

# Digital Piracy, the Hidden Competitor to Pay Per Views

Dean Simone

Senior Project

Table Of Contents

**Section 1**

Abstract..... 2

Intro/Background.....3

Literature Review.....4-7

**Section 2**

Factors of Consumer Behavior towards Digital Piracy.....8-14

- Lessig’s Modalities
- Rationality Theory
- Theory of Planned Behavior

Evidence of Consumer Behavior in Sports Broadcasting.....15-17

- Singapore’s Piracy Issue
- Mayweather Vs. McGregor PPV
- Consumer Consumption regarding MMA PPV

**Section 3**

Impact of Digital Piracy on the UFC.....18-25

Conclusion.....26-27

Bibliography.....28-31

**Abstract:**

Microeconomic theory states that if two homogeneous goods are offered to a buyer at two different prices, the buyer will choose the cheapest option. However, behavioral economics tells us that the rational idea to save money is in fact not always the case. This paper will explore digital piracy and the factors that consumers face when choosing whether or not they wish to pirate, specifically in the sports broadcasting industry. "Pay Per View" (PPV) programs such as MMA, Boxing, Football and other sporting events have many alternatives to consume and stream them for free illegally. Because of the many extreme ranging prices of these PPVs, as an economist, one would think that if there was a free alternative to these products the consumer would take it and the business of PPVs itself would be forced to lower prices or fully contain the externality; however, this is not always the case. Although pirated PPV streaming and the actual PPV program are not exactly "identical products", the opportunity costs streaming illegally can be viewed as equal to the monetary costs of the legal PPV. In line with that thought, this paper questions the motivations of individuals and shows evidence in which behavior towards piracy has taken place in certain sports programming; concentrating on the Ultimate Fighting Championship (UFC). The fact is that PPVs are still wildly profitable even though many people can and do stream them illegally. This can be due to the many negative carry-ons that come with illegally streaming such as, morality, consequences of viruses, illegal repercussions, and ability and effort to find a proper outlet where these free streams are available and working.

There are many limits to microeconomic theory when applying it to the real world. One limitation can be expressed through the market for Pay Per View (PPV) sporting programs. Microeconomic theory would state that if there were two homogenous or identical products, one priced relatively expensive and the other costs zero dollars, a rational consumer would choose the zero cost product. That is not the case when it comes to consuming PPV events. With the help of digital piracy, anyone with an internet connection can watch the same \$70 UFC fight card for free just by finding a pirate website that offers it. With that said, pirated content and PPVs are not identical products. Although pirated versions may be free of monetary cost, there are other opportunity costs such as legality, search costs, social costs, and often quality differences. Even with that in mind, people do weigh the costs and often choose the monetary free pirate version. This would then bring up the question; what are the factors of consumer's decision to pirate and how does it impact the programs they are pirating? What microeconomic theory lacks is the ability to account for outside influences such as legal consequences, societal pressures, and how willing the consumer is to take on these risks. By taking the literature on consumer behavior towards digital piracy and its relation to sports and sports consumption, this paper will create a synthesis of the literature and draw conclusions to how consumers choose whether or not they will partake in digital piracy of PPV.

When it comes to digital piracy, there are many papers revolving around a similar idea. When discussing the behavior of the consumer, many believe it is a weighing of certain opportunity costs. The general consensus is that factors of morality, fear of punishment, and personal risk all come into play (Shemroske 2014, Hill 2009, Williams 2016). Shemroske uses Lawrence Lessig's modalities of regulation to discuss consumer behavior when it comes to file sharing. The 4 modalities being: the law regulates copyright infringement through threat of punishment, Social norms; family, friends, co-workers impact internal decisions, the markets regulation of price can affect behavior, and architectural elements of the internet (Shemroske 2014). Hill pulls from different research theories about piracy and creates a synthesis similar to the ones discussed in Lessig's modalities. He discusses the moral development theory, equity theory, and moral intensity theory, combining the three as behavioral reasons towards piracy on the internet (Hill 2009). He goes on to talk about the consequences of piracy and strategic responses that firms can make to combat piracy. Williams evaluates the literature on digital consumer behavior and attitudes towards piracy. Finds similar results to Hill and Shemroske such as situational factors, economic factors, fear of punishment, anonymity, social pressures, and performance of pirate (Williams 2016). The interesting limitation that Williams picks up is the fact that much of the literature focuses on the behaviors of younger people. He looks at the relationship of the digital world and the physical world and results that they are very different in that the digital world changes the assumptions of ownership.

Similar to the papers mentioned, there is also literature surrounding these ideas but takes rationality into account and how it affects the consumers opportunity cost (Vida 2012, Kos 2016). Vida investigates consumers perceptions of risk and benefit of digital piracy behavior and determinants of rationalizing piracy/future piracy. She creates a conceptual model using counterfeiting and piracy literature to survey adults of 5 European countries. She finds that rationalization determines the relationship between perceived benefits and piracy intention, but not between perceived risk and intention. Rationalizing past behaviors of piracy cause and increase in the likeliness to commit future piracy (Vida 2012). Kos conducts a study that develops three mechanisms that determine consumer digital piracy behavior: personal risk, interpersonal influence, and moral intensity. They also dissect the relationship of rationality and future piracy intent due to past piracy behavior. They served 4 European countries to test the mechanisms of behavior. Findings resulted in moral intensity and personal risk negatively affecting piracy behavior. Also, personal risk, past digital piracy behavior and rationality directly affected consumers intention to engage in piracy (Kos 2016).

Slightly different from the papers mentioned, there is literature about digital piracy focusing on the concept of the Theory of Planned Behavior (Wang 2009, Cronan 2008). Wang uses the Theory of Planned Behavior (TPB) and the Social Identity theory to determine behaviors towards downloading music illegally rather than buying. According to TPB, behavior is determined by motivation and ability. Motivation has to do with the degree an individual would like to do something (Wang 2009). She then uses data collected from 350 teenagers to test whether TPB does determine the piracy tending

behaviors. Cronan focuses on digital piracy and how the Theory of Planned Behavior determines and influences the decision to illegal download or pirate. He discusses the literature behind TPB and the model he analyzes. Different variables of the model include attitude, subjective norms, perceived behavioral control, moral obligation, past piracy behavior, and intention (Cronan 2008). He goes on to create a questionnaire and surveys 292 students in a business school in the midwest. They used the results of the survey to examine whether the hypothesis they created should be rejected or accepted. They concluded that past behavior in pirating, moral obligation had the strongest correlations when deciding on whether to illegal download or pirate.

The rest of the literature focuses on sports itself having to do with piracy and literature on consumer behavior towards purchasing PPV UFC content (Wong 2016, Reams 2012, Granados 2017). Wong looks at the sports piracy problem in singapore. she examines the phenomenon in singapore and looks at the driving factors to why this dynamic market system emerged. It goes on to discuss the preventive measures used and highlights the challenges of the sports broadcast landscape. Although there are many versions of digital sports piracy, wong focuses on the live broadcasts of sports through peer to peer television services. She discusses the conditions for piracy to take place: desirability of the product, consumer budget, and acquisition costs of the product (Wong 2016). Reams discusses the motivations of consumers to buy PPV UFC fights. The purpose of the study is to examine involvement, motives, and consumption of the UFC fights. Reams used models such as the Psychological Continuum Model (PCM) to measure involvement and created a survey that found 454 surveys deemed usable.

Results found that the higher stage of consumer involvement, the more they were motivated to watch and anticipated to continue to consume in the future; It was also found that consumers who consume primarily at home were more involved than those who consumed the fight events in other locations (Reams 2012). Granados discusses the Mayweather-Mcgregor Fight piracy numbers. VFT solutions reported 7,000 illegal live streams, with 100 million viewers averaging 14,000 per stream (Granados 2017). It goes on to discuss how social media platforms struggle with live sports broadcasting piracy and some factors that may have caused people to turn to piracy such as the official UFC streaming site crashing during the fight causing consumers to find alternatives, the merging of the UFC and Boxing audiences, and Ads for illegal streams for the fight being prevalent.

This paper will address the gap in the literature between digital piracy in relation to PPVs. There are many works on behavior towards digital piracy, but not towards specific sets of content. This will be done using the data from the papers that address behavior and sources that visualize sports broadcasting. I will then create a synthesis of the relevant literature and apply it to sporting PPVs such as the UFC. This will hopefully bring light to the limitations of microeconomic theory since it disregards outside variables of opportunity cost other than monetary value.



This section of the paper will be used to discuss the different views towards consumer behavior relating to digital piracy. There are many reasons to why a consumer might download something illegally. In my personal experience, I take part in illegally streaming MMA or Boxing PPVs because of the high prices they charge. My reasoning behind this is not necessarily because I do not have the money to pay, but rather because I am uncertain whether I will be satisfied with the program I am buying; so by receiving it for free I have no feeling of loss if I did not enjoy the event. In many other cases, the main argument for most people is one of monetary reasons. Now this leaves us with everyone who does not download content illegally. From a monetarily economic standpoint, it would not make sense for an individual to purchase a PPV event if they could find one on the internet for free, yet people buy them anyway. This has to do with the idea of opportunity cost and marginal utility. Though the cost of a PPV may be very high in a monetary sense, an individual's cost to utilize the pirated versions may be higher.

In Lessig's Modalities of Regulation, described by Shemroske, he states the four modalities to be law, social norms, markets, and architecture:

The law would regulate primarily as it had, through the threat of punishment. If individuals were to not obey its boundaries, there would be a penalty. The law would state the expected behaviors of individuals (e.g. it is unlawful to download copyrighted material without consent/agreement from the rightful owners) and upon violation (e.g. downloading copyrighted music files without paying) prosecution would ensue. By this method, the law would be a regulatory force.

Social norms are dictated by other parties than a governing body. Family, friends, coworkers, church, hobbyists, etc., all contribute to community based influence which can impact the internal decision making processes that an individual employs. Norms are not written, and violation of a norm does not necessarily result in a direct or tangible punishment. Yet, there is a penalty for violating norms (e.g. negative social response) and thus this can be seen as a regulating force.

Markets regulate by price. The cost of a music CD can be seen as exorbitantly high when judged against the quality of the songs it contains. As such, a high price might

dictate few sales of the CD once information about the quality of the music gets out. In this way, the market itself may be influenced by social norm, but is still seen as a regulating force whereby price may drive behavior.

Finally, architecture is proffered by Lessig as given by the physical world “as we find it”. As we find it in internet technology means routers, switches, servers, clients, software, and people. It might be the case that if there were no grocery stores, one might find the purchase of dinner somewhat more of a challenge. The physical entity of ‘a grocery store’ dictates a quick stop on the way home would achieve the goal. Were this architectural element (or a substitute) missing, there would instead be a need for a well planned and time consuming hunt and gather. The Internet has no shortage of architectural elements which can easily be seen to be regulate (e.g. bandwidth, protocol usage, firewalls, etc...). (Shemroske 2014)

Of the four modalities, I disagree with social norms being a negative factor when talking about social norms today. In today’s society, it seems as if digital piracy has slowly transformed into an acceptable practice of the internet. In Shemroske’s study, he finds that, “Where walking into a store and taking a music CD off the shelf without paying would not be considered, perceptions of downloading music through a file sharing network have less impact on moral reckoning.” (Shemroske 2014). It is almost as if the internet’s anonymity causes consumers to feel more comfortable with the idea of stealing content through the web. “much digital piracy, particularly where facilitated by the internet, offers the illusion that the act is victimless – an observation that leads on to an important finding from the literature, that digital piracy is not regarded as an ethical issue.” (Williams 2010). Therefore social norms could be positive or at least neutral when it comes to illegal downloading content and does not discourage digital piracy. However, going back to the idea of opportunity cost and marginal utility, the modalities of law, markets, and architecture do seem to be main focal points of behavior.

The law has a significant role in the idea of digital piracy; really being one of the main factors to why people shy from digital piracy. “Results suggested that fear of

punishment did have an impact on the propensity to download illegally. “Results clearly show that there is a significant negative correlation between downloading intentions and consequences of being caught downloading” (p. 175). As the writers point out, Kwong and Lee (2002) also found that laws can be a strong deterrent, with regard to at least the pirating of CDs.” (Williams 2010). In performing the action to take part in digital piracy, you are performing an illegal action. Therefore whether or not you decide to do it depends on how risk averse or risk loving you are. If you are more risk averse, then buying the PPV programs will seem like a better option and vice versa.

Markets are also very pivotal when choosing to download or stream illegally as well. Basic economics can tell us that the quantity demanded for a product will fall if the price is too high. But what happens if the consumer still wants the product even though it is not in their price range. “Equity theory predicts that when individuals find themselves participating in relationships that are perceived to be inequitable, they will become distressed and will try to eliminate the distress by taking actions to restore equity.” (Hill 2007). Equity theory relates to this problem because consumers are taking action and finding new routes to receive the desired product or content at a lower cost. This can also be seen in Williams synthesis regarding economic factors in digital piracy:

This is a big determinant in the decision to commit piracy. Hsu and Shiue’s (2008, p. 729) study of consumers’ willingness to pay (WTP) for non-pirated computer software mentioned earlier showed that average WTPs for software products were much lower than suggested retail prices, indicating that users did not value authorized software products as high as market price. Unsurprisingly, other studies (e.g. Lau, 2006) also suggest that perceived excessive pricing is a factor in the decision to act illegally. (Williams 2010).

Markets pricing of content can directly relate to whether or not consumers decide to download illegally. If consumers do not believe that a product should be valued at a certain price, they will find other means to obtain that product at a lower monetary cost. With that said, that is a cause behavior, weighing more towards people who participate in digital piracy. With the combination of the other modalities, you then can determine if a consumer will act illegally or not.

Coming to our last modality, architecture, which is the ability or entity in which a consumer can find said product of content in which he or she would like to receive for a lower monetary cost. Architecture is interesting because like most markets with specific goods or services, the consumer needs to know where they can buy or receive that specific good or service in order for there to be a market. And that is where it gets tricky when it comes to digital piracy. There isn't an official store or website that one can find that allows them to get the illegal content they desire, thus why it is illegal. These search costs to find the correct content consumers are looking for and whether or not it performs to the level of one's preference can factor in on a consumer's willingness to illegally download. In my experience I have one website that always works for me when I am looking for a certain PPV event. Downsides are usually that of quality, although some streams of PPV events can match the quality of the actual PPV events. But I only found out about that website through the suggestion of a friend. Before that I had no idea where to look for the content I wanted to pirate causing me to fallback to just buying the PPVs. This shows the significance of architecture in these illegal markets because without a well known medium that is reliable, willingness to pirate can

decrease causing consumers to pay for the programs or content rather than pirate even if they wanted to. The modalities of law, markets, and architecture are a solid basis to justify whether a consumer wants to take part in digital piracy. By weighing a combination of the three, we should be able to identify the opportunity cost of consumers and whether or not they want to participate in digital piracy or not.

With the modalities mentioned above, the concept of rationality also plays a role in whether or not consumers will pirate digital content. When thinking in basic economic terms, marginal utility and rationality go hand in hand. As a rational consumer, one will part take in an action that is within their marginal utility to better themselves until they are satisfied or have gained as much benefit as they wanted. "Rationalization mediates the relationship between perceived benefits and piracy intention, but not between perceived risk and intention. Both perceived risk and benefits affect piracy intent, with risk reducing it and benefits increasing it. Rationalization of past behavior increases future digital piracy intent." (Vida 2012). In Vida's study she discovers that rationalization takes a significant role in weighing benefits and piracy intention, but not risk and piracy intention. While illustrating how perceived risks and benefits are apart of the weighing processes she finds that rationalization of past behavior also positively affects consumers decision to pirate again. This shows how rationalization of consumers is an adaptive process, thus making pirating more justifiable the more it is done. With this said, it can be inferred that the more a consumer partakes in digital piracy, factors deterring consumers such as fear of lawful punishment will be reduced. This rationalization can also cause how consumers value monetary price for content

such as PPVs, making PPV price value decrease to the consumer and causing them to find new entities to receive desired content through the architectures of the internet. In Kos's study, he finds that, "The results further support....the positive influence of past digital piracy behavior on consumers' use of rationalization. Lastly, personal risk, rationalization, and past digital piracy behavior directly influenced consumers' intention to engage in digital piracy in the future." (Kos 2016). This further supports the idea that rationalization is an adaptive behavior in consumers allowing them to become more comfortable with digital piracy if they are successful in the beginning. However, if rationality is an adaptive process, then the opposite may also be true. If a consumer has a bad experience with digital piracy or they did not like what they received due to search costs, fear of punishment, or quality of content, that may deter them from ever partaking in digital piracy again. This could then lead to a preferred method of legally purchasing PPV events. After weighing the opportunity cost of the Lessig's modalities, rationality will then take part in whether piracy will be a continued method of action or not.

The Theory of Planned Behavior (TPB) is connected to the idea of rationality as well. TPB states:

According to the TPB, behavior is determined by motivation and ability (Kwong and Lee, 2002). Motivation or intention refers to the degree that an individual would like to perform a specific action. "Attitude," "subjective norms," and "perceived behavioral control" are antecedents of an individual's intention. Attitude is defined as an individual's feelings regarding a specific behavior (Ajzen, 2002). The feelings could be beneficial, harmful, interesting, boring, etc....[TPB] indicated that an individual's attitude to a specific behavior is an important antecedent of his/her intention to do it. The more positive the attitude, the greater is the intention. (Wang 2009).

The concepts of motivation and attitude should not be overlooked. In order to want to consume a certain good or service, the consumer must be motivated to consume that

good. If you are an avid combat sports consumer, one can infer that you should be highly motivated to consume PPV events regularly. If you only enjoy watching combat sports in social settings or at a friends house, then one can not say for sure whether you would be willing to consume PPV events on a regular basis. That said, digital piracy consumption has to do with the consumer preferences at that time. The person who isn't an avid combat sports watcher may not be as willing to pirate as the person who is. Therefore, that person has to rationalize whether or not it is worth it to endure the costs of consuming a pirated good such as a PPV event given his or her specific situation. As for attitude, it goes hand in hand with motivation, being a matter of preference. Using the framework of TPB, Cronan created a model to test the factors that cause intention to pirate and found:

The significant components of this model are attitude, perceived behavioral control, moral obligation, and past piracy behavior. Past piracy behavior had the greatest effect on the intention to pirate (standardized coefficient of 0.463) in the model (Table VI). This suggests that subjects who have previously pirated digital material have a higher intention to pirate in the future, especially as the frequency of pirating increases. Further analysis of the responses indicates that 76.5% of the subjects in this study have previously pirated. (Cronan 2008).

This shows how TPB plays a role in rationalization of piracy. The more a consumer pirates shows how they are motivated to pirate due to there preference in their specific good or service, resulting in future intention to pirate. TPB complements the idea of rationality when it comes to determining behavior of digital piracy.

This section will discuss sports piracy and how the concepts discussed link to consumers decisions to pirate PPVs or pay for them legally. Many sports broadcasts are pirated on a daily basis, especially PPV events. An analysis of Singapore's football piracy problem was done by Donna Wong to find that three main drivers of piracy were desirability of the product content, consumer budget, and acquisition costs (Wong 2016). The factor of desirability ties in to the idea of motivation and attitude. The more a consumer wants to consume something the more they are motivated to do it. And when the consumer's budget is not in range with the pricing of their desired content they will find other routes to gain access to it. This also covers the modalities of markets because of consumer pricing and firm pricing not matching up and it shows architecture through their ability to find different entities of access of their desired event. "...there appears to be an increased acceptance of digital piracy as the mainstream practice for the access of sports content in Singapore. This permissive attitude seems to suggest the use and supply of digital piracy might not be an illicit or blameworthy activity, and is perceived as a socially acceptable norm in Singapore." (Wong 2016) The idea that digital piracy as a mainstream practice shows that it has become a social norm and that the modality of law is not as big of a concern in Singapore.

A most recent PPV event that was pirated was the Mayweather-Mcgregor boxing match in which undefeated boxer Floyd Mayweather defeated MMA lightweight champion Conor McGregor in a 10th round knockout. It was also one of the most illegally watch PPV events in history, "VFT Solutions, which specializes in monitoring live streams in social media, is reporting records in its books for a single live event. Its



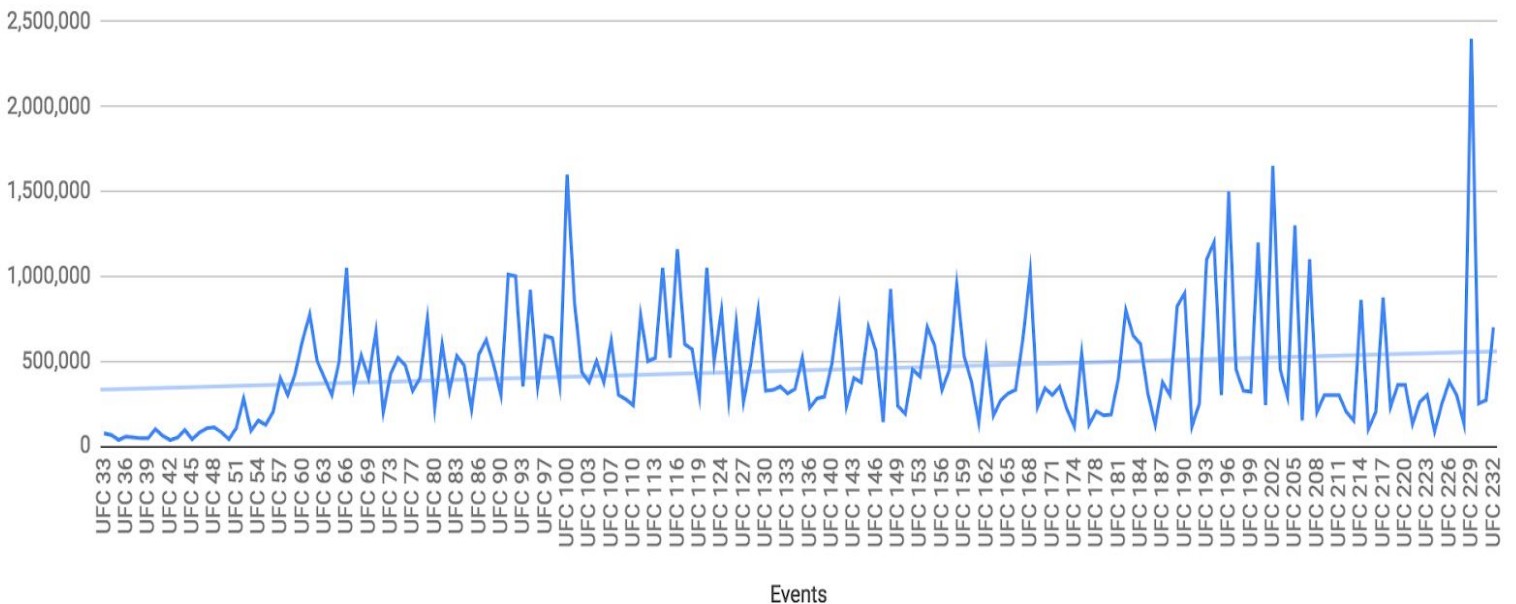
preliminary numbers show more than 7,000 partial or full live streams of the fight in social media platforms, with roughly 100 million viewers, or an average 14,000 viewers per stream.” (Granados 2018). We can apply the same concepts of behaviors here as well. One problem that caused an increase in piracy of this event was the fact that the UFC’s streaming site crashed, which left people who wanted to watch the fight forced to find different entities that were offering the fight (Granados 2018). This shows the modality of architecture on the internet and how people were more willing to take on search costs when the legal option was removed. Another factor was the merging of UFC and Boxing audiences (Granados 2018). Consumers of Boxing may not be as motivated to purchase a boxing fight with an MMA fighter as the main card, causing them to prefer the free pirated version, and vice versa for MMA fans. Yet, even with many people illegally streaming the fight, the PPV buys for the fight were extremely successful, “Mayweather-McGregor was, in fact, the second-biggest pay-per-view event of all-time, coming in at a total of 4.3 million pay-per-view buys in the United States.” (Christ 2017).

Lastly, consumer involvement and consumption was looked at in a study by Reams and literature on the topic of MMA PPV consumption stated, “....motives of sport interest, drama, and adoration of a fighter as significant predictors of media consumption for Korean attendees. For their U.S. counterparts, fighter interest, sport interest, and drama were the motives that explained the most variance in media consumption (Kim et al., 2009).” (Reams 2012). Reams later finds that, “In terms of consumer involvement, it was determined in the current study that the more involved a

consumer was with the UFC and their PPV events, the more events they consumed and anticipated consuming in the future.” (Reams 2012). This suggests that the more involved a consumer is the more they will consume in the future. What it doesn’t account for is how they will consume the PPV, whether through legal means or illegal streaming. This means that consumers who are more involved in the content they are receiving will most likely watch it in the future, but if they decide to pirate and continue to do so it will become rational to the consumer to continue to consume this content illegally for as long as the benefits are received.

This last section will analyze digital piracy’s impact on the UFC specifically by observing the data around pay per view buyrates and the data surrounding digital piracy in the U.S and worldwide. By observing this data, we can further understand how consumer behavior towards digital piracy is affecting the sports broadcasting industry. Looking at the UFC’s buyrates of their PPV events, the numbers are inconsistent and volatile. When compiling the data from September of 2001 through December of 2018 (Fox 2018), It can be seen that there is a very slow increase of buyrates throughout this period.

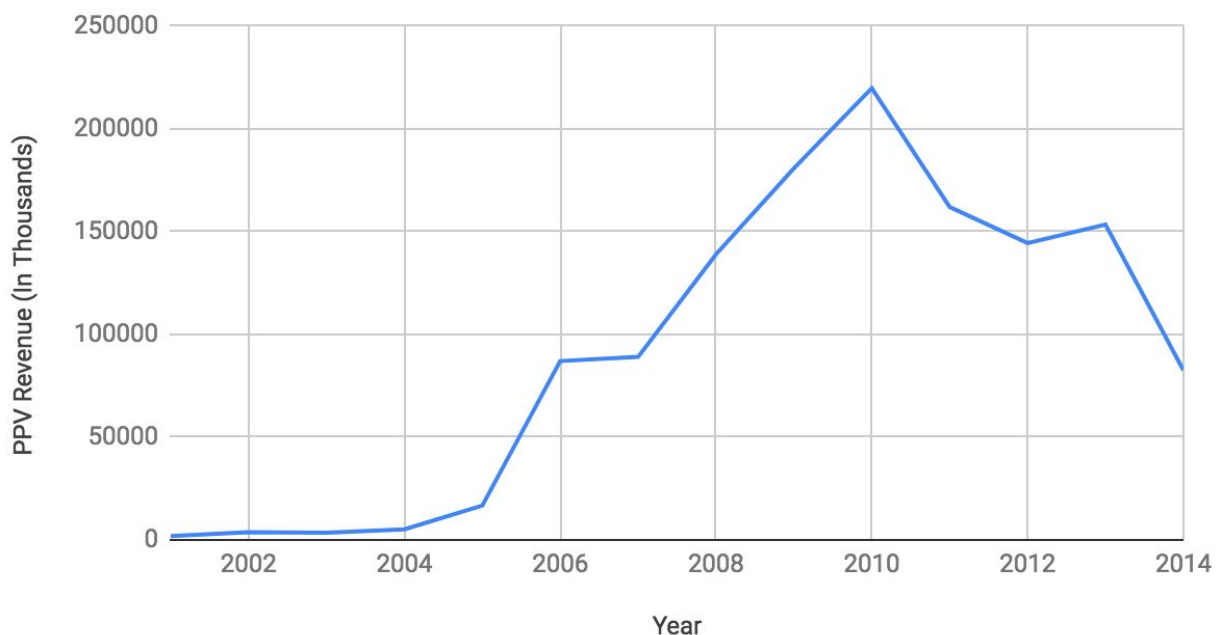
UFC Event Buy-Rate



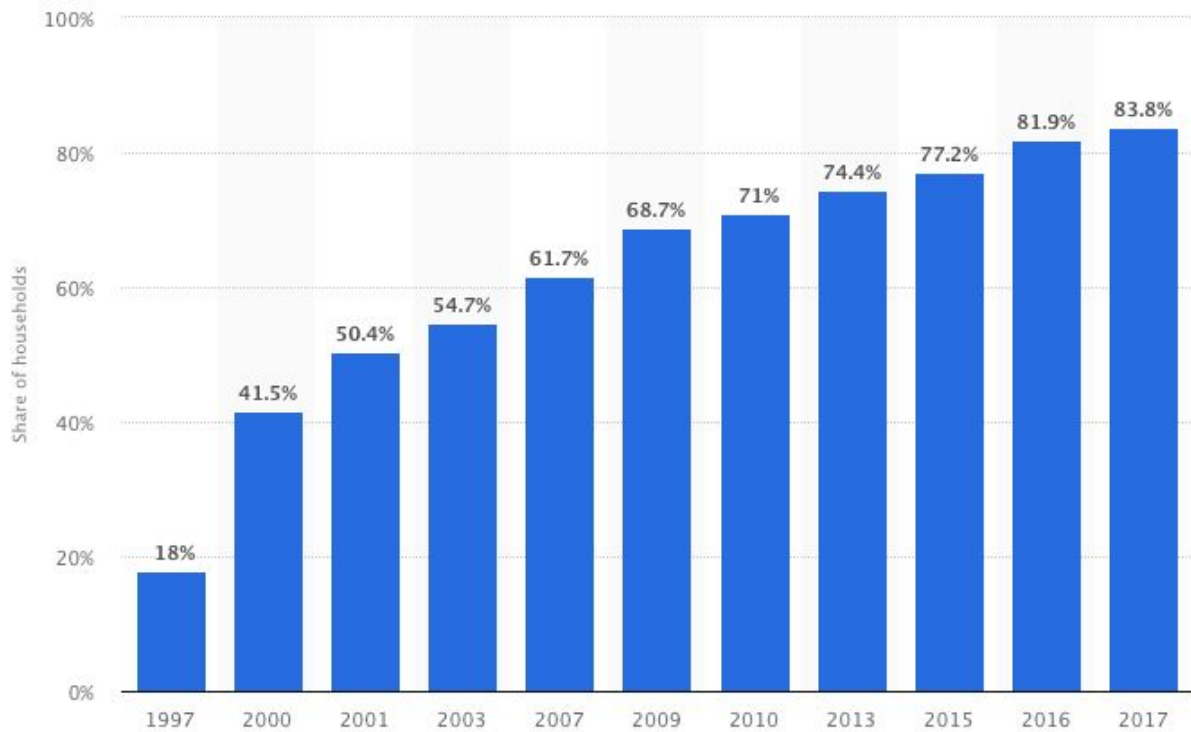
There are many variables to consider when trying to understand the volatility of the PPV buyrates such as popularity of the sport in different years, attraction of the fighters on

specific events, marketing of the event, etc. However, I believe that with the increase in technological advancement and familiarity, digital piracy plays a major role in the inconsistent buyrates of the UFC's PPV events. If we look at UFC PPV revenues from 2001-2014 we can observe a sharp decline in sales after 2010.

PPV Revenue (In Thousands) vs. Year

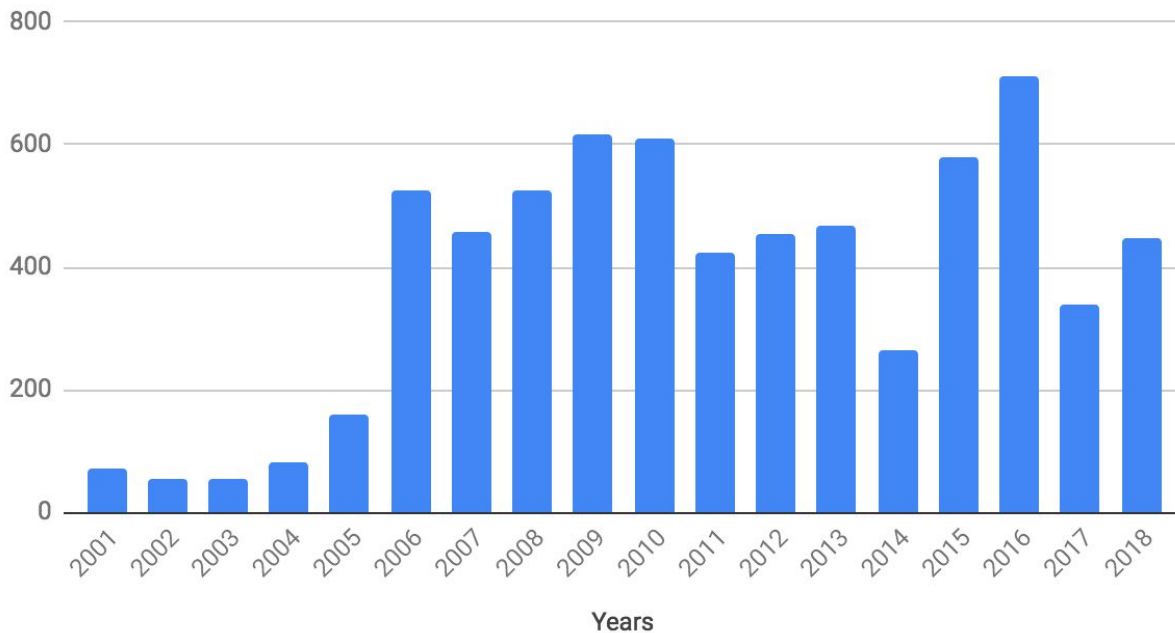


This drop in PPV sales can suggest that consumers could have found illegal outlets to watch the UFC events instead of purchasing them. In support of this argument, in 2001 only 50.4% of households in the US had internet available to them; however, in 2010 71% of households had internet available to them (U.S 2017).

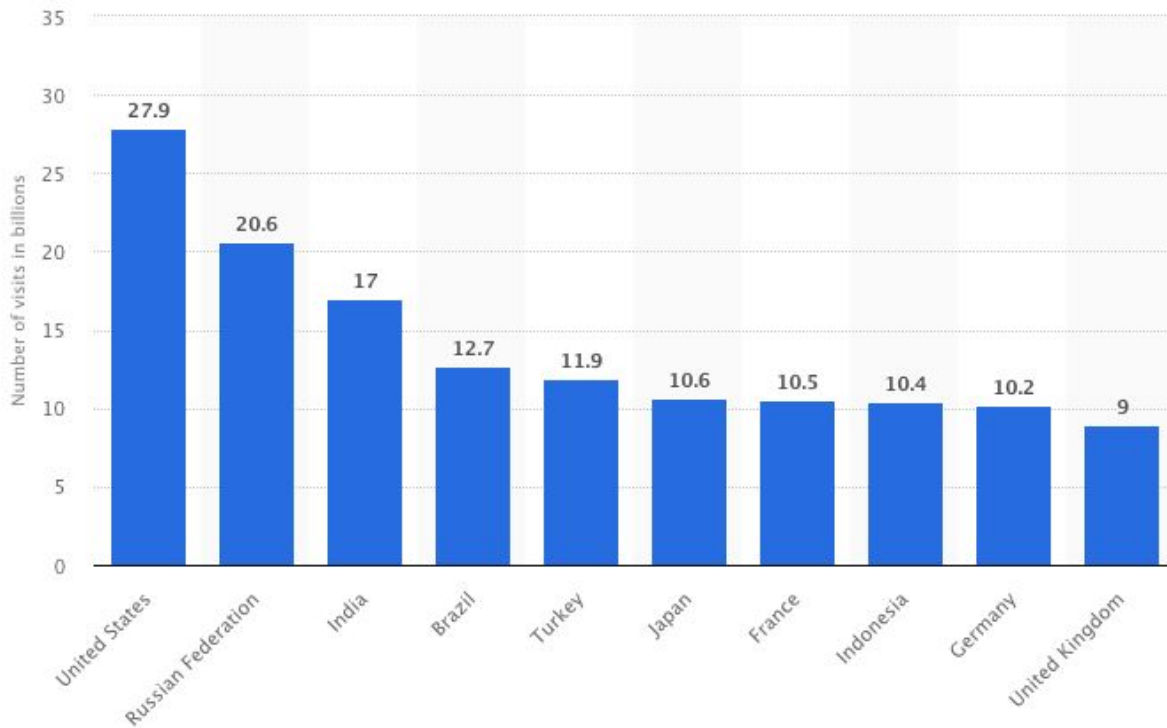


This data can illustrate how consumers did not have the option to pirate during the earlier years of the UFC. But as time progressed, more homes gained internet access and different streaming services became available through a more saturated market of consumers. If we observe the average buyrates of UFC's PPV events it is also consistent with the revenues observed in the previous graph.

Bar Graph of Average Buyrates (in Thousands)



The increase in the use of piracy websites has also increased throughout the years of technological advancement as well. In 2017, the number of piracy websites that were visited by country ranking from highest to lowest is: United States 27.9 billion, Russian Federation 20.6 billion, India 17 billion, Brazil 12.7 billion, Turkey 11.9 billion, Japan 10.6 billion, France 10.5 billion, Indonesia 10.4 billion, Germany 10.2 billion, and the United Kingdom at 9 billion (Global 2017).



This data suggests that many consumers tend to use piracy websites rather than legal means to receive the entertainment they want. Knowing this tells us that the factors regarding consumer behavior towards piracy (Lessig's modalities, rationality theory, and theory of planned behavior) can favor the side of consumers choosing to pirate.

Another observation into behavior can be seen with a 2017 survey done on whether or not U.S citizens considered digital piracy to be theft. In the age range of 18-29 years old, 34% said they do believe piracy to be theft, 44% said they do not believe piracy to be theft, and 22% had no opinion (Public Opinion 2017). The data shows that in today's society, more people believe digital piracy is not theft than those that do. This is significant because this may be what is causing more people to pirate, therefore it is effecting a private company like the UFC itself. The volatility in the UFC's

buyrates for pay per views may be no fault of its own due to the changing stigma around piracy. Also, going back to the modalities, the idea of social norms impacting people's decision to pirate is shown through this data. Instead of social norms being a negative, it has become more positive and thought as something that should not be considered illegal.

More data around piracy can suggest that consumer behavior regarding the modality of markets is a major factor as well. A survey taken in 2011 asked U.S citizens what there reasons for downloading free tv/movies. Of the answers given, 36% said legal versions were too expensive, 32% said they cannot find what they want through legal channels, and 31% said they wanted to consumer entertainment on more than one device (Reasons 2011). This data can illustrate how the modality of markets factors into consumer behavior. Believing the product is too expensive or wanting to watch it in more than one place shows the consumers willingness to pirate rather than purchase their entertainment legally.

Observing the newer generations behavior to consumption is significant because they will lead the way into what will be social norms in the years to come. In a survey taking during April of 2017, millennials were asked what their preferred method of TV consumption was. 33% of millennials chose piracy as their preferred method of consumption (TV Consumption 2017). As the social norms begin to accept piracy, more people will begin to do it or be ok with others doing it. In turn that can cause people to rationalize illegally streaming the more they do it, resulting in a domino effect of mass digital piracy.



It is also important to note that the UFC has taken many strides to combat digital piracy. In a report from the Center of Public Integrity, it shows that the UFC had outspent major sports companies to fight against piracy. The UFC spent \$620,000 while Major League Baseball spent \$310,000 and the National Basketball Association spent \$125,000 (Holland 2013). Because PPVs are a big portion of the UFC's revenue, it makes sense that they would fight harder than most other companies to solve this problem. This also reveals how big of a problem piracy really is in the UFC, which supports the argument that the volatility in buyrates is due to digital piracy.

Another example of UFC fighting digital piracy is the company finding and shutting down piracy websites. The UFC successfully shut down the website [www.cagewatchers.eu](http://www.cagewatchers.eu) and prosecuted owners and individuals who partook use of this website (Ultimate 2014). Not only does the UFC spend money lobbying to stop digital piracy they also hire law firms to prosecute offenders. Here we can observe the modality of Law creating consequence for individuals choice to watch UFC's PPVs illegally.

Lastly and most recently, the UFC joins with copyright protection organizations to further prevent more piracy for their PPVs. "UFC has engaged VFT Solutions, a leader in the content consumption and protection field, to monitor piracy across live streaming social media sites during the event. VFT's platform identifies and records the participants on both ends of the piracy: the streamers illegally using live social media applications to share copyrighted content and the viewers watching that content in real time. VFT's groundbreaking, patented technology helps educate viewers on the dangers

and damage of live streaming piracy and also provides viewers with a link for legal viewing, disrupting the false belief that viewers are anonymous.” (Ultimate 2018). With this move the UFC has further “beefed up” their security towards PPVs making it harder and riskier to illegal stream PPV events.

In a recent update after this paper was started, the UFC has signed a five year deal with ESPN to broadcast all events including PPVs and regular access “Fight Nights”. The UFC switched from the FOX network, having their last event air on FOX at the end of 2018 and began airing on ESPN in January of 2019. The deal is estimated to be worth around \$1.5 billion and the events will be exclusively broadcast from ESPN+ (ESPN 2018). This is significant because it can be argued that the PPV model that the UFC has been relying on has not been efficient in gaining the most revenue. This is because the ESPN+ broadcasting system requires viewers to subscribe to ESPN+ in order to view the PPVs that the UFC creates. This may help unify where a viewer can find the product and also create more marketing around the UFC since they are now partnered with arguable the biggest broadcasting network in sports. The deal can also give the UFC breathing room when it comes to relying mostly on PPV revenue. ESPN paid \$1.5 billion to acquire the UFC for five years meaning the company is getting \$300 million a year just for signing with ESPN. On the other side of the argument, This deal may harm UFC PPV buyrates. Adding an additional pay wall before you can purchase a UFC PPV may turn casual fans off. Having to pay for a subscription as well as the fight may not be worth it in the case of casual fans as well as avid fans.

Lessig's Modalities and the use of TPB in rationality allow for us to understand the opportunity costs the consumer must deal with. Weighing the costs and benefits of digital piracy through the economic eye of marginal utility and opportunity costs shows us that fear of punishment by law, markets pricing too high, social norms of today's digital piracy, and architecture of the internet are all factors that go into consumers choosing to illegal consumer content. Rationality and the concepts from TPB also help understand how future piracy continues. By continuing the action without repercussion an individual will therefore perform the action more. It also works in reverse; if a individual receives an undesired result through the use of an action, they will most likely avoid doing it again. The TPB illustrates that through this rationality there also must be motivation and an attitude towards the action that is being evaluated in order for this thought process to take place. Through these concepts we can acknowledge that PPVs are also apart of this behavioral decision making when choosing whether or not to partake in digital piracy in the sports broadcasting world. When diving deeper into a company that focuses heavily on PPVs for one of its main sources of revenue, we find much volatility. This volatility can be attributed to the advancement of technology allowing people to figure out ways around having to pay for their programs and watch them for free through illegal substitutes. We've observed through statistical data how digital piracy is viewed and how many people partake in it globally. There is an obvious trend that digital piracy is a normal occurrence amongst most people who have a

computer, especially to the younger generations. Because of this, the UFC has made many efforts in fighting against digital piracy and illegal streaming by cracking down on websites and joining up with copyright organizations to protect their product. However, with the new ESPN deal, the UFC PPV model has been slightly modified and may benefit both the UFC and ESPN in the process. ESPN acquiring the rights to broadcast the UFC should attract more people to subscribe to the ESPN+ platform that is required for viewing and the UFC should be able to rely on the big payout of ESPN as insured revenue for the years to come. However, nothing is certain. There are still going to be people who prefer pirating over paying, and they will continue to illegally stream this content. It may be impossible to stop the negative externality the UFC faces from pirate websites, but there should be a way to shrink it. With an understanding of how this market works and creating more literature surrounding these problems, there may be a solution that can eliminate the uncertainty between consumer and producer. I believe the main problem is within the value that consumers see the PPVs to be worth and the value the UFC sees it. The sport needs to follow in the footsteps of others such as the MLB, NBA, and NFL. If they find a way to eliminate the need to rely on PPVs and broadcast freely, more people may begin to enjoy watching the sport, resulting in a larger audience creating a demand for the sport. The answer to creating that demand may rely on stronger marketing towards fighters or events, giving something fans can attach to; like being attached to a team that comes from your city. However, this is easier said than done. For now, consumers will still face the choice of watching PPVs

for free and taking on the risks that come with it or paying for them and watching them as they were intended.

## Bibliography

Christ, Scott. "Mayweather v McGregor: Final Pay-per-View Numbers Are Official." *Bad Left Hook*, 14 Dec. 2017, <https://www.badlefthook.com/2017/12/14/16779010/mayweather-v-mcgregor-final-pay-per-view-numbers-are-official>.

Cronan, Timothy Paul, and Sulaiman Al-Rafee. "Factors That Influence the Intention to Pirate Software and Media." *Journal of Business Ethics: JBE; Dordrecht*, vol. 78, no. 4, Apr. 2008, pp. 527–45. *ProQuest*, doi:<http://dx.doi.org/10.1007/s10551-007-9366-8>.

ESPN. "UFC, ESPN Agree to 5-Year, \$1.5B Rights Deal." *ESPN.Com*, 23 May 2018, [http://www.espn.com/mma/story/\\_/id/23581729](http://www.espn.com/mma/story/_/id/23581729).

Fox, Jeff. "All-Time UFC PPV Buyrates." *The Sports Daily*, 16 Feb. 2018, <https://thesportsdaily.com/2018/02/16/all-time-ufc-ppv-sales-data-fox11/>.

"Global Number of Visits to Media Piracy Sites by Country 2017 | Statistic." *Statista*, <https://www.statista.com/statistics/786046/media-piracy-site-visits-by-country/>.

Accessed 7 Feb. 2019.

Granados, Nelson. "Tens Of Millions Watched Mayweather Beat McGregor On Pirate Streams." *Forbes*,

<https://www.forbes.com/sites/nelsongranados/2017/08/28/tens-of-millions-watched-mayweather-beat-mcgregor-on-illegal-streams/>. Aug 2017. Accessed 11 Mar. 2018.

Hill, Charles W. L. "Digital Piracy: Causes, Consequences, and Strategic Responses." *Asia Pacific Journal of Management: APJM; Singapore*, vol. 24, no. 1, Mar. 2007, pp. 9–25. ProQuest, doi:<http://dx.doi.org/10.1007/s10490-006-9025-0>.

Holland, Jesse. "UFC Lobbies Capitol Hill, Outspends MLB & NBA." *MMAMania.Com*, 2 May 2013, <https://www.mmamania.com/2013/5/2/4294052/ufc-outspends-mlb-nba-lobbying-capitol-hill-fight-against-online-video-piracy-mma>.

Kos Koklic, Mateja, et al. "Three-Level Mechanism of Consumer Digital Piracy: Development and Cross-Cultural Validation." *Journal of Business Ethics: JBE; Dordrecht*, vol. 134, no. 1, Mar. 2016, pp. 15–27. ProQuest, doi:<http://dx.doi.org/10.1007/s10551-014-2075-1>.

"Public Opinion on Media Piracy by Age Group in the U.S. 2017 | Statistic." *Statista*, <https://www.statista.com/statistics/742454/media-piracy-theft-by-age/>. Accessed 1 Nov. 2018.

Reams, Lamar. *An Analysis of the Involvement and Motives of Ultimate Fighting Championship Pay-per-View Consumers*. University of Northern Colorado, 2012. ProQuest, <https://search.proquest.com/abicomplete/docview/1284867046/abstract/1F34B40061864AF2PQ/3>.

“Reasons for Downloading TV Files and Movies in the U.S. 2011 | Survey.” *Statista*,  
<https://www.statista.com/statistics/254490/reasons-for-downloading-tv-files-and-movies-in-the-us/>. Accessed 1 Nov. 2018.

Shemroske, Kenneth. “Describing Online File Sharing Behavior and Perceptions of Pay Channels for Digital Media.” *Academy of Information and Management Sciences Journal*, vol. 17, no. 2, 2014, pp. 15–29.

“TV Consumption Methods among Millennials 2017 | Statistic.” *Statista*,  
<https://www.statista.com/statistics/281859/tv-consumption-adult-millennials/>. Accessed 1 Nov. 2018.

Ultimate Fighting Championship. “UFC Takes Steps To Prevent Piracy Of Its Biggest Pay-Per-View Ever.” *UFC.com*, October 6, 2018.  
<http://www.ufc.com/news/UFC-Takes-Steps-To-Prevent-Piracy-Of-Its-Biggest-Pay-Per-View-Ever>. Accessed 25 Oct. 2018.

Ultimate Fighting Championship. “UFC Takes Down Illegal Stream Website.” *UFC.com*, February 10, 2014 <http://www.ufc.com/news/ufc-takes-down-stream-site>. Accessed 30 Oct. 2018.

“UFC Pay-Per-View Revenue 2001-2014 | Statistic.” *Statista*,  
<https://www.statista.com/statistics/682064/pay-per-view-revenue-of-ultimate-fighting-championship/>. Accessed 31 Oct. 2018.

“U.S. Households with Home Internet 2017 | Statistic.” *Statista*,  
<https://www.statista.com/statistics/189349/us-households-home-internet-connection-subscription/>. Accessed 26 Feb. 2019.

- Vida, Irena, et al. "Predicting Consumer Digital Piracy Behavior." *Journal of Research in Interactive Marketing; Bradford*, vol. 6, no. 4, 2012, pp. 298–313. *ProQuest*, doi:<http://dx.doi.org/10.1108/17505931211282418>.
- Wang, Chia-chen, et al. "Pirate or Buy? The Moderating Effect of Idolatry." *Journal of Business Ethics: JBE; Dordrecht*, vol. 90, no. 1, Nov. 2009, pp. 81–93. *ProQuest*, doi:<http://dx.doi.org/10.1007/s10551-009-0027-y>.
- Williams, Peter, et al. "The Attitudes and Behaviours of Illegal Downloaders." *Aslib Proceedings; Bradford*, vol. 62, no. 3, 2010, pp. 283–301. *ProQuest*, doi:<http://dx.doi.org/10.1108/00012531011046916>.
- Wong, Donna. "The EPL Drama – Paving the Way for More Illegal Streaming? Digital Piracy of Live Sports Broadcasts in Singapore." *Leisure Studies*, vol. 35, no. 5, Oct. 2016, pp. 534–48. *EBSCOhost*, doi:[10.1080/02614367.2015.1035315](https://doi.org/10.1080/02614367.2015.1035315).