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# The Uses and Gratifications of Streaming Live Linear Sports Networks Online

Benjamin Whittle

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The Uses and Gratifications of Streaming Live  
Linear Sports Networks Online

by

Benjamin Chad Whittle

A Dissertation  
Submitted to the Graduate School,  
the College of Arts and Sciences  
and the School of Communication  
at The University of Southern Mississippi  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy

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## ABSTRACT

The streaming of live sports television channels online is changing how sports fans access live sports T.V. content. This new technology is becoming a greater challenge to traditional cable/satellite television services as Americans continue to cancel their cable services for new online streaming options. DirecTV Now, SlingTV, PlayStation Vue, YouTube TV, among others, are offering sports fans access to the most popular live national and regional sports T.V. networks online via live streaming, allowing them to bypass traditional cable. These new services provide subscribers' access to their favorite channels anywhere and on any mobile, internet connected device.

The purpose of this study was to explore the gratifications that are obtained by sports fans from using online live streaming for sports content. With online live streaming from over-the-top (OTT) services becoming a growing alternative to cable, this study wanted to examine the gratifications obtained from using these services and if the gratifications obtained are similar or different from gratifications obtained from previous television and internet research. The uses and gratifications theory was the theoretical framework for this study.

A survey was commenced online using the Amazon M Turk platform (N = 300) to obtain data for this study. The results showed there is a significant relationship between viewer's intentions and their use of online live streaming for sports content. Other variables examined including the convenience of use, viewing costs, perceived enjoyment, social benefits, and viewing quality may all affect their use of online streaming once the participant has decided to use these services.

Other findings showed that the television/Smart T.V. is still the main source for viewing televised sport content. In addition, the results showed the most popular televised sports are also the most popular online with the NFL, NBA, MLB, and college football, all ranking as the most streamed sports. This study included a wide range of participants' demographics, showing there is an interest in streaming sports among a variety of demographics.

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Thank you, Mom and Dad, for all of the love and encouragement during this process. I also want to thank my Grandparents E.M. and June Hattaway. Thank you, for all the support and love throughout the years.

## DEDICATION

This dissertation is dedicated to my Grandpa E.M. Hattaway. I look forward to seeing you again one day in Heaven.

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## CHAPTER I – Introduction

Streaming live sports online is changing how sports fans access live sports T.V. content. Traditionally, cable and satellite systems have been the only place to access broadcast and cable network coverage of live sports. However, recent research and industry surveys have shown that more Americans, including Millennials, are cancelling their cable subscriptions, while the number of streaming service subscriptions continues to increase, with many of these services offering access to the same live sports channels as cable/satellite television (Burch, 2017).

Cable/satellite services have seen a concerning decline in the number of subscribers to their services. In the first quarter of 2017 alone, 762,000 pay-T.V. subscribers “cut the cord,” with satellite television provider Dish Network seeing a decrease of 320,000 subscribers in the first quarter of 2017 (Zara, 2017). Marketing firm Fluent LLC reported that 67% of internet users in America watch content via streaming versus 61% that have a cable subscription. However, this report stated that some of those included in the poll subscribe to both services (Williams, 2017). Among Millennials (18-35 years old), there was a 20-point difference, with those who use streaming video representing 77% of the sample, and those that had cable were 57% of the sample (Ivanova, 2017). A Pew Research study reported that 61% of 18-29 years old surveyed stated the primary way they watch T.V. content is via a streaming service, with just 31% stating they mostly watch via cable/satellite (Rainie, 2017). The viewing of sport content has been marketed as a way to keep subscribers from cancelling cable, but even sports networks are starting to offer streaming of their channels in order to reach a younger audience (Heitner, 2017). Since 2011, ESPN has lost nearly 13 million subscribers as

cord cutting has occurred, which has resulted in loss of revenue for the sports network (Gaines, 2017).

New services like DirecTV Now, SlingTV, YouTube TV, among others, are offering subscribers access to a large sample of T.V. networks including sports networks (and in some markets, even local over-the-air broadcast stations) via live online T.V. streaming. Unlike traditional cable and satellite services, the only equipment one needs to access the channels is a mobile device such as a smartphone, tablet, streaming box, or a computer. These content providers offer subscribers access to their favorite channels almost anywhere streaming live over the internet, which makes these services more mobile than traditional sources. These video providers promote their services as a cheaper alternative to traditional cable and satellite services and are an effort to appeal to Millennials that are less interested in traditional cable as many subscribe to on-demand streaming services such as Netflix. Some of the most popular streaming services have already reached over a million subscribers and continues to grow. HBO Now, the network's streaming app has almost 3.5 million subscribers (Porch, 2017). SlingTV has over 2.2 million subscribers (Seppala, 2018). ShowTime and CBS All-Access streaming apps have nearly 1.5 million subscribers (Spangler, 2017). DirecTV Now has 1.2 million subscribers (Fingas, 2018).

These live T.V. streaming services offer users features not available via on-demand services such as Netflix. Live streaming services allow one the ability to watch their favorite shows live as they air on T.V., without having to wait months for the episodes to appear in the libraries of on-demand services. A viewer can watch sporting events live in real time as most streaming content providers offer major sports channels

including ESPN, SEC Network, and Fox Sports 1 in their packages. Due to broadcast rights, Netflix, Hulu, and other on-demand options, offer very little sports content. In 2017, Amazon purchased the rights to stream NFL Thursday Night Football, which was the company's first attempt into streaming live sports (Kim, 2017). The traditional broadcast and cable networks still hold the majority rights to these events, which make live T.V. streaming services an attractive alternative to cable for those that still want to watch sports programming.

The purpose of this study is to explore the gratifications that are obtained by sports fans from using online live streaming for sports content. The theoretical framework for this study is the uses and gratifications theory. This study will add to the body of knowledge on a topic that is of current and future importance to the academic, as well as the broader media community in general. Live streaming of television continues to increase in popularity as an option used by viewers in accessing live sports content and is altering the traditional television business.

## CHAPTER II – Literature Review

### *Broadcast T.V.*

While a majority of Americans receive their T.V. programming from either a cable or satellite provider, some of the biggest events in sports still air on over-the-air broadcasters including ABC, CBS, FOX, and NBC. Eight of the ten most watched events in T.V. history are Super Bowls, and all aired on an over-the-air broadcaster with Super Bowl XLIX receiving a record 114 million viewers (Taibi, 2014). However, even with big sports events that receive substantial audiences, broadcast T.V. continues to see a viewership decline due to competing media options for consumers to view.

Even before Netflix began streaming *House of Cards* and reruns of *Breaking Bad* that could be “binged watch (watching multiple episodes of a T.V. series in a row),” the audiences of broadcast networks were decreasing. In 1980, 90% of T.V. viewers were watching ABC, CBS, and NBC, but since then the broadcast networks have seen a decline in the share of audiences. One reason for the decline is the number of viewing choices. Traditionally, broadcast networks targeted a “mass audience” with its programming. Today’s viewership, however, is more fragmented. Cable and streaming services are better able to tailor programming for these fragment/niche audiences (Hindman & Wiegand, 2008).

Even though the audiences have declined for broadcast T.V., the advertising revenue has increased. Dimmick (2003) stated broadcast network’s revenue continues to increase because these networks are some of the few mediums left where an advertiser can reach a large, massive audience. Advertisers want to maximize the audience that views their ad. Sports on broadcast networks offer them the opportunity to reach a large

audience since their content is free to view, as opposed to cable that requires a subscription (Hammervold & Solberg, 2006). This is why events such as the Super Bowl or the Olympics still air on broadcast over cable channels. Even as popular and as large as ESPN is, broadcast networks are still available in more homes because these networks are available both on cable/satellite and over-the-air. Waterman and Yan (1999) stated that broadcast networks are in 95% of U.S. households, 78% for cable according to their data.

Networks pay hundreds of millions of dollars for sports rights, which is why top networks own the majority of the broadcast rights to sports programming including the NFL, because these outlets have the finances to purchase these rights. Lower tier networks cannot compete for the rights due to lower revenue. A large percentage of the sports content that is streamed online originates from broadcast networks as these content providers offers live streams of their T.V. broadcast on corporate owned mobile apps and to live streaming services. The rights to top-tier sports plus signal fidelity and screen size offers broadcast television an advantage over their online competitors (Gantz and Lewis, 2014).

As previously mentioned, broadcast networks are taking full advantage of their rights as they use the broadcast rights of sports to complement their online offerings. Tang and Cooper (2013) examined multiplatform viewing of the London Olympics. Their study sampled 351 students via a survey at a large Midwestern U.S. university. The results showed that the participants on an average day watched an average of 3 hours and 50 minutes of content on various media platforms, with television receiving 3 hours and 19 minutes ( $M = 199.22$ ,  $SD = 176.89$ ) of their viewing time. The NBCOlympics.com

website received 22 minutes ( $M = 22.32$ ,  $SD = 19.62$ ) of their viewing time and mobile apps were used 9 minutes ( $M = 8.68$ ,  $SD = 11.89$ ) per day to view Olympic coverage. Overall, 33.9% of the participants watched the games on NBCOlympics.com, and 11.9% viewed the games on mobile devices. Of the sample, 60% viewed the games only on traditional television. The study also showed there was a positive correlation among watching the coverage on television, web, and mobile. Watching on T.V. had a positive relationship with the time spent watching on mobile ( $r = .255$ ) and on the internet ( $r = .214$ ). Watching the event on the internet related to time spent watching on mobile devices as well ( $r = .286$ ). The authors concluded that more time spent watching on T.V. was associated with more time spent watching online and on mobile devices.

While broadcast networks remain the source for many of the top sports in America, cable television offers sports fans even more options for sports coverage with multiple networks broadcasting sports coverage 24 hours per day.

#### *Cable T.V.*

There is a plethora of research on the rise of cable and its battle with the broadcast industry (Brotman, 1980, Streeter, 1987, Mullen, 2008, Sterling & Kittross, 2002), along with its growth (Park, 1971, Besen & Crandall, 1981). In the 1960s, predictions were already being made about the concept of T.V. programming being delivered via cable and satellite dishes that would allow channels to broadcast from coast-to-coast (Papernow, 1965). A study in 1967 predicted a cable future where there would be multiple networks that would provide programming to a niche audience as opposed to broadcast networks such as NBC, which tries to reach the largest audience possible (Licklider, 1967).



Barnett and Greenberg (1968) reported on how the T.V. industry could improve its service by offering more choices for consumers. One proposal presented in the article was from the Rand Corporation that called for a national 20 channel service, which would replace the then current broadcast service that did a poor job meeting audiences' needs. Parsons (2003) studied the early growth of cable/satellite technology and explained that without the advancement of satellites that could provide local cable systems national networks, national cable channels growth would have been diminished.

During the 1960s, cable was in its early days as the service was originally intended to provide better reception to T.V. viewers in rural and mountainous areas. One reason cable's growth was restricted was due to FCC (Federal Communication Commission) regulation. In 1965-1966, the FCC passed restrictive rules that were put in place to protect over-the-air broadcasts from the possible financial harm from cable. A cable system had to carry all stations from within a 60 miles radius, and could not carry shows from stations outside this radius that aired the same shows. In 1968, the commission ruled that cable systems in the top 100 markets had to receive approval before they carried distant stations (Dominick, Sherman, & Copeland, 1990, p. 253).

The cable-satellite distribution system began to grow exponentially in the 1970s and saw even more growth in the 1980s. Brotman (1980) described how the growth of cable was helped by many factors including a reduction in regulation restrictions from the FCC, increase in investment in the industry, and more consumer interests as more Americans wanted more choice beyond the three networks. He concluded that cable would probably become a profitable business and offer more choices to Americans than the previous three networks offered. He also stated that the broadcast networks could

keep the status quo going and cable could become a fringe business. His main rationale on whether cable would grow or not depended on whether national brands would be willing to advertise on cable channels (Brotman, 1980).

Besen and Crandall (1981) reported on how during this era (1970s, early 1980s) the federal government was still trying to protect the three broadcast networks for fear the cable T.V. industry would greatly damage the status quo of the three networks. The FCC's biggest fear was that the cable channels would not serve "the public interest" and would decrease the entertainment options available to homes that could not afford cable T.V. and depended on over-the-air broadcasters. The FCC thought the amount of programming on local broadcasters could decrease as more programming shifted to cable channels, and thus would leave some viewers without a large amount of entertainment. As the 1970s continued, the federal government saw that the growth of cable did not have a necessarily negative effect on broadcast T.V. as cable grew, because the broadcast networks were still in business and were still able to compete. While there was still legislation aimed at cable in 1978, many of the imposed limitations on the cable industry were lifted, as it was obvious broadcast T.V. could still compete successfully with cable.

An earlier study by Park (1971) concluded that the potential revenue decline that could result from the growth of cable would not be large enough to be of a concern to the broadcast networks. While overall the decline in revenue from cable would be small, especially for stations in large markets, stations in smaller markets would be hurt more if cable was available in a large amount of homes.

While many limitations on cable were abolished in the late 1970s, the FCC deregulated most of cable in the 1980s. Simon (1981) determined that deregulating cable

would benefit the public overall by providing more sources of programming, but the growth of cable could harm broadcast television.

In 1988, cable reached a penetration milestone of 50% of U.S. households according to Chan-Olmsted and Barry Litman (1988). These researchers examined possible antitrust possibilities due to the large mergers that occurred in the cable industry during the 1980s as the industry grew. One business deal the researchers covered was TCI cable's deal to become the second largest stockholder in the Turner Broadcast System. This deal provided TCI cable a stake in channels that were a part of their own cable system. They concluded that with the growth of cable systems, there should be antitrust authorities overseeing the industry to make sure the public interest was being served (Chan-Olmsted et. al, 1988).

Streeter (1987) viewed the growth of cable T.V. from a policy perspective. Streeter discussed the political and business policies that helped to create cable. He stated that there was optimism that cable would help to end the T.V. oligopoly, but instead cable helped to create a new one. He was referring to the small amount of T.V. channels and owners, which is similar to today's cable, as there are just a handful of cable channel owners. Some examples mentioned in regard to the attempt of cable related companies trying to purchase broadcast T.V. networks included Capital Cities Communications purchase of ABC, and Ted Turner's (failed) attempt to purchase CBS. He also concluded that cable T.V. was not as a technical leap forward as some assumed it would be as it was not much more interactive than traditional broadcast T.V. During cable's early growth years, the 1970s and 1980s, he reported most viewers only received about 20 channels.

Today, that is considered a basic cable package, but during this time period, this was considered to be a large variety of channels compared to the three broadcast networks.

One company that led cable's growth in the 1970s was the Turner Broadcast System and its flagship station WTBS Atlanta. WTBS was the first SuperStation on cable. Rothe, Harvey, and Michael (1982) explained that a SuperStation is a local station that beamed its signal nationally to cable systems across the nation. WTBS's main programming included reruns of popular family friendly shows and Atlanta Braves baseball games that aired nightly on the station. Before WTBS, no T.V. station aired nightly games of a specific team on the same station. This programming innovation by WTBS helped to lead the way to the regional sports networks on cable today that have exclusive broadcast rights of baseball and other sports.

Some of the reasons Rothe et al. (1982) suggested cable expanded during this era included the growth of satellite technology, as well as investments from entrepreneurs that helped the industry's growth. Other factors mentioned included the dissatisfaction from T.V. viewers that they could only receive a small amount of channel choices and programming options. As mentioned in previous studies, this paper also explained that FCC policy changes helped to drive the growth of cable television. While there are still stations that broadcast their local signal nationally, most stations are not promoted as a SuperStation, including WTBS, which is now known simply as TBS. In fact, TBS is now a national only signal as Turner Broadcasting has made the local WTBS signal a local station only again and rebranded it as WPCH, PeachTree T.V. Atlanta.

Another network that helped to grow cable during the 1970s and 1980s was HBO (Home Box Office). HBO in 1975 announced it would be a satellite-interconnected cable

programming network that local cable systems could set up their own receivers to receive the signal. Unlike WTBS, subscribers were charged an additional fee to watch HBO that offered programming viewers could not receive on other channels including first run movies and sports. The addition of HBO, a channel not available over-the-air helped to expand cable and led the way to other cable only channels including The Movie Channel, Christian Broadcasting Network, ShowTime, ESPN, CNN and MTV (Dominick, Sherman, & et al., 1990, p. 257).

Home satellite dishes grew in the 1980s that offered T.V. viewers another option for accessing T.V. programming. Satellite technology evolved multiple times during this time period. First was T.V.R.O. (television receive-only) that allowed users to access cable system's signals for free. In 1985, cable systems began scrambling their signals, which eventually made this technology useless. A similar technology, S.M.A.T.V. (Satellite master-antenna television) offered a similar service as T.V.R.O. but for apartment communities, and eventually lost the battle to cable as the channels were scrambled (Dominick, Sherman, & et al., 1990, p. 77). During the late 1980s and the early 1990s, the foundation was laid for what is known today as DBS (direct broadcasting by satellite), which are the umbrella shaped dishes that consumers use to receive channels from services such as DirecTV or Dish Network. Before DBS, many would receive programming from large backyard dishes, while DBS dishes are small enough to fit on the side of a house (Dominick, Sherman, & et al., 1990, p.261).

Cable and satellite T.V. services have provided customers with an almost limitless choice in programming. Networks such as ESPN and Fox Sports 1 have millions of dollars in revenue and can attract large audiences. Even though broadcast networks have

been able to charge more CPM (cost per thousand) for ads than cable networks (because these networks can reach a larger audience), cable channels have more revenue streams than over-the-air networks have (Waterman & Yan, 1999). As with broadcast networks, cable channels earn revenue from advertisements. Unlike broadcast networks, cable channels earn additional revenue from subscriber fees that cable service providers pay each channel. ESPN receives an estimated average \$6.04 per subscriber (regardless if the person even watches the channel), TNT \$1.48/subscriber, Fox News \$0.99/subscriber, and TBS only \$0.72/ subscriber (Molla, 2014).

Because of the rise of cable T.V. and the shift of sports programming to cable, there are many sports channels available for sports fans to watch. From ESPN networks, to Fox Sports networks, to regional sports channels, there is always sport content on for fans to watch. ESPN offers fans content from early morning with SportsCenter, to talk shows, to even sports themed movies (Brown & Bryant, 2003). A 2004 FCC report on cable television reported that cable has overtaken broadcast T.V. in audience attention. ESPN is the leader in sports television, but there are also other channels including NBC Sports Network and Fox Sports 1, as well as many sport specific channels including The NFL Network, The Golf Channel, and The Tennis Channel. Many of the sports cable channels are extensions of broadcast networks, with NBC/Comcast owning the NBC Sports Network, and Fox owning Fox Sports 1. While many fans want coverage of national sporting events, many want local coverage of sports since they are fans of local teams. Local regional networks can offer more localized coverage of teams that national brands like ESPN cannot offer. With the high programming costs associated with regional networks, these channels have become some of the most expensive networks for

video providers, including cable to offer (Caves, Holt, & Singer, 2013). For these fans, there are hyperlocal networks such as NESN (New England Sports Network), and NBC Sports Bay Area (San Francisco, California). There are also networks for college teams including the SEC (Southeastern Conference) Network and Big Ten Network.

A study by Kunz (2017) examined the growth of regional sports networks between 2000-2015 and the trends that occurred during this time, including the migration of local T.V. rights away from free over-the-air broadcasters to subscription cable services. The data for his analysis of ownership is cited from SNL Kagan, a research firm that is widely used by media companies, while other data was accessed via corporate websites and documents from the Securities and Exchange Commission (SEC).

During the time-period examined, more sports shifted away from over-the-air broadcasters to cable channels, specifically MLB (Major League Baseball). By 2014, 19 of 29-baseball team's full season of games shifted from local stations to cable channels. Significant broadcast rights deals occurred with the L.A. Lakers signing a \$3 billion deal with Time Warner Cable that included the creation of a regional network to air the team's games. The Los Angeles Dodgers signed a 25-year deal with Time Warner Cable that was worth \$8 billion that included the creation of a network to carry the games. The Dodgers deal eliminated local over-the-air broadcasts of the team for the first time since 1959, the year the baseball team moved to L.A. The author stated that this deal was another example of the shift away of sports programming from over-the-air broadcasters to cable. However, this deal was not without controversy. With Time Warner Cable having exclusive rights, it left other cable viewers without access to the team. Nearly

70% of residents in the L.A. area were not able to watch the Dodgers because other cable systems refused to pay the high carriage fees (Kunz, 2017).

One of three companies including Twenty-First Century Fox (Fox Sports), Comcast (NBC Sports Regional Networks), and AT&T/DirectTV Sports Networks, own the majority of the regional networks. Corporate consolidation of the networks, plus the demand for these regional networks to be available for fans to watch in lower tier cable packages has resulted in increasing carriage fees for the cable companies. These factors have caused an increase in revenue for the networks/teams alike. While many sports channels are available in lower cable tiers, many fans have an access problem, as some channels are only available in higher costing cable tiers (Kunz, 2017).

Sports as a big business present an access problem to fans depending on the service and package in which they have a subscription. With cable systems offering various sports channels in different packages, a sports viewer may have to purchase a higher tier cable package or a separate provider in order to access a channel that has coverage of their favorite sport (Smith, Evens, & Iosifidis 2015). For NFL fans, DirecTV is their best option in regard to viewing their favorite team's games as the satellite service has exclusive rights to the NFL's Sunday Ticket package. This allows a subscriber to view all games live on Sundays, including out of market games, and not just the game that is airing on their local cable system (Stennek, 2014). If one has a Dish Network or local cable subscription, they might not be able to view their favorite team, as the game may not be available on their cable due to restrictions. Dish Network does not have the rights to NFL Sunday Ticket. With the cost of broadcast rights increasing, which in turn makes the price of cable rise, sports networks are facing challenges (Ramachandran &



Flint, 2015). For some networks, a decline in viewership is not necessarily their main concern. Instead, it is trying to receive clearance to air on large cable systems.

The independently operated Tennis Channel sought the FCC's support in 2010 to gain carriage on Comcast cable due to an unwillingness from the cable operator to place the channel on basic tiers while the company allowed Comcast owned sports channels including the Golf Channel access to these lower tiers. By only offering the Tennis Channel on more expensive sports only tiers, the owners felt this provided them with a disadvantage. Comcast argued that a projected lack of revenue increase was the reason they did not offer the channel in a lower tier (Dittmore & Li, 2017).

The channel's conflict with Comcast unfolded over a six-year period. In 2016, Sinclair Broadcasting purchased the channel for \$350 million and at the time stated it had reached agreements with multiple cable providers, but it was not clear if Comcast was included in these carriage agreements. To reach more possible fans of the channel and to bypass more carriage fights, Tennis Channel created Tennis Channel Plus, a direct-to-consumer product that offers live streaming of the channel 24/7 to subscribers for \$89.99/year on [tennischanneleverywhere.com](http://tennischanneleverywhere.com) and on apps that can be downloaded on Roku, Apple TV and other streaming media players (Dittmore & Li, 2017).

With sports television so popular among audiences, and sports fans so invested in their favorite team or sport, viewers of these channels have specific motivations for watching sports that helps to explain their dedication to the genre. For many fans, they simply do not just watch a game, but are actively involved in the sport or team they are watching by preparing even before the game is on by reading other related media about the game. Other genres of T.V. simply do not have this level of interest.

### *Viewer Motivations for Watching Sports*

Research from Gantz, Wang, Paul, and Potter (2006) compared sports viewing to other television genres including situational comedies, reality shows, animated shows, dramas, and late-night talk/comedy shows. Their research showed that compared to other fans, sports viewers were more active as they prepared to watch a sport program. Sports fans were more likely to read a magazine, newspaper, or website before watching. The only similarity between fans of other genres (situational comedies, reality programs, dramas, talk shows, adult-themed animated shows) and sports in pre-program activities was betting on the outcome of the show or game (either for money or something else) and the participation in online chat forums. Compared with genres that were similar to those of sports fans, the genres included reality, situational comedies, and dramas. As with sports, fans of these genres would think about what may occur during the upcoming broadcasts and talk with friends about the programs. These same researchers found that motivations for sport consumption included “to watch T.V. to see who does well/wins,” “they like the unpredictability of the game,” “so they could follow their favorite player/team,” “to put aside responsibilities,” and they “watch because they care about the outcomes.”

The researchers also assessed the behaviors and emotional reactions the viewers have from watching their favorite T.V. program. For sports fans, they agreed on 11 of the 16 behaviors reviewed including “feeling happy when their favorite character, player, or team did well,” “feeling excited,” and “feeling sad or depressed when their team/player did poorly.” They also stated, “Yelling at a player/character,” “hoping or praying for a positive outcome,” and “talking about the show/game.” Remaining behaviors that they

rated was feeling “anxious,” “to argue or fight,” and “tell people to be quiet (Gantz, et al., 2006).”

After the game, the research showed that sports fans were more active than other genres, with fans stating they would be in a good mood for a while if their favorite team or player did well, and they would read information about the players/teams/games in various media including newspapers/online. They would also discuss the game with their friends, and in the same manner would be in a bad mood if their team or favorite player did poorly in the game. No other genre showed interests in watching more about their show after it aired. They also showed interests in hanging out with friends after a sporting event was over. Overall, the results showed that in post-viewing, sport fans were more emotionally involved than fans of other T.V. genres (Gantz, et al., 2006).”

A study from Billings and Ruihley (2013) that included 1,261 adult traditional and fantasy sports media consumers was used to examine if there were motivational differences in consuming sports media content. The researchers used an online questionnaire hosted on Google Docs to obtain data for this study. The results showed that fantasy sport consumers had elevated levels of enjoyment, entertainment, passing time, social interaction, and surveillance motivations than traditional fans. Traditional fans scored higher for escape motivations. Fantasy sport fans also had an increase in all motivation behaviors when there were increased levels of involvement. The researchers concluded that fantasy sport participants have similar fanship motivations as traditional fans, but at higher levels. With fantasy viewers having a vested interest in the outcome of games, it is understandable why these viewers would have more motivation than the

traditional sports fan that watches for the enjoyment and entertainment of sport competitions.

A study from Hu and Tang (2010) examined the relationship among viewing motivation, fan identification, and viewing behavior of baseball broadcasts. A questionnaire sample of 800 participants, with ages ranging from 15 to over 65, from the Taipei area in Taiwan, showed that entertainment, self-esteem, and eustress (positive levels of stress), affected fan identification, which is defined as “the personal commitment and emotional involvement a person has with a sports organization (p. 682). In addition, the top motivating factors for participants were entertainment, excitement, and supporting athletes from their home country. The results also showed that those that had a greater identification with MLB would watch for longer periods.

There has never been a better time to be a sports fan as there are multiple technologies now one can use to access live sports programming, with more choices appearing thanks to internet streaming. These new online options are providing new ways in which to watch live sports, allowing a fan to bypass traditional cable/satellite outlets for more mobile and possibly affordable services.

#### *O.T.T. Over-the-top Streaming Services for Sports*

For the sports fan that wants to bypass cable and continue to receive sports programming, there are now multiple options in which to access live sports via streaming. Live streaming is when a legitimate television broadcast is retrieved, and then simultaneously made available to watch live online (Kirton & David, 2013, p. 84). When one streams content online, there is not a downloaded copy of the content saved onto the

user's computer, rather, he/she views the content as it happens in a similar manner as watching a live program on television.

All the large sports networks including ESPN and Fox Sports networks offer video clips and live streaming of game content on their websites, which are live streams of their linear T.V. channels. However, in order to view this content on your desktop, laptop or mobile device, you must log in with your cable/satellite subscription. For mobile devices, you must download the channel's app to view programming. For those that do not wish to purchase traditional cable, there are now services that offer live streaming of channels via web browsers, apps, and streaming boxes, known as OTT (over-the-top) services.

Over-the-top (OTT) is a video distributor that offers video content to consumers over the internet, instead via traditional cable or satellite services (FCC, 2013). Some of the options for customers that wish to purchase cable channels, but do not want to pay for a traditional cable or satellite service can choose from Dish Network's SlingT.V., DirecT.V. Now, PlayStation Vue, YouTube T.V., Hulu (which offers a live streaming T.V. channel option in addition to their on-demand service), Roku, and Fubo TV, which is a sports specific streaming service. In 2018, ESPN launched its own standalone OTT service that allows subscribers to receive ESPN networks live streams and live event coverage of sports content (Bonestell, 2017). Unlike Netflix and other on-demand services (also known as VOD: video on-demand), these services offer the same channels as traditional cable or satellite television, with the main difference being the delivery method of the content (streaming online as opposed to receiving content via a cable cord or satellite dish). These services offer channels in a similar manner as traditional cable

with each service providing many different programming packages that customers can choose. These packages may include a small bundle of channels or larger bundles may contain many channels that range from sports, news, entertainment, and even local broadcast networks in some markets. For young Americans that are accustomed to streaming content, this offers T.V. networks with the potential to reach a market segment that may otherwise not be interested in purchasing their services.

OTT services are accessed in various ways as discussed; however, unlike cable, which provides popular channels in a bundle, there are gaps in OTT services, which may become problematic for consumers. Lack of streaming rights forces certain channel owners to offer a much smaller bundle of channels than others. YouTube T.V. made agreements with the owners of broadcast networks to provide all four of the major American broadcast networks (including access to local channels) on their service. However, SlingT.V. for example, offers access to certain broadcast networks in only certain markets, while other areas may have to pay extra for ABC, for example, just to receive its programming on-demand only, and not as a live stream. CBS has been reluctant to offer their broadcast network for these services as they have their own standalone OTT app that is available via subscription. As with traditional T.V., online OTT options may blackout sporting events due to the broadcast rights held by T.V. networks. Or, some sports channels may not be available to stream such as Fox Sports South if you live in Georgia, because the stream provider may not offer Fox Sports. For sports, having gaps in access to broadcast and cable networks could be an issue that may make potential subscribers decide not to purchase these services. With over-the-top

services gaining in popularity, research has examined if OTT is a replacement or complement to traditional services.

Hu, Zhang, and Wang (2017) attempted to explain live streaming audiences' continuous watching behavior intention from two live streaming services in China that included Douyu TV and YY TV. A sample of 412 questionnaire participants was commenced, with 70.64% of the respondents age 25 or under, with 85.78% receiving a college education. The results indicated that audiences' personal identification with broadcasters helped to promote the user's intention to continually use these services, and audience groups are positively associated with their continuous watching intention. Broadcast identification was defined as users that have a personal connection with a broadcaster that might lead to a long-term preference for the broadcast channel because he/she may admire the attitudes/values or personality/branding of the channel. Audience group identification included viewers exchanging ideas and thoughts about streams, connecting with others that share their values and beliefs.

Indrawati and Haryoto (2015) used a modified version of UTAUT2 (Unified Theory of Acceptance and Use of Technology) model that added the variable of content, while excluding the variable of habit (because the study wanted to study potential users, not those that already use streaming) to identify the key elements that influenced the behavior intention of internet users in Indonesia to begin using T.V. streaming. The study contained 467 participants via an online questionnaire. The results showed that content, hedonic motivation, social influence, price value, and performance expectancy, all had positive influence on the behavior intention to adopt T.V. streaming. Compared to the older group of participants, the effect of social influence to behavioral intention to use

T.V. streaming was higher in the younger group. Variables were not affected by gender, except for content to behavioral intention with women experiencing more influence than men in regard to this variable. Income differences among participants influenced the effect of content, facilitating condition, hedonic motivation, and social influence on the behavioral intention of the participants to adopting T.V. streaming.

Lee and Lee (2015) examined how the changes in time spent on online video services affect time spent on other media, including television. The study included 3,053 respondents that answered the Korean Media Diary Survey from the Korea Information Society Development Institute (KISDI). The results showed that online video services were shifting users from other media including cable T.V. in regard to the amount of time the participants use the various mediums. The study did show that unlike in America, most of those surveyed did not cancel cable. This study concluded that an increase use of online options caused a decrease in traditional T.V. viewing.

A study from Bury and Li (2015) examined the viewing of T.V. programming between traditional T.V. and other methods of watching. For this study, the researchers wanted to gather data on the differences in the ways in which to watch T.V. shows. Their online survey sample consisted of (n = 671) with an age range from 18-75 years old. Their study showed that a majority of viewing continues to take place in front of a traditional T.V. set, with the computer as the second choice to view T.V. content, followed by mobile devices. Among those under 30 years old, 94% use online methods to view T.V., as opposed to other age groups, and the researchers also found a decline in live viewing of T.V. programming. Considering there are multiple ways to watch T.V.



shows on-demand now including apps, web browsers, on-demand options via cable/satellite, the decline in live viewing is not too surprising.

Baccarne, Evens, and Schurrman (2013) examined the development of OTT services in Flanders, located in northern Belgium, by obtaining data via a survey of 1,269 participants between the ages of 20-50 years old. The results showed that 57.2% of the sample had between five and nine multimedia screens (T.V., tablets, computers, smartphones) at home. The primary medium to watch video content was television with 61.3% participants using it on a daily basis. Computers (33.4%) and tablets (24.5%) followed T.V. for use. Smartphones were the least used device to watch television programming with just 14.8% stating they use these mobile devices on a daily basis to watch T.V.

The researchers concluded that due to cable triple play bundles that in many cases include OTT service access, a large scale “cord-cutting” is likely not to happen in this market. With consumers having to pay for internet access, independent OTT services owned separately from large cable providers will have a difficult time to compete with larger competition. Other factors that will determine the success of OTT services include the pricing of these services, and video quality of the streams. They conclude that OTT services will be a complement, not a replacement for traditional television services.

Cha (2013) obtained a sample of 1,500 online survey participants to examine what factors influenced consumer’s intentions to use the internet and television to watch video content. For hypothesis analysis, a sample of 388 participants was included in this study. The author states that online video platforms coexist with the traditional television market, and therefore this study examined the interaction between online video platforms

and T.V. on consumers' usage of video platforms. The researcher concluded that when consumers perceived new video platforms different from television in satisfying needs, the use of new video platforms increases. The relative advantage (online video being viewed as better than T.V., which is the medium it replaces) and compatibility (the degree of adoption of a technology that is likeminded with existing values, past experiences and needs of the consumers) of online video platforms decreased the possibility of using T.V.

Lee (2011) used UTAUT (Unified Theory of Acceptance and Use of Technology) to conduct a qualitative study examining users' adoption of mobile video apps in Taiwan. The sample included six participants and two experts that were iOS and Android users. In addition, a focus group consisting of five members was included in this study. The participants ages ranged from 19-29 years old, the two experts' ages were from 35-45. The data was obtained using an open-ended questionnaire that was developed by the researcher, and a modified five-point Likert UTAUT questionnaire that was created by the researcher that was used to collect data concerning video app adoption. All the qualitative data was coded as either participant (P), expert (E), or focus group (F). Statistical analysis methods were used on the modified UTAUT questionnaire for triangulation that included descriptive statistics, and multiple-choice analysis.

The results indicated that perceived playfulness, effort expectancy, facilitating conditions, and performance expectancy, all had positive effect on users' usage behaviors toward mobile video app adoption. In addition, the participants like to watch mobile video throughout their day, with participants stating they enjoy watching video while in bed, or on mass transit. Short video over long form video was the top choice for

smartphone users with YouTube being the top destination for viewing these videos. Smartphones were also quoted as being used instead of computers for watching video. The quality of the video streams was a concern, including the image quality of the video that could be poor due to internet connection issues. Participants suggested they would be interested in purchasing a fee-based video app if the service offered better content and video quality than free apps.

While OTT services offer a wide variety of sports channels and event coverage, as with traditional television, the main determination concerning what sports content is available for viewing or not is determined by what broadcast rights a particular channel has in regard to a sport or league. While there are more choices than ever to access sports, due to broadcast/streaming rights deals, sports are not necessarily ubiquitous.

#### *Broadcast and Streaming Rights to Sports Content*

While video streaming quality is an important factor in OTT's possible success, the rights to broadcast or stream sports content is a vital issue for the success or failure of sports networks and streaming OTT services. Channels and OTT services that do not have the rights to stream games or sports networks face a difficult challenge if the service does not offer access to top tier sporting events. With sports being more commercialized than ever, sports rights are big business. With broadcasters and sports leagues wanting to maximize their incomes from rights, some viewers are losing access to sports content because the games have shifted from broadcast T.V. to pay-T.V. cable networks (Smith, Evens, and Iosifidis, 2015).

Stennek (2014) explains that exclusive distribution helps consumers in accessing content, as opposed to limiting their content options. He states that the commonly held

belief is that allowing exclusive distribution of T.V. rights of content, (including DirecTV's exclusive rights to the NFL Sunday Ticket package), prevents some viewers from accessing content, and consumers will have to pay higher prices. He argues that exclusive distribution helps T.V. consumers because it forces distributors to purchase the rights to content that is in high demand, and forces competitors to reduce their prices.

MLB has games that are broadcasted on national networks, but a majority of its games air on regional networks, as well as online via MLB's MLB.TV. While fans can watch games live online with a streaming subscription to MLB.TV, local/regional games are blacked out and are not available on the platform. The league feels that many fans would rather stream the game than watch on their local regional network. By limiting access to local games online, the league is protecting its highly profitable rights agreements the league has with regional broadcasters, with some team television contracts being worth over \$1 billion. Out of market games are available on the platform, so this service is a good option for fans that are not supporters of the local team (Mills & Winfree, 2016).

One major problem that broadcast rights owners and leagues face is online illegal streaming and piracy of their content. The biggest concern among broadcasters is the retransmission of live sports broadcasts, rather than just highlights of games or delayed transmissions of sporting events. There are four main areas online where pirated sports content is consumed. First, are peer-to-peer (P2P) services that live stream channels from a website via user-generated content. Second, are recorded versions of games uploaded to file sharing networks such as BitTorrent. Third, are user-generated content sites including YouTube, that has also seen a rise in illegal streams of live sports content, and social

networking sites. With social media including Facebook and Twitter, offering users more ways to watch live streams of content, illegal streaming of sports may become a bigger issue on these social networking sites. Finally, pirated broadcasts are being viewed from illegal set-top boxes and 'signal boxes' that offer pirated signals through unscrambling pay-T.V. cable content (Wong, 2016).

While there are many more ways to access sports content and overall television programming today than in the past, Stewart (2016) argues that it is a myth that T.V. content is ubiquitous and offers explanations why he has this view. First, he explains that VOD (video on-demand) services do not nor can offer all T.V. programming on their services. He states that:

“This discourse of televisual ubiquity grossly overstates the availability of television, specifically in overlooking issues of geographic boundaries, as well as perpetuating assumptions about taste, cultures, and quality, and not reflecting the role still played by broadcast scheduling and nationally proscribed distribution windows (p. 692).”

Certain shows are only available in their home country on their own home networks. If you are an American and you enjoy British shows from the BBC for example, many of their shows may not be available on streaming services due to country restrictions. In addition, another issue he discusses is Geoblocking, which is the restriction of out of country web users from accessing certain internet content. Therefore, if you try to view BBC programming online via their iPlayer here in America, it will block your access to certain shows because you do not live in Great Britain. Geoblocking has also been applied to streaming services as well. One who has a United States Netflix or DirecTV Now subscription may not be able to access their favorite shows if they visit Canada. These services may not have your favorite show or channel licensed to Canada

for viewing, and thus you will only be able to access programming that the service has licensed to regions outside of the U.S. While his article concentrates on streaming VOD services, this same principle can be applied to T.V. streaming services that carry sports programming as these online T.V. channel providers have the same issues with the networks they offer. If you visit Canada for summer vacation, you may not be able to stream your favorite baseball team because the service may only have the streaming rights for the U.S. and you may be Geoblocked from viewing that content.

With sports fans watching games because of the excitement and the enjoyment they receive from watching, the uses and gratifications theory is a helpful framework to help examine sports fans potential interest in using OTT services to access sports programming.

#### *The Uses and Gratifications Theory*

The uses and gratifications theory has been used in many media studies including research into television. The theory was originally developed in the 1940s and was re-introduced by Katz, Blumler and Gurevitch (1974). This theory has been useful for media research because audiences consume media for entertainment purposes. Prior research examined why people selected to use one medium over another to gratify their needs (Ruggiero, 2000), and what consumers do with the media selected in the 21<sup>st</sup> century as there are more choices than before for consumers to select from (Bryant & Miron, 2004).

There are five parts concerning audiences and media use in the uses and gratifications model. First, the audience is active, not passive. The audience has a reason and a purpose to why they are (for the purposes of this study) watching T.V. He/she may be watching a show for entertainment, to pass time, or to be informed. Second, in regard

to media use, the media selected and what needs were met is determined by the media consumer. The consumer is the one who initiates the relationship, not the media. Third, the theory explains that the media is not the sole source of meeting satisfaction for people but is in competition with other sources for trying to meet the needs of the audience. With hundreds of cable channels, Netflix, and other online options available now for the consumer, this has never been truer concerning television (Katz, et al., 1974).

In the age of big data, the fourth feature of the uses and gratifications theory is important to T.V. networks. Media outlets can discover if their goals (entertaining, informing, etc.) are being achieved directly from the audiences. In T.V., this is achieved through ratings surveys, interviews, focus groups, and online forums/social networks. The fifth aspect of the theory states that judgements about the cultural importance of mass media should be paused while the audience determines their own meaning (Katz, et al., 1974).

A study by Rubin (1979) found that there are six main reasons why young children use T.V. Those reasons included for learning, for passing time, companionship, escape, arousal, and to relax. In a similar study, Rubin (1983) found five reasons for why adults use television. Adults use T.V. to pass time, for information, for entertainment, for companionship, and for escape. The researcher wants to make clear that both children and adults share similar reasons for why they interact with T.V. and believes either set of reasons could be applied to people of all ages including Millennials.

Levy and Windahl (1984) expanded the active audience within the uses and gratifications framework and explained that the audience has separate amounts of activity in three different stages. Stage one is pre-activity; this is when the consumer selects (for

this study) the T.V. shows he/she will watch. Then there is the duractivity stage, this is when the person is watching, thinking, and interacting with the T.V. program. The third stage is the post-activity, this is when the show is over, and the viewer is thinking about what he/she just watched.

Lewis, Conlin, and Brown (2017) applied the uses and gratifications theory to examine the motivations of users of sport streaming services online (NFL Game Rewind, NBA League Pass, MLB.TV, and NHL Game Center, among others). They interviewed 38 self-identified streaming sports users from a large southeastern university to obtain data. The results showed that several main themes emerged with this sample. First, was accessibility of streaming. The participants mentioned the mobile capability and the convenience of streaming sports from other devices outside of their home. In addition, they like that streaming allows them to watch their favorite teams without having to attend games, being able to watch in their own time thanks to DVR (some OTT services offer DVR service as well), and they are able to access games that may not be on cable or satellite channels. Finally, they stated they like streaming sports because it is cheaper than watching through cable or satellite services.

Cheever (2009) used the theory to determine the reasons why people watch Mixed Martial Arts (MMA) on television. The study included an online survey sample of more than 2,700 MMA fans worldwide. The results showed that MMA fans overall, enjoy the competition, skill of the fighters, and the technical aspects of the sport over its more violent and sensational qualities including blood, brutality, knockouts, and the fighters getting injured.



Gantz and Wenner (1995) employed the uses and gratifications theory to examine if fans and nonfans based on their level of interest in sports, would have different experiences in their interaction with viewing sports on television. Telephone calls were used to obtain an interview sample of 707 adults living in Los Angeles and Indianapolis. The results showed that fans were more invested in viewing sports on T.V. Fans were more involved and responsive, had more emotions, were more engaged before, during, and after the game than nonfans. The nonfans had less interest, concern, involvement, or responsiveness. Between male and female sports fans, the results showed difference between them, except for males being slightly more involved than women.

Li (2017) used gratifications obtained and opportunities for gratifications to examine the competitive relationships among OTT, MOD (Multimedia on-demand) and digital cable in the Taiwan market. To gather data, the researcher used 20 intensive interviews (18-46 years old) and a nationwide phone survey that included 1,015 valid questionnaires. Overall, the results showed that OTT was the most competitive, and digital cable/MOD were close to being equivalent in competitiveness. The most competition occurred between MOD and digital cable because the participants viewed these services more similar to one another than they did OTT services.

A study by Sundar and Limperos (2013) found that new media (internet and other new communication technologies) offer similar gratifications as traditional media has offered. This is not too surprising considering that someone is using a tablet or computer for the same purpose as a traditional T.V., which is to watch a program to help pass the time, for enjoyment, or for information, among other gratifications sought. However, unlike prior mediums, the internet offers users the ability to take their video content with

them and access it from anywhere. Before mobile technology, one could not simply access their favorite show from anywhere because T.V. sets were not portable.

Cha and Chan-Olmsted (2012) used a national survey of 388 U.S. adults to determine the motives these participants have in regard to using online video platforms for watching T.V. programs online, music videos, movies, YouTube etc. They answered questions on a 7-point Likert scale with the items coming from previous research into T.V. and internet use. The results showed that there are different motivations and gratifications between the use of T.V. and online video platforms for video content consumption. The study revealed, “Non-users of online video platforms were more likely than users of online video platforms to perceive online video platforms as a substitute for television (p.261).” Overall, the results showed that consumers still view T.V. as a better option than online video to obtain entertainment gratification and for relaxation.

Logan (2011) used a 75-item online questionnaire with a sample of 380 participants (18-34 years old), to help find differences in the use of streaming video versus traditional T.V. This study also examined advertising differences among these two delivery methods, but for the purpose of this paper, the results of the differences between online and traditional viewing are applied to this study.

There was no significant difference between users of television and online for the main gratification of viewing T.V. which is entertainment. Of the sample, 60% traditional viewers and 70% online viewers said they use the medium for entertainment. Traditional viewers also used the medium for social interaction more than web viewers did. Both groups were more likely to watch entertainment programming (comedy, drama) over informational programming (news, sports). The findings showed that a key economic

factor for using online T.V. was the ability to view programming without having to purchase a cable subscription. This study was conducted at the very beginning of streaming services online and since then the options for viewing live and on-demand content has only increased, but this study shows that even in 2011, T.V. viewers were interested in ways in which to view programming without a cable package.

Other findings showed that MOD was viewed as having the highest system quality, digital cable was second, and OTT had the lowest system quality. Some participants stated a limitation of over-the-top included poor picture quality, and unstable and poor caption quality. However, the researcher mentioned that some of the over-the-top services that may contain these limitations are illegal streams that are available on OTT services that contain poorly written captions and video quality. A third limitation mentioned was insufficient bandwidth that mostly occurred on mobile devices when using OTT. The participants did like over-the-top's portability that is offered on mobile devices. They also liked that the service offers fewer commercial interruptions, and the ability to search programming via keywords. They viewed OTT as providing the most gratifications in terms of program content.

Additional research into the gratifications obtained from television has concentrated on reality-based programming, as this is a popular genre of T.V. entertainment. Papacharissi and Mendelson (2007) used a survey to sample 157 students (18-34 years old) enrolled at an urban university to gather data concerning the uses and gratifications obtained from reality television. The results showed that the main motive for watching this type of programming was habitual pass timing and for reality

entertainment. The study found they also watch these shows for relaxation, social interaction, and for voyeurism.

A study of reality-based talent shows by Barton (2013) examined what gratifications viewers receive from these shows. A sample of 640 students at a southeastern college participated by answering a survey that sought to obtain their reasons for watching reality programs in general and their reasons for watching certain reality shows in particular that included the shows American Idol, Dancing with the Stars, and America's Got Talent. This study found similar gratifications obtained as previous studies, except with the addition of two new ones that previously were not produced by prior studies. The first factor was "T.V. personalities." The results showed that the host and the judges on the show played a part in determining if they tuned in or not. Strong personalities such as Simon Cowell of American Idol, is one reason why viewers want to watch these shows. The second new factor is "schadenfreude," meaning people tune in for the entertainment value of watching bad performances by contestants such as the infamous performance of Ricky Martin's "She bangs" by American Idol contestant William Hung.

A study by Greer and Ferguson (2015) that obtained data via an online questionnaire of 153 college students, found that participants that use the iPad for viewing programming tend to watch movies and scripted T.V. shows on the device over news, sports, and talk shows. The study also showed that the iPad is not necessarily replacing traditional T.V. watching, but instead is being used to watch their favorite programming when a T.V. is not available.

Ferguson and Perse (2000) used an online survey of 250 college students at two universities (one in the midwest and the second was located on the east coast) to explore the similar gratifications obtained between the World Wide Web and television. Among the comparable gratifications that this group of participants felt the internet provides in relation to television was entertainment, to pass the time, relaxation, social interaction, and information. However, this study also showed that the Web may not be as relaxing to use as traditional T.V. is.

Papacharissis and Rubin (2000) used the theory to examine audience's uses of the internet. The study surveyed a sample of 279 students in an introductory communication class at a large midwestern university about their internet use. The results found five motivations for the sample's use of the internet. First, was interpersonal utility, which included using the internet to help others, to participate in discussions, to belong to a group, among other factors. The second motivation was to pass time that included to occupy their time, to pass time when they are bored, and when they have nothing better to do. Third, was information seeking, that included looking for information online and because using the web is easier. Fourth, was convenience that included because you can communicate with family/friends, and because the internet is cheaper. The final motivation was entertainment.

While the uses and gratifications theory is a useful theoretical framework for this study, self-determination theory (SDT) can help provide additional analysis concerning the motivations and gratifications from consuming televised sport.

### *Self-Determination Theory*

According to the self-determination theory (SDT), people have intrinsic needs that include competence, autonomy, and relatedness (Deci & Ryan, 2011). “Competence refers to feelings of mastery and ability. Autonomy refers to feelings of control. Relatedness refers to feelings of connectedness with others” (Rogers, Strudler, Decker, and Grazulis, p. 28, 2017). This can be applied to the current study by examining the intrinsic needs sports viewers have when deciding to use online live streaming for sports content to satisfy their needs for sports entertainment.

Rogers et al. (2017) used SDT to examine how using different information-seeking technologies while watching a sporting event could impact the enjoyment of the event. A sample of 65 participants from a northeastern college were recruited to watch a ten-minute clip of a basketball game between two schools (California and Oregon). To make the viewing feel more realistic to watching an actual game, the footage was shown in a theater. While watching the footage, the participants were prompted to complete information-seeking tasks concerning the basketball teams. The tasks included searching for the California men’s basketball head coach, the year the venue where the game was being played was renovated, and to search for the California men’s basketball team schedule for the current season.

The participants used a California men’s basketball media guide, a smartphone, or a pair of Google Glass to search for the information. After the viewing of the footage was completed, they answered a questionnaire. The results showed that the technology used did not impact their enjoyment of the game directly, but the technology used did impact the enjoyment via feelings of competence and autonomy. The more they felt competent

and autonomous, the more they enjoyed the sporting event. Overall, participants felt more competent and autonomous using a smartphone than using Google Glass or the media guide provided. In addition, the researchers also concluded that because the technology was so new that this could have had a negative influence on the overall outcome. The researchers explained the reason there were not significant differences in relatedness in their study may be due to the setting since it was artificial and did not completely reflect a live game experience.

Further research in regard to the viewing of T.V. programming was conducted by Adachi, Ryan, Frye, McClurg, and Rigby (2017) that used three studies to investigate the motivation for sustained engagement with T.V. dramas by using SDT. The researchers developed a new assessment for their study based on SDT called the Assessment of Media Engagement and Satisfaction (AMES) to measure the variables. All items were assessed on a five-point scale. For study one, the sample included 190 undergraduate participants. Participants in a lab setting were randomly assigned to watch either the pilot episode of *Jessica Jones* or *Killer Women*, depending on which one the participant had not viewed previously. After viewing the episode, they answered the AMES. The results for study one found the descriptive process model developed predicted sustained engagement with the T.V. shows. The AMES variable explained the variance in the two sustained engagement outcomes (p.7). In addition, relatedness to the characters was another factor that predicted sustained engagement with the show and helped influence their intrinsic motivation to watch the next episode in the series.

For study two, the researchers wanted to replicate the findings from study one to help further offer credibility to the AMES. For study two, 150 undergraduate participants

were included; with the study procedures the same as in study one, with one difference, the controlling of a confounding variable, which was the attention required to view a show. Study one showed that the viewer needed more levels of attention to follow the plot of *Jessica Jones* than *Killer Women* required. The results replicated study one, even with the addition of controlling for the variable of attention requirements. Study two by offering similar results to study one helps to increase the confidence in the reliability of the model created according to the researchers.

For study three, the goal was to build upon study one and two, and to investigate the SDT-based descriptive process model of sustained engagement with T.V. dramas that people voluntarily watch on their own time in order to test the ecological validity of the model with viewers rating self-selected shows (p. 10). The sample consisted of 294 American T.V. viewers that were recruited via TurkPrime (a part of the Amazon Mechanical Turk platform). A list of 23 TV dramas for participants to choose from (e.g., *The Walking Dead*, *Breaking Bad*) was included to help determine the T.V. drama each participant was referring to when answering the survey. The participants were asked to indicate the shows they have watched within the last month that they have not finished watching the entire series of yet. This was important so that they could answer questions about their interest in continuing watching the show. AMES variables were measured as in study one and two, with the addition of a 10-item scale developed by Cohen (2001) to assess identification with the protagonist in the shows. The results for study three were consistent to the two previous studies, thus providing additional evidence to support the reliability of their model. In total, 19 dramas were reported on in study three.



Overall, for these three studies, “the eudemonic themes afforded by the shows was a particularly robust and consistent predictor of sustained engagement in these dramatic shows (p. 13).” These themes reliably predicted relatedness with characters and sustained engagement in all three studies. The researchers stated that meaningful, thought provoking, and moving storylines helped viewers connect with characters and enhance their intrinsic motivation for the shows. In addition, novelty and surprise also helped to predict their sustained engagement across the three studies.

Oliver, Bowman, Woolley, Rogers, Sherrick, and Chung (2015) conducted an experiment to examine individual’s perceptions of enjoyable (games simply played for fun) and meaningful (games that offer thought-provoking ideas concerning issues of the human condition) video games using SDT. The sample consisted of 512 participants that answered an online survey that were recruited from online gaming venues including Gamespot, Game Informer, Playstation Community Forums, Xbox forums, Facebook, Twitter, a professional listserv (Communication Research Theory Network), and invitations forwarded to other individuals via the participants in the study. The age range for participants were 18-56 years old. On average, the sample reported playing video games an average of seven years. Ten recipients were randomly selected and won a \$50 Amazon gift certificate for their participation.

The results showed that enjoyable games were recalled more by the participants than games that offered meaningfulness. Also, different attributes of a video game seemed to influence the enjoyment or meaningfulness of the game for the participants. Increased feelings of autonomy and competence were associated with enjoyment, while increased feelings of relatedness and insight were associated with appreciation. Overall,

the researchers concluded that games that were enjoyable were more accessible than those that offer a meaningful experience, although, these types of games do exist.

### *Hypothesis and Research Questions*

Uses and gratifications is a useful framework for this current study because this theory has been used in previous studies to examine the gratifications received from television content by consumers. This research applies the theory to test the streaming of live sports content specifically. The current study hopes to provide more research into the viewing of sports content and to offer future researchers a starting point in which they can conduct their own research into this topic and expand upon the results offered in this study.

Live streaming of sports online provides viewers the ability to watch at home on streaming boxes including Roku and Apple TV, or while they are on the go on mobile devices including apps on their mobile smartphones or tablets. Therefore, Hypothesis 1 examines the convenience of being able to watch while on the go.

Hypothesis 1: Perceived convenience positively affects viewer's frequency of use of online live streaming sports content.

When watching a live event, the viewer wants to know that he/she can watch the sporting event without any delay or interruption of service. The viewing quality of the content is important to the streaming viewer, especially during exciting moments of games, such as the final touchdown drive during a Super Bowl. Viewers want to know that they can depend on online live streaming sports content.

Hypothesis 2: Perceived viewing quality positively affects viewer's frequency of use of online live streaming sports content.

Previously discussed research from Billings and Rühley (2013), Hu and Tang (2010), and in some respects Gantz, Wang, Paul, and Potter (2006), showed that one main reason media consumers watch sports is because of the entertainment value of sport programming. They receive enjoyment from watching sporting events, which is why Hypothesis 3 examines the enjoyment that is obtained from viewing sporting events.

Hypothesis 3: Perceived enjoyment positively affects viewer's frequency of use of online live streaming sports content.

When watching online live streaming sports content, viewers can obtain social benefits. These include feeling that they “belong to a specific group, or by actively socializing when viewing mobile television content (Hino, 2015, p. 75-76).” Other social benefits could include watching the game with their friends or discussing the game in real time on social media apps or by text messaging. For this study, social benefits are operationalized to include gratifications obtained from interacting and socializing with family and friends while watching sports T.V. content.

Hypothesis 4: Social benefits positively affects viewer's frequency of use of online live streaming sports content.

Streaming sports online is not free. There are costs associated with viewing content online that includes the cost of streaming devices/mobile smartphones, and subscription services that one must subscribe to in order to watch content. With the cost of accessing streaming sports content an important factor in deciding to use online streaming, Hypothesis 5 examines the costs associated with viewing streaming sports online.

Hypothesis 5: Perceived viewing costs positively affects viewer's frequency of use of online live streaming sports content.

The behavioral intentions for streaming consumers are another factor in their use of streaming sports services. This includes their general interests in using the services, their possible increase in usage, and their intention to recommend others to use these services.

Hypothesis 6: Perceived viewer intentions positively affects the frequency of use of online live streaming sports content.

With the various ways to access sports content, including both traditional and new digital devices, obtaining data on which delivery method is used overall, is important as more options are becoming available to view sports content. As with viewing sports overall, there are multiple choices when accessing streaming sports content. With streaming offering fans a new option for watching sports, which content delivery methods (television, desktop/laptops, smartphones, and tablets) are used by consumers to access sports is important data to gather. This data could help provide a better understanding concerning which delivery method users prefer: in a more traditional manner such as streaming on a big screen television, or new methods including on mobile devices and smartphones, which are smaller screens and are more mobile.

RQ 1: Will the delivery method selected affect a viewer's use of online streaming of sports content?

While obtaining data on which delivery methods are being used for streaming sports content, it is also important to examine which sports are being streamed. A particular sport may be streamed more than others, while some sports may not be streamed at all.

RQ 2: Which sport is watched the most when using online streaming for live sports content?

With sports having a wide range of fans, it is important to obtain demographic data on how various groups are adopting streaming sports online. There may be different adoption rates depending on different demographic details.

RQ 3: Do demographic differences predict variation in the use of online live streaming of sports content?

## CHAPTER III - Method

This chapter will explain the procedure used to obtain data including the use of a pretest, survey instrument creation based on prior research, how participants were recruited, how the survey was distributed, and the procedures used to analyze the data.

### Procedure

#### *Pretest*

A pretest ( $N = 30$ ) was conducted on Amazon Mechanical Turk (Amazon M Turk) to test the understanding of the wording and reliability of the survey instrument. Each participant received monetary compensation for participation in the pretest. After analyzing the results of the pretest, minor wording adjustments were made to the survey. After the wording adjustments, the researcher posted the updated survey instrument onto the Amazon M Turk platform.

#### *Survey*

The current study employed a national survey hosted on Qualtrics to obtain data on a sample of ( $N = 300$ ). The survey was accessed by participants on the Amazon M Turk platform during a two-day period in March 2018. The participant's ages were 19-73 years old. Participants were offered a monetary reimbursement in exchange for their participation in this study.

#### *Survey Instrument*

This study based the hypothesis and the scale used to obtain data for the hypothesis for the survey from Hino (2015) and modified it for relevance to this current study. The first page of the survey provided an overview of the study and instructions.

This page also included information regarding consent to participate. Participation was voluntary.

The first section examined if perceived convenience positively affects viewer's use of online live streaming sports content (Hypothesis 1). For the following statements, the survey utilized a five point-Likert scale with 1 representing strongly disagree and 5 representing strongly agree. The statements for this section included:

- Compared to the time I have to invest in watching sports, the use of online live streaming for sports content is beneficial to me.
- I find it convenient to watch live sports content via live streaming.
- I find it convenient to watch live sports online on any device.
- I find it convenient to use live streaming for sports anywhere including indoors or outdoors.

The second section asked if the perceived viewing quality positively affects viewer's use of online live streaming sports content (Hypothesis 2). A five point-Likert scale with 1 representing strongly disagree and 5 representing strongly agree was used for this section. The statements included:

- I think online live streaming for sports content provides high quality content.
- Online live streaming for sports content is free of delay, jitter, and buffering.
- I think online live streaming for sports content provides better quality service than cable/satellite.

Section three examined Hypothesis 3 that states, "Perceived enjoyment positively affects viewer's use of online live streaming sports content." A five point-Likert scale with

1 representing strongly disagree and 5 representing strongly agree was used for this section to obtain data. The statements included:

- I think online live streaming of sports content is entertaining.
- I find using online live streaming of sports content enjoyable.

The next section examined if social benefits positively affects viewer's use of online live streaming sports content (Hypothesis 4). A five point-Likert scale with 1 representing strongly disagree and 5 representing strongly agree was used for this section to obtain data.

The statements included:

- My friends think I should use online live streaming for sports content.
- Most of my friends use online live streaming for sports content.
- People whose opinions I value prefer online live streaming for sports content.

Section five examined if perceived viewing costs positively affects viewer's use of online live streaming sports content (Hypothesis 5). A five point-Likert scale with 1 representing strongly disagree and 5 representing strongly agree was used for this section to obtain data. The statements included:

- I think online live streaming services that offer sports content are reasonably priced.
- I have no problem paying money to watch higher quality content on online live streaming services that provides sports content.
- I think the cost of using online live streaming services that offer sports content will make traditional television watching less entertaining.
- I think online live streaming services for sports content should offer more pricing options.



- I think the cost of online live streaming sports content provides me a better financial value than traditional cable/satellite television.

Section six measured Hypothesis 6 that investigated if perceived viewer behavioral intentions positively affect the use of online live streaming sports content. A five point-Likert scale with 1 representing strongly disagree and 5 representing strongly agree was used for this section to obtain data. Statements included:

- My general intention to use online live streaming for sports content is very high.
- I recommend others use online live streaming for sports content.
- I intend to increase my use of online live streaming for sports content in the future.
- Whenever possible, I intend to use online live streaming for sports content.

With this study examining the streaming of sports content online, it is important to collect data on which content delivery methods the participants are using. The researcher created a set of questions to help explore this topic further. RQ1 helps to provide data on this subject. RQ1 asks, “Will the delivery method selected affect a viewer’s use of online streaming of sports content?” To obtain data for RQ1, multiple questions were asked to the participants. The first question is included below.

“Please indicate how often you use a cable/satellite T.V. subscription to watch sports content.”

- Never
- Once a week
- Twice per week

- Three times per week
- Four times per week
- Five times per week
- Six times per week
- Seven or more times per week

In addition to providing data for RQ1, the next question also served as the dependent variable that was measured. “Please indicate how often you use online live streaming for sports content.”

- Never
- Once a week
- Twice per week
- Three times per week
- Four times per week
- Five times per week
- Six times per week
- Seven or more times per week

The third question asked the participants “During a typical game, which media device do you use for viewing sports content?”

- Television/Smart T.V.
- Desktop/Laptop (PC/MAC)
- Smartphone (iPhone, Android, etc.)
- Tablet (iPad, Kindle, etc.)

Question four in this section was a follow up to the previous question, and asked, “When using the selected media device, how are you accessing sports content?”

- Cable/Satellite T.V. subscription and I watch the games live
- Cable/Satellite T.V. subscription and I watch the games on-demand
- Online live streaming service or app (DirecTV Now, Sling TV, YouTube T.V. etc.)
- Streaming Box (Roku, Apple T.V., Amazon Fire Stick, etc.)

This next section of the survey was used to obtain data on RQ2, which asked, “When using online streaming for live sports content, which sport do you watch the most?” The list of sports the participants could select included:

- College Football
- College Basketball
- College Baseball
- College Softball
- Other College Sports
- NFL (Professional Football)
- NBA (Professional Basketball)
- NHL (Professional Hockey)
- MLB (Professional Baseball)
- MLS (Professional Soccer)
- Tennis
- Olympics

- Golf
- NASCAR/Auto Racing
- Other Sports
- My favorite sport isn't available to stream live online
- I don't watch online streaming

The final section asked the participants demographic information (RQ3). The questions asked are included below.

- What is your age?
- What is your sex?
  - Male
  - Female
- What is your race?
  - White
  - Black or African American
  - Hispanic or Latino
  - American Indian or Alaska Native
  - Asian
  - Native Hawaiian or Pacific Islander
  - Other
- What state are you participating from? (Participants selected their state from a drop-down list of U.S. states and territories including Washington, D.C.)
- What was your entire household income in the past year?
  - Less Than \$25,000

- \$25,000 to \$34,999
  - \$35,000 to \$49,999
  - \$50,000 to \$74,999
  - \$75,000 to \$99,999
  - \$100,000 or More
  - Prefer Not to Answer
- What is your highest level of school you have completed or the highest degree you have received?
  - Less Than High School
  - High School Graduate (high school diploma or equivalent including GED)
  - Some College, but No Degree
  - Associate Degree (2-year)
  - Bachelor's Degree (4-year)
  - Master's Degree
  - Doctoral Degree
  - Professional Degree (JD, MD)
  - Prefer Not to Answer

### *Analysis*

This study was IRB approved by a local review board. After the data was collected, data analysis was conducted using the Statistical Package for the Social Sciences (SPSS). See Appendix A for a copy of the survey instrument.

## CHAPTER IV – Results

### *Descriptive Statistics of the Sample*

A U.S. national sample ( $N = 300$ ) of participants was commenced on the Amazon M Turk platform to obtain data. Of the sample, males included 59% ( $N = 177$ ) of the sample and females were 41% ( $N = 123$ ). The average age of the participants was 33.3 years old, with a range of 19-73 years old ( $M = 33.37$ ,  $SD = 9.793$ ). Due to the wide range in age, the participants were recoded into three age groups in order to analyze the descriptive data (See “other findings” section) among generations and examine similarities/differences among generations. Information for which ages to include in each age group was from 2018 Pew Research Center data (Dimock, 2018). Due to a low sample number of six participants, Generation Z (19-21 years old) and Millennials (22-37 years old) were combined into age group one. Generation X (38-53 years old) represented age group two, and Baby Boomers (54-72 years old) and the Silent generation (73-90 years old) were combined into age group three, due to only one member of the Silent generation participating in this study.

The sample included 68.7% Whites ( $N = 206$ ), Black/African American 12.3% ( $N = 37$ ), Asian 9.7% ( $N = 29$ ), Hispanic/Latino 7.7% ( $N = 23$ ), American Indian/Alaska Native .7% ( $N = 2$ ), Other .7% ( $N = 2$ ), and Native Hawaiian/Pacific Islander .3% ( $N = 1$ ). California (12.3%) included the largest number of participants, followed by New York (12%), Florida (7%), and Illinois (5%). The other states represented less than 5% of the sample size. Of the sample, household income of \$50,000 to \$74,999 represented 24% of the sample, followed by \$35,000 to \$49,999 (19.3%), and \$25,000 to \$34,999 (16%). The rest of the household income levels represented less than 15% of the sample

size. The household income levels ranged from \$25,000 to \$100,000 or more. Preferred not to answer was 1.3% of the sample. The sample included 35.3% with a bachelor's degree, followed by 24 % stating they have some college, but no degree, participants with an associate degree 13.3 %, master's degree recipients represented 12.3%, high school graduates were 10.7%, participants with a professional degree (JD, MD) were 1.7% of the sample, participants with a doctoral degree was .3%, less than high school 1%, and .7% preferred not to answer.

### *Findings*

First, the reliability of each hypothesis on the survey instrument was measured using Cronbach's alpha. The minimum acceptable value of Cronbach's alpha for reliability is .70 (Hair, J. Anderson, R., Tatham, R., Black, W., p. 641, 1995, Nunnally, 1978, Roy, S., p. 883, 2009). For Hypothesis 1 the reliability was .82. The reliability of Hypothesis 2 was .81. Hypothesis 3 had a reliability of .81. For Hypothesis 4 the reliability was .82. Hypothesis 5 had a reliability of .76. Finally, Hypothesis 6 had a reliability of .88. After reliability was established, the data was tested using correlation and regression analysis.

### *Hypothesis Testing*

A Spearman correlation was run to assess the relationship between the hypotheses and the streaming of online live sports content. The results showed that there was a moderate positive correlation between perceived viewer intentions and the streaming of online live sports content,  $r = .588, p < .001$ . The assumption of normalcy was tested on the data. The Shapiro-Wilk Test results showed that the data was not normally distributed  $p < .001$ .

There was a moderate positive correlation between viewing costs and the streaming of online live sports content,  $r = .418, p < .001$ . The assumption of normalcy was tested on the data. The Shapiro-Wilk Test results showed that the data was not normally distributed  $p < .001$ . There was a strong positive correlation between perceived convenience and the streaming of online live sports content,  $r = 1.000, p < .001$ . The assumption of normalcy was tested on the data. The Shapiro-Wilk Test results showed that the data was not normally distributed  $p < .001$ . There was a small positive correlation between social benefits and the streaming of online live sports content,  $r = .318, p < .001$ . The assumption of normalcy was tested on the data. The Shapiro-Wilk Test results showed that the data was not normally distributed  $p < .001$ . There was a strong positive correlation between perceived enjoyment and the streaming of online live sports content,  $r = .662, p < .001$ . The assumption of normalcy was tested on the data. The Shapiro-Wilk Test results showed that the data was not normally distributed  $p < .000$ . There was a small positive correlation between viewing quality and the streaming of online live sports content,  $r = .314, p < .001$ . The assumption of normalcy was tested on the data. The Shapiro-Wilk Test results showed that the data was not normally distributed  $p < .001$ . After the correlation reported that there was a positive correlation between each hypothesis and the streaming of online live sports content, each hypothesis was included as a part of a regression model and was tested.

A multiple regression was carried out to investigate whether perceived convenience, perceived viewing quality, perceived enjoyment, social benefits, perceived viewing costs, and perceived viewer intentions could significantly predict the participants' use of online live streaming for sports content. The results of the regression



indicated the model explained 23.4% of the variance ( $R^2 = .234$ ) and the model was a significant predictor of the use of online live streaming for sports content,  $F(6, 293) = 14.91, p = .001$ .

Overall, viewer intentions, perceived convenience, and viewing costs contributed significantly to the model. For every one-unit increase of viewer intentions there is a .761-unit increase in online live streaming of sports content  $b = .761, t(299) = 3.954, \beta = .317, p = .001$ .  $\beta$  interpretation: For every one-standard deviation increase in viewer intentions there is a .317 standard deviation increase in online live streaming of sports content. For every one-unit increase of perceived convenience there is a .398-unit increase in online live streaming of sports content  $b = .398, t(299) = 1.962, \beta = .143, p = .05$ .  $\beta$  interpretation: For every one-standard deviation increase in perceived convenience there is a .143 standard deviation increase in online live streaming of sports content. For every one-unit increase of viewing costs there is a .299-unit increase in online live streaming of sports content  $b = .299, t(299) = 1.760, \beta = .122, p = .07$ .  $\beta$  interpretation: For every one-standard deviation increase in viewing costs there is a .122 standard deviation increase in online live streaming of sports content. While viewer intentions and perceived convenience are within range of a significance level of .05, viewing costs ( $p = .07$ ) is just outside the range, but is within range of a significance level of .10.

For every one-unit increase of social benefits there is a .171-unit increase in online live streaming of sports content  $b = .171, t(299) = 1.266, \beta = .078, p = .206$ .  $\beta$  interpretation: For every one-standard deviation increase in social benefits there is a .078 standard deviation increase in online live streaming of sports content. For every one-unit increase of perceived enjoyment there is a -.269-unit decrease in online live streaming of

sports content  $b = -.269$ ,  $t(299) = -1.261$ ,  $\beta = -.094$ ,  $p = .208$ .  $\beta$  interpretation: For every one-standard deviation increase in perceived enjoyment there is a  $-.094$  standard deviation decrease in online live streaming of sports content. For every one-unit increase of viewing quality there is a  $-.025$ -unit decrease in online live streaming of sports content  $b = -.025$ ,  $t(299) = -.172$ ,  $\beta = -.011$ ,  $p = .864$ .  $\beta$  interpretation: For every one-standard deviation increase of viewing quality there is a  $-.011$  standard deviation decrease in online live streaming of sports content. The final predictive model was: Live streaming of sports content =  $-1.065 + .143(\text{Perceived Convenience}) - .011(\text{Viewing Quality}) - .094(\text{Perceived Enjoyment}) + .078(\text{Social Benefits}) + .122(\text{Viewing Costs}) + .317(\text{Viewer Intentions})$ . See Appendix B for a copy of Table 1 that contains the results of the regression analysis.

#### *Other Findings*

In addition to the hypotheses results, this study also provides supplementary data to offer more insight into all participants' use of streaming for sports content. To help establish a contrast between traditional cable/satellite television and streaming sports online, the participants were asked how often per week they use a cable/satellite T.V. subscription to watch sports content. The results showed that 23% of the sample stated they "never" use cable/satellite T.V. to watch sports, 21.7% stated they use cable/satellite "twice per week," "once per week," received 19.7%, and "three times per week," was selected by 15.3% of the participants. The remaining options received 7.7% or less. Analysis of variance showed that between the sexes, how often per week the participants use a cable/satellite T.V. subscription to watch sports content did not differ significantly  $F(1) = .1952$ ,  $p = .163$ ,  $\eta^2 = .007$ .

Of the males in age group one (Generation Z and Millennials), 24.6% stated they use cable/satellite “twice per week,” followed by “never,” and “once per week” each received 19.7%. “Three times per week” received 15.5%. The remaining percentages were less than 10%. For age group two (Generation X), 37% said they “never” use cable/satellite T.V. per week to watch streaming sports content. “Once per week,” “twice per week,” and “three times per week” all received 18.5% each. Age group three had a three-way tie of 25% for “never,” “once per week,” and “five times per week.” “Three times per week” and “four times per week” received 12.5% a piece.

For females in age group one, 26.1% said they “never” use a cable/satellite subscription to view sports content, 22.7% said “once per week” or “twice per week.” For age group two, 28% stated they use traditional television services, 16% said “never” or “twice per week.” “Four times per week” or “seven or more times per week” each received 12%. For age group three, 40% said “four times per week” while 20% said “never.” The remaining items received 10% each.

For the dependent variable, that asked participants how often per week they use online live streaming to watch sports content, 23% of the participants stated they use streaming “twice per week,” while “once per week” received 18.3%. “Three times per week” received 18%, “four times per week” was selected by 13.3% of the participants, and “five times per week” received 13%. The remaining options received 7.3% or less. Analysis of variance showed that between the sexes, how often per week the participants use online live streaming to watch sports content did not differ significantly  $F(1) = 1.150$ ,  $p = .285$ ,  $\eta^2 = .004$ .

For males in age group one, there was a three-way tie of 27% for “twice per week,” three times per week,” and “five times per week.” “Once per week” received 22% and “four times per week” received 20%. Males in age group two stated they use online streaming “once per week” 25.9%, “twice per week” 22%, and “four times per week” 14.8%. The remaining items received under 12% respectively. For males in age group three, 62.5% stated they use online streaming “once per week.”

Females in age group one said they use online streaming “twice per week” 32%, “three times per week” 19.3%, “four times per week” 17%, and “once per week” 14%. Age group two stated they use streaming “once per week” 28%, “twice per week” 24%, and “five times per week” 16%. For age group three, “three times per week” received 40%. “Once per week” received 20%.

Next, the participants were asked which media device they use for viewing sports content. A television/Smart T.V. received 50.3%, desktop/laptop 38%, smartphone (iPhone, Android, etc.) 7.7%, and tablet 4%. Analysis of variance showed that during a typical game, the media device used for viewing sports content between the sexes did not differ significantly  $F(1) = .511, p = .475, \eta^2 = .002$ .

For males in group age one, desktop/laptop (PC/MAC) received 48.6% and television/smart T.V. received 41.5%. In males age group two, television/smart T.V. received 56% and desktop/laptop received 37%. In males age group three, television/smart T.V. was the clear device of choice with 88% stating it as their first option for viewing.

For females in age group one, 55% said they use television/smart T.V., followed by desktop/laptop with 30%. For age group two, television/smart T.V. was the favorite

with 64% saying their use these devices, desktop/laptop received 16%. Smartphones received 12%. Finally, for age group three, television/smart T.V. received 60% and desktop/laptop received 40%.

After answering which device they use, the participants were then asked how they access sports content when using the device they selected in the previous question. Of the sample, 54% stated they use an online live streaming service or app (DirecTV Now, Sling TV, YouTube TV, etc.), 24.3% said they use a cable/satellite T.V. subscription and they watch the games live, a streaming box (Roku, Apple TV, Amazon Fire Stick, etc.) received 15.7%, and cable/satellite TV subscription and they watch the games on-demand received 6%. Analysis of variance showed that between the sexes after they select a media device, how they access sports content to use online live streaming did not differ significantly  $F(1) = .920, p = .338, \eta^2 = .003$ .

For males in age group one, they said they use online live streaming services/apps 58%, followed by “cable/satellite T.V. subscription and I watch the games live” 22%, streaming box 17%, and “cable/satellite T.V. subscription and I watch the games on-demand” 3.5%. Group two said online live streaming services/apps 56%, “cable/satellite T.V. subscription and I watch the games live” 26%, streaming box 15%, and “cable/satellite T.V. subscription and I watch the games on-demand” 4%. For males age group three, “cable/satellite T.V. subscription and I watch the games live” received 38%. Online live streaming service/app and streaming box each received 25%. “Cable/satellite T.V. subscription and I watch the games on-demand” received 13%.

For females in age group one, online live streaming services/app received 58%, “cable/satellite T.V. subscription and I watch the games live” 22%, and streaming box

12%. For age group two, online live streaming services/app received 44%, “cable/satellite T.V. subscription and I watch the games live” 32%, and streaming box 20%.

“Cable/satellite T.V. subscription and I watch the games on-demand” received only 4%.

For age group three, “cable/satellite T.V. subscription and I watch the games live” received 50%, “cable/satellite T.V. subscription and I watch the games on-demand” and streaming box each received 20%. Online live streaming services/app received 10%.

Finally, all respondents were asked which sport they watch the most when using online streaming for live sports content. First, the NFL (National Football League) received 26.7%, NBA (National Basketball Association) was second with 18%, college football 12.7%, MLB (Major League Baseball) 12%, college basketball 8%, NHL (National Hockey League) 6%, other sports 4%, tennis 3.7%, MLS 3%, and Olympics 2%. The remaining sports received 1% or less. “My favorite sport isn’t available to stream live online” received 1%, and “I don’t watch online live streaming” received 0.3%. Analysis of variance showed that between the sexes, which sport they watch when using online live streaming did not differ significantly  $F(1) = .1.848, p = .175, \eta^2 = .006$ .

For all male respondents in group one, the NFL (27%) and the NBA (26%) almost tied for the top spot when asked which sport they watch the most when using online streaming for live sports content. College football was third with 12%. MLB received 9%. The remaining sports received single digit responses below 8%. For all male respondents in age group two, MLB was the favorite with 26%, NFL 22.2%, college football 11.1%, and the remaining sports received less than 10%. For all male

respondents in the third age group, the NFL, college football, and other sports were tied with 25% each, and NHL and MLB were tied at 13%.

For all female respondents in age group one, NFL was the clear favorite with 30%, followed by college football 13%, and MLB with 11.4%. Next, college basketball and NBA each received 10.2%. For all female respondents in age group two, they stated they stream the NFL the most at 24%, followed by MLB/NBA with 16% each. College football and college basketball received 12% each. For all female respondents in the third age group, college football, college basketball, and the NFL each received 20%.

## CHAPTER V – Discussion

### *Hypothesis*

This study examined the gratifications that are obtained by sports fans from using online live streaming for sports content. The study found that Hypothesis 6, that examined perceived viewer intentions ( $\beta = .317, p < .001$ ) was significant, and included the strongest influence in the participants decision to use online live streaming for sports content. It is understandable that behavioral intention would rank the highest, as the participant must have an interest in deciding to use online live streaming before deciding on other factors that may influence their decision to use these services. If he/she does not have an interest in using these services, then the possibility for the other factors that may have an influence on their decision to use the services may not occur. For the participants to be interested in using these services, he/she must feel that using these services will provide gratifications that they may otherwise not be able to obtain from other sources of media. Self-determination theory explains that people have intrinsic needs that include competence, autonomy, and relatedness (Rogers et. al., p. 28, 2017). For one to have an interest in using live streaming, he/she must have a basic understanding of how these services work. Therefore, making them feel that they have the competence and autonomy to use these services. The more a user interacts with these services, and find them to be beneficial, they may increase their usage of these services, thus obtaining a possible increase in gratifications obtained from using online live streaming for sports content.

Following Hypothesis 6 that surveyed the behavioral intentions of using online live streaming, it is understandable that Hypothesis 1 that examined the perceived convenience of using online live streaming would be significant and include the second



highest beta coefficient ( $\beta = .143, p < .05$ ). If one is interested in using an online streaming service, there is a probability that there is a relationship between their behavioral intention to use these services and the convenience these services offer. The results are similar to Lewis et al. (2017) that showed that participants enjoy the convenience of accessing sports on multiple devices. Online streaming services could offer the participants a possibly more gratifying user experience due to the ability of watching sports content on various portable mobile devices, computers, and on SmartTVs that provides them the option to view on a larger screen in their own home. If a participant has an intention to use these services because of the convenience, one can assume those that understand the technology more may find using these services more convenient, and thus obtain more gratifications than one that does not have a basic understanding of these services as the SDT explains.

While the viewer's intentions to use these services may be the most important factor in determining their use of online services, the price of streaming T.V. providers may be a factor in their continued use of these platforms once they have decided to use an online television service. With more live and on-demand video content being available now more than ever, the financial value that participants feel these services provide is an additional issue that may influence their decision to purchase subscriptions to these products.

Hypothesis 5 examined the perceived viewing costs of online live streaming services and how the cost affects their use of these live sports video services ( $\beta = .122, p < .07$ ). For the participants, the overall price of the services and the financial gratifications that using these online platforms provide may be an important aspect of

their decision-making process when deciding to continue to use these streaming television providers. A potential subscriber may be more willing to subscribe to these services long term if he/she feels the streaming service offers a higher level of gratifications than someone that receives a lower level of satisfaction. For participants that feel the amount of gratifications obtained is not enough to subscribe/continue their subscription, they may feel that using these services are not financially gratifying. Previous studies have shown the price influences consumer's decision to adopt and subscribe to online streaming services (Constantiou, 2009, Hino, 2015).

Hypothesis 4 surveyed the social benefits of online live streaming for sports content ( $\beta = .078, p < .206$ ). Unlike other T.V. genres, viewing live sporting events is an activity that many enjoy watching with a group of family and friends. While in the past one would watch a game on a big screen T.V., with the advancement of mobile technology, watching sports is now a more intimate experience as one can stream the game live on a mobile app on a smartphone or tablet. With watching sports now less of a group experience than in the past, this may help to explain why social benefits were not a significant factor in their decision to use live streaming for sports.

Hypothesis 2 ( $\beta = -.011, p < .864$ ) examined the perceived viewing quality and the results showed that viewing quality may negatively affect a viewer's use of online live streaming for sports content. For the participants, the viewing quality of streaming services is important to them and helps to provide a gratifying experience for them when they watch live sporting events. Unlike with cable/satellite television, streaming video could be delayed, buffer, and have poor signal quality due to the speed of the internet connection. Some of these viewing problems may be due to the speed of the internet

service they subscribe to from an internet service provider and not necessarily from the OTT service itself. Studies from Baccarne, Evens, and Schurrman (2013) and Logan (2011) offer similar results to this study concerning the viewing quality of streaming video and how it affects viewer's use of online video content.

Finally, Hypothesis 3 examined the perceived enjoyment of using online live streaming and the results showed that perceived enjoyment negatively affects a viewer's use of online live streaming ( $\beta = -.094, p < .208$ ). The previous variables discussed may have an overall influence on their enjoyment of online streaming, specifically the variables of viewing quality and costs. If the consumer feels that online live streaming does not provide an enjoyable experience possibly due to low viewing quality, this may lead to him/her also feeling that the price of these services and the gratifications (or lack therefore) it provides are not worth paying for. However, more research is needed in this area in order to determine as to why they responded this way in regard to the enjoyment of online live streaming for sports content.

While some of the examined hypotheses were not significant, this does not necessarily mean they are not important factors in deciding if a participant will use online streaming for sports content. When deciding to use online streaming, their intention to use these services and the convenience they provide may have more of an influence than hypothesized. These factors may outweigh other aspects such as the enjoyment or viewing quality of these services. If he/she does not have an intention to use these services, then the other factors examined may not matter or influence their decision. If one does not have an intention or interest to at least use or try a service, then the other variables will not influence their decision to use these services. It may be that only after

he/she has an intention to use these services that the other factors may then influence their decision to use online live streaming. In addition, there may be other factors involved in their decision to use online streaming services that were not measured in this current study.

### *Traditional Cable and Streaming Discussion*

While online live streaming of sports content continues to increase, the results showed overall, that streaming has a small advantage over traditional cable/satellite television. While 23% stated they never use cable/satellite T.V. subscriptions to watch sports, the remaining results were similar when asked how often per week they use online live streaming sports content. Of the sample, “once per week” received 19.7% for cable/satellite and 18.3% for streaming, 21.7% said they use cable/satellite “twice per week,” with 23% stating they use streaming “twice per week.” “Three times per week” was 15.3% for cable/satellite and 18% for streaming. While the difference in usage is small, overall, the usage of streaming seems to be increasing, while traditional cable/satellite usage is on the decline for streaming live sports video content.

Among males, regardless of the age group, streaming was selected more often than cable/satellite services, even among older generations. Not surprisingly, streaming seemed to be more popular with all the participants that were represented in age group one that consisted of all Generation Z and Millennials in the study. One surprising statistic was that among all the participants in the study that were included in age group two (Generation X) said they “never” (37%) use cable/satellite T.V. subscriptions to watch sports content. With many in Generation X not being digital natives, while almost all of Generation Z and Millennials having used technology in their childhood and into

adulthood, this was surprising to find that a majority of Generation X would say they never use cable or satellite to view sports.

For females in group one, they seem to be more interested in streaming than their male counterparts, as cable/satellite use received 26% saying they “never” use these services versus 19% for males, but as with males, group one females are more interested in streaming than older generations. Females in age group three seem to be more even on their use of cable/satellite and streaming as 40% said they use cable/satellite “four times per week,” and 40% said they use streaming “three times per week.”

Regardless of how viewers access sports, the television/Smart T.V. is still the majority option when viewing sports content over other devices overall. The results showed that the T.V. is still the main source of viewing for both males and females of all age groups, which is a circumstance that is unlikely to change in the future, as users are able to access streaming content on their televisions via apps and streaming boxes. Overall, the participants showed a large usage of online streaming services with 54% of the sample stating they use an online streaming service or app to view sports, with cable/satellite subscription receiving only 24.3%. This result shows the popularity of streaming services increasing as a majority of the sample stating they subscribe and/or use these services over cable. If this trend continues, the “cord cutting” of cable/satellite television will become an increasing concern to traditional video providers.

Among males and females of age group one and two, streaming services were the majority source of how participants accessed sports content. However, among males and females in age group three, cable was their top choice, which is understandable

considering they are older and may not be as knowledgeable about these new online only services.

The NFL, NBA, college football, and MLB receiving the largest percentage of viewership is not surprising since these are the most watched televised sporting events and leagues in the U.S. With the growing popularity of streaming services, the popularity of these sports may continue to increase, as fans will have multiple ways to watch their favorite sports. In addition, they can receive more information on their favorite sports as the web offers the option of additional video coverage of sporting events.

The popularity of the NFL, NBA, MLB, and college football as some of the top sports to stream remained fairly consistent among all demographics of males and females. The only exception were males in age group three that selected “other sports” in addition to college football and the NFL, and females in age group three that said college basketball along with college football and the NFL as their most popular sports to stream.

#### *Limitations and Future Research*

With survey research there is the possibility of self-report bias. Future scholars should consider a mixed-method approach that contains a survey and interviews with a sample that could possibly provide more through discussions of the research topic. In addition, future scholars should consider multiple approaches in obtaining survey data that includes online and offline methods in order to obtain a wider sample. Obtaining participants online on only one platform could limit the researcher’s access to a wider range of survey participants that may not participant on online platforms such as Amazon M Turk.

The data for this study was obtained before ESPN introduced the ESPN + online streaming service. Future studies should take into consideration this new streaming service and how it could influence sports consumers' interest in viewing sports via streaming since ESPN is the leader in sports programming.

Due to a lower than acceptable reliability score, a third item on the survey for Hypothesis 3 was removed to obtain an acceptable reliability score. To increase the reliability score for Hypothesis 5, two additional statements were added. Future studies should consider adding multiple items on a survey instrument in order to increase the reliability.

### **Conclusion**

The purpose of this study was to explore the gratifications that are obtained by sports fans from using online live streaming for sports content. The results showed that overall; the viewer's intentions to use online live streaming may be the most important factor when deciding to use these services. However, other factors may possibly influence them to continue to use these services once he/she has decided to use online live streaming platforms. The results of this study helps to provide more insight into the factors that influence sports fans interest in streaming live sports online. This study can help provide the media industry with a better understanding of how consumers think and the thought process that is involved in their decision to use online live streaming for sports content. In addition, this study offers future researchers a starting point on developing their own research into this topic as this study provides them with possible hypotheses they can expand on and additional research questions they can use to help to further the knowledge on this subject.

Online live streaming is growing as an alternative to traditional cable/satellite television and while usage of live streaming is increasing, traditional cable/satellite services are still used. However, streaming usage is increasing while cable usage is in decline. There was interest in streaming online among all generations, especially younger generations, and this should be of concern to the traditional cable/satellite industries concerning their long-term future as a profitable and competitive business.

Regardless of how the participants' access sports content, the television is still the overall favorite device used to access the live content. With increased technology and new ways to access sports content via smartphones and mobile tablets, the results showed the participants still enjoy the experience that watching on a large screen T.V. provides over other screens. However, among younger generations there could be a shift occurring as younger males and females showed more interest in streaming on mobile devices.

The results showed that no matter how they access sports content and on the device they choose to use to watch, the most popular U.S. leagues remain consistently as the most popular to view. According to the results of this study, the NFL, NBA, MLB, and college football will remain the most popular viewed sports into the future whether cable stays competitive or if streaming becomes the first option to watch live sports. These sports will still be in high demand, and if streaming services can provide a better viewing experience for these sports over cable; these online platforms will have a competitive advantage to traditional cable service.



## APPENDIX A – Survey

Dear Participant,

I would like to ask you to consider participating in a study. The purpose of this study is to gather data concerning the adoption and use of online live streaming services for viewing sports content. Some of these providers include: Fubo TV, DirecTV Now, Hulu TV, Playstation Vue, SlingTV, and YouTube TV. Completion of the questionnaire should take no more than ten or fifteen minutes. All data collected will be anonymous to the researcher. Please do not put your name or any other identifying information on the questionnaire. Any information inadvertently obtained during the course of this study will remain completely confidential. Participation in this project is completely voluntary. Please feel free to decline participation or to discontinue participation at any point without concern over penalty, prejudice, or any other negative consequence. Data will be aggregated and summary reports will be submitted by the researcher for publication in an academic journal or an academic conference. Upon completion of data compilation, all questionnaire data will be destroyed. If you have questions concerning this research, please contact Chad Whittle at [benjamin.whittle@usm.edu](mailto:benjamin.whittle@usm.edu). This research is being conducted under the supervision of Dr. Mary Lou Sheffer. She can be contacted at [mary.sheffer@usm.edu](mailto:mary.sheffer@usm.edu). This project has been reviewed by the Institutional Review board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820.

By clicking the box below, you are consenting to participate. If you do not consent, to participate in the questionnaire, please close your browser window. By completing the questionnaire, the respondent gives permission for this anonymous and confidential data to be used for the purposes described above. If you wish to not participate in the interview, you can simply decline and your answers will not be recorded. Only completed questionnaires will receive the \$1.50 monetary reward. Amazon M Turk will have access to your personal information in order for you to receive your payment. However, all data collected will be anonymous to the researcher.

Thank you for your consideration.

Sincerely,

Chad Whittle

[benjamin.whittle@USM.edu](mailto:benjamin.whittle@USM.edu)

## CONSENT TO PARTICIPATE IN RESEARCH

By clicking the box below, consent is hereby given to participate in this research project.

All procedures and/or investigations to be followed and their purposes, including any experimental procedures, were explained to me. Information was given about all benefits, risks, inconveniences, or discomforts that might be expected.

Check this box if you consent to this study, and then click “Continue.” (Clicking “Continue” will not allow you to advance to the study, unless you have checked the box including your consent.)

If you do not wish to consent to this study, please close your browser window at this time.

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Each of the following statements are on a five-point scale ranked from strongly disagree to strongly agree and concerns the *perceived convenience of using online live streaming for sports content*.

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
Compared to the time I have to invest in watching sports, the use of online live streaming for sports content is beneficial to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find it convenient to watch live sports content via live streaming.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find it convenient to watch live sports online on any device.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I find it convenient to use live streaming for sports anywhere including indoors or outdoors.

Each of the following statements are on a five-point scale ranked from strongly disagree to strongly agree and concerns the *perceived viewing quality of online live streaming for sports content*.

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
I think online live streaming for sports content provides high quality content.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online live streaming for sports content is free of delay, jitter, and buffering.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think online live streaming for sports content provides better quality service than cable/satellite.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Each of the following statements are on a five-point scale ranked from strongly disagree to strongly agree and concerns the *perceived enjoyment of using online live streaming for sports content*.

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
I think online live streaming of sports content is entertaining.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find using online live streaming of sports content enjoyable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online live streaming of sports content is more fun than watching on cable/satellite television.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Each of the following statements are on a five-point scale ranked from strongly disagree to strongly agree and concerns the *social benefits of online live streaming for sports content*.

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
My friends think I should use online live streaming for sports content.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most of my friends use online live streaming for sports content.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People whose opinions I value prefer online live streaming for sports content.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Each of the following statements are on a five-point scale ranked from strongly disagree to strongly agree and concerns the *perceived viewing cost of online live streaming for sports content*.

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
I think online live streaming services that offer sports content are reasonably priced.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have no problem paying money to watch higher quality content on online live streaming that provides sports content.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think the cost of using online live streaming services that offer sports content will make traditional television watching less entertaining.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



I think online live streaming services for sports content should offer more pricing options.

I think the cost of online live streaming services for sports content provides me a better financial value than traditional cable/satellite television service.

Each of the following statements are on a five-point scale ranked from strongly disagree to strongly agree and concerns the *behavioral intention of online live streaming for sports content*.

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
My general intention to use online live streaming for sports content is very high.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I recommend others use online live streaming for sports content.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I intend to increase my use of online live streaming for sports content in the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Whenever possible, I intend to use online live streaming for sports content.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate how often per week you *use a cable/satellite TV subscription to watch sports content.*

- Never
- Once Per Week
- Twice Per Week
- Three Times Per Week
- Four Times Per Week
- Five Times Per Week
- Six Times Per Week
- Seven or More Times Per Week

Please indicate how often per week you *use online live streaming to sports content*.

- Never
- Once Per Week
- Twice Per Week
- Three Times Per Week
- Four Times Per Week
- Five Times Per Week
- Six Times Per Week
- Seven or More Times Per Week

During a typical game, which media device do you use for viewing sports content?

- Television/Smart TV
- Desktop/Laptop (PC/MAC)
- Smartphone (iPhone, Android, etc.)
- Tablet (iPad, Kindle, etc.)

When using the selected media device, how are you accessing sports content?

- Cable/Satellite TV subscription and I watch the games live
- Cable/Satellite TV subscription and I watch the games on-demand
- Online Live Streaming Service or app (DirectTV Now, SlingTV, YouTube TV, etc.)
- Streaming Box (Roku, Apple TV, Amazon Fire Stick, etc.)

When using online streaming for live sports content, which sport do *you watch the most*?

- College Football
- College Basketball
- College Baseball
- College Softball
- Other College Sports
- NFL (Professional Football)
- NBA (Professional Basketball)
- NHL (Professional Hockey)
- MLB (Professional Baseball)
- MLS (Professional Soccer)
- Tennis
- Olympics
- Golf
- NASCAR/Auto Racing
- Other Sports
- My favorite sport isn't available to stream live online
- I don't watch online streaming

What is your age? (Please enter age below)

What is your sex?

- Male
- Female

What is your race?

- White
- Black or African American
- Hispanic or Latino
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Other

Which state are you participating from? Select one from drop down list.

▼ Alabama (1) ... Washington D.C. (51)

What was your entire household income in the past year?

- Less Than \$25,000
- \$25,000 to \$34,999
- \$35,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 or More
- Prefer Not to Answer



What is your highest level of school you have completed or the highest degree you have received?

- Less Than High School
- High School Graduate (high school diploma or equivalent including GED)
- Some College, but No Degree
- Associate Degree (2-year)
- Bachelor's Degree (4-year)
- Master's Degree
- Doctoral Degree
- Professional Degree (JD, MD)
- Prefer Not to Answer

APPENDIX B

Table 1 *Summary of Regression Analysis for Predicting Streaming Sports Content*

(*N*=300)

Variable	B	SE B	$\beta$	<i>t</i>	<i>p</i>
Convenience	.398	.727	.143	1.962	.051
Quality	-.025	.144	-.011	-.172	.864
Enjoyment	-.269	.214	-.094	-1.261	.208
Social Benefits	.171	.135	.078	1.266	.206
Costs	.299	.170	.122	1.760	.079
Intentions	.761	.192	.317	3.954	.001

Note:  $R^2 = .234$        $p < .05$       *F* for change in  $R^2 = 14.903$

## APPENDIX C – IRB Approval Letter



**INSTITUTIONAL REVIEW BOARD**  
118 College Drive #5147 | Hattiesburg, MS 39406-0001  
Phone: 601.266.5997 | Fax: 601.266.4377 | [www.usm.edu/research/institutional.review.board](http://www.usm.edu/research/institutional.review.board)

### NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.  
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 18031402  
PROJECT TITLE: The Uses and Gratifications of Streaming Live Linear Sports Networks Online  
PROJECT TYPE: Doctoral Dissertation  
RESEARCHER(S): Chad Whittle  
COLLEGE/DIVISION: College of Arts and Letters  
DEPARTMENT: School of Mass Communication and Journalism  
FUNDING AGENCY/SPONSOR: N/A  
IRB COMMITTEE ACTION: Expedited Review Approval  
PERIOD OF APPROVAL: 3/21/2018 to 03/20/2019  
**Lawrence A. Hosman, Ph.D.**  
**Institutional Review Board**

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