation of an instrument to measure user perceived service quality of information presenting web portals. *Information & Management, 42*, 575-589.

Zhu, F., & Zhang, X. (2009). Impact of online consumer reviews on sales: The moderating role of product and consumer characteristics. *Journal of Marketing*, 74, 133-148.

APPENDIX

Participant Survey

PART I

Days of Video Games Played

How many days in a week do you typically play video games? (Can include gaming consoles, portable gaming devices, computers, cell phones, and tablets)

- Less than once per week
- 1
- 2
- 3
- 4
- 5
- 6
- 7

If you typically play less than once a week, please estimate the frequency of your play per month.

- Less than once per month
- Once per month
- Twice per month
- Three times per month

If you typically play less than once per month, please estimate the frequency of your play per year.

- Less than once per year or never
- 1-3 times per year
- 4-6 times per year
- 7-11 times per year

How long is your typical playing session?

- Less than 15 minutes
- Greater than 15 minutes but less than an hour
- 1-2 hours
- 2-4 hours
- 4-6 hours
- 6-8 hours
- 8-10 hours
- More than 10 hours

Please select the type of video games most often played. (Select all that apply)

Action/Adventure

Sports

Role Play

Strategy

Shooter

Simulation

Online multiplayer

Puzzle

Other

Stream Familiarity

Have you ever viewed a video game stream (i.e. watched someone play a video game on Twitch, YouTube, etc.)?

Yes

No

Which best describes how frequently you watch video game streams?

Once or more per week

1-3 times per month

1-5 times per year

6-11 times per year

Demographics

What is your age? _____

What is your gender?

- Male
- Female

PART II

Stream 1

Please view the following stream of Call of Duty: Black Ops III. After watching the video in its entirety, continue with the survey by hitting the "next" button at the bottom of the page.

*If you do not see the video below, please click on the URL. The video will open in a new window. Please return to the survey once you have watched the video.

<http://www.youtube.com/watch?v=gCKkV15Iu78>

Stream 2

Please view the following stream of Call of Duty: Black Ops III. After watching the video in its entirety, continue with the survey by hitting the "next" button at the bottom of the page.

*If you do not see the video below, please click on the URL. The video will open in a new window. Please return to the survey once you have watched the video.

<https://www.youtube.com/watch?v=VyJ3OxpjGLs>

PART III

Usefulness of Content

Please indicate the extent to which you agree or disagree with the following statements:

The video contained relevant information for a potential buyer of the game.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

The video contained helpful information for a potential buyer of the game.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

The video contained seemingly accurate information about the game.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

The video provided valuable information about the game.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

There is enough information presented in the video to help make a decision about purchasing the game.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

Credibility

Please rate the streamer on the following categories:

Not an expert 1 2 3 4 5 6 7 Expert

Inexperienced 1 2 3 4 5 6 7 Experienced

Unknowledge-
able 1 2 3 4 5 6 7 Knowledgeable

Unqualified 1 2 3 4 5 6 7 Qualified

Unskilled 1 2 3 4 5 6 7 Skilled

Undependable 1 2 3 4 5 6 7 Dependable

Dishonest 1 2 3 4 5 6 7 Honest

Unreliable 1 2 3 4 5 6 7 Reliable

Insincere 1 2 3 4 5 6 7 Sincere

Untrustworthy 1 2 3 4 5 6 7 Trustworthy

Unpopular 1 2 3 4 5 6 7 Popular

Group Identification

Please indicate the extent to which you agree or disagree with the following statements:

In general, the streamer thinks like me.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

In general, the streamer behaves like me.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

In general, the streamer is similar to me.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

In general, the streamer is like me.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

Purchase Intentions

Have you previously owned or do you currently own this game?

- Yes
- No

Have you previously played or do you currently play this game?

- Yes
- No

Please indicate the extent to which you agree or disagree with the following statements:

I intend to play this game in the future.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

The likelihood of me purchasing this game is high.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

The probability that I would consider buying this game is high.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

My willingness to buy this game is high.

Strongly disagree 1 2 3 4 5 6 7 Strongly agree

VITA

LISA BRIANNE FOSTER

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