

DEVELOPING A THEORY OF SUBJECTIVITY FOR VIDEO GAMING

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Abstract

Video game studies in mainstream psychology are often limited to investigating the positive and negative effects of playing on mental health. The few studies that explore immersion in video games mostly adopt a pathologizing perspective towards the phenomenon of immersion. These studies adhere to a reductionist perspective trying to make a direct link between violence, depression, or anxiety and playing video games. I argue that to fully understand the subjective experience of video gaming, there is a need to develop a theory of subjectivity that can explain why and how immersion happens in the experience of playing video games. To develop this theory, I compare the experience of playing video games to the experience of watching a movie and then, based on preexisting subjectivity theories in cinema, I try to develop a similar theory for gaming experience. First, I review the literature on video gaming to illustrate the need to develop a coherent theory addressing video gaming subjectivity. Second, I unpack the suture theory in cinema which serves as a template for my theory for video games. Then, I present the collected empirical data with a qualitative inquiry mapping out the differences between video gaming and movie watching, as well as serving to understand the subjective experience of playing video games in gamers. Finally, based on the empirical data and my theoretical insights, I provide a theory of subjectivity which I call gaming-based suture, as opposed to cinema-based suture, which explains the subjective experience of playing video games.

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Introduction

According to Newzoo's latest Global Games Market Report (Wijman, 2018), about 2.3 billion gamers across the globe generated \$137.9 billion in game revenues in 2018. This figure represents an increase of \$16.2 billion, or 13.3%, from the year before. Hence, in 2018, the video game industry made three times more money than the film industry which hit only \$41.7 billion (McNary, 2019). For comparison, the music industry generated \$43 billion in 2018 (Sanchez, 2018). It is expected that the consumers will spend \$180 billion annually by 2021 on video games; compared to the industry's revenue in 2012, which was \$70.6 billion, this growth puts the compound annual growth rate for this industry over a 10-year period at 11%, which is a remarkable accomplishment for even a single company, let alone an industry (Wijman, 2018).

According to Lofgren (2017), there are approximately 2.3 billion gamers in the world, constituting roughly one third of the world population. The average age of the gamers is 35. About 65% of households own a device that is used for gaming; 59% of the gamers are male and 41% are female. The age breakdown of video gamers shows that 28% of them are under 18 years old, 29% are between 18 and 35, and 43% of them are above 35 years old. The devices which are used for gaming include a variety of affordable devices such as personal computers, cell phones and gaming consoles.

It seems that playing video games is more prevalent among teenagers. Lenhart, Kahne, Middaugh and Vitak (2008) report that 99% of boys and 94% of girls aged 12–17 play video games worldwide, with 50% of them having played “just yesterday”. However, gaming does not end with teenage years. Lenhart, Jones and McGill (2008) report that 89% of adults between 18–29 years old play video games worldwide. Of this total, 53% of the gamers live in urban areas and 47% in suburban and rural areas. Regarding education level, 40% of the gamers report

having less than a high school diploma education, 51% are high school graduates, and of these 57% of them have at least some college education. These researchers did not find any significant relationship between income level and gaming.

In Dauphin and Heller's (2010) report the average gamer (n=164) in United States spends 11.45 hours (SD=11.97) per week playing video games, with a median of 8 hours. The average number of hours for the gamers who play Massive Multiplayer Online Role Playing Games (MMORPG) is about 22 hours per week. There exists a small segment of the gamer population (4% of the gamers) who are called "extreme gamers" and spend more than 50 hours per week playing video games.

Part of the popularity of video games is due to the technological advancement in video gaming in the past couple of decades. While video gaming devices were only affordable by rich families in late 1980s and 1990s, the 21st century presented a giant leap in terms of technology, which made the advanced gaming devices affordable for many families. In fact, many smartphones and consoles come with pre-installed games, and many online games can be played for free. This high accessibility was probably the main reason that made gaming culture part of the popular culture. Even those who don't actively play games are exposed to the news and cultural presentation of gaming culture. For example, 94% of American consumers recognized the character PAC-MAN (BradyGames, 2010). In recent years, Hollywood has tried to make money out of video game culture, making blockbuster movies inspired by video games; movies like *Tomb Raider* (2018), *Need for Speed* (2014), *Prince of Persia* (2010), and *Warcraft* (2016) have made millions of dollars at the box office.

Considering the above-mentioned numbers and statistics and the ever-increasing popularity of video games, it seems that video games are more than a passing fad; they are here

to stay and thrive, and consequently, the dangers and benefits of video gaming turn into major concerns for parents, psychologists and educational institutes. A quick search using the key words “video games” in the PsycInfo database retrieves more than 7000 results (as of February 2019). Therefore, the first chapter of this study is dedicated to a literature review. The existing literature on video games can be divided into three categories. Researchers in the first category study the negative effects of video games and suggest some interventions to avoid these perils. The second group of researchers tries to take a more optimistic approach; their articles acknowledge that video gaming is a phenomenon which is here to stay and grow. They are looking to see this development as an opportunity that can be used in positive and constructive ways. The third category refers to case studies, usually studying a specific game or genre.

Chapter 1: Status of Traditional Research

Negative Effects of Video Games

According to King, Delfabbro, and Griffiths (2009), the literature on negative effects of video games can be divided into two categories: 1) research about the addictive nature of video games, and 2) research about the relationship between video gaming and psychological factors like violence, depression, anxiety, self-esteem, and social isolation, to give a few examples.

Addiction

In June 2018, the World Health Organization (WHO) added the category of gaming disorder to its eleventh edition of *International Statistical Classification of Diseases and Related Health Problems* or ICD-11 (Balhara, 2018). Although the latest version (2013) of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* did not include gaming addiction in its validated disorders list, it was added to the *DSM-5*'s further study section, which created heated debates (Griffiths et al. 2016). It is estimated that 4–8% of gamers can be described as addicted or problematic gamers (Wittek, Finseras, Pallesen, Mentzoni, Hanss & Molde, H., 2015). A growing body of literature investigates the addictive nature of video games. Griffiths and Meredith (2009) summarize the symptoms of gaming addiction as follows:

According to some reports, the symptoms of computer addiction are quite specific and include both psychological and physical symptoms. Psychological symptoms include: (1) having a sense of well-being or euphoria while at the computer, (2) inability to stop the activity, (3) craving more and more time at the computer, (4) neglect of family and friends, (5) feeling empty, depressed, irritable when not at the computer, (6) lying to employers and family about activities, and (7) problems with school or job. Physical symptoms include: (1) carpal tunnel syndrome, (2) dry eyes, (3) migraine headaches, (4) back aches, (5) eating irregularities, such as skipping meals, (6) failure to attend to personal hygiene, and (7) sleep disturbances, change in sleep pattern (p. 248).

Some questionnaires have been developed based on these criteria, usually asking gamers to respond with a “yes” or “no” answer to the questions about their gaming experience in the past year or the past six months, where those who have at least five of these criteria are considered gaming addicts or problematic gamers (Gorman, Gentile & Green, 2018). Hedden (2015), however, believes that the addiction symptoms in problematic gamers are not the consequences of their excessive gaming but rather of their personality traits which make them susceptible to any other addiction. He points out that the prevalence rate of 4–8% is very similar to the figure for the prevalence of alcohol or drug addictions. Yen et al. (2017) claim that video gaming addiction is associated with attention deficit disorder, and Ko et al. (2005) argue that video gaming is the result of high impulsivity in some gamers. Wood (2008) proposes that the reason for gaming addiction is the gamers’ poor time management skills, claiming it has nothing to do with the addictive nature of the games. Yee (2006) argues that gaming motivations are the primary predictors of gaming addiction. He identifies three motivators: achievement, socialization, and immersion within games. Achievement refers to gamers’ desire to advance and progress in the game, while immersion refers to escapism that motivates some gamers to play video games to escape real-life problems. However, Dauriat et al. (2011) suggest that there is no relationship between motivators and the tendency to become a gaming addict. Instead, they show that there is a positive correlation between the amount of time spent on gaming and addiction.

Violence

There is a large body of literature that has investigated the relationship between playing violent video games and subsequent aggressive behaviours in the gamers. In an experimental study, Pusateri (2006) examined the negative impacts of violent video games on gamers’ aggressive behavioural intentions and showed that the subjects who played violent games

showed more hostile and negative emotions compared to the control group who played non-violent games. Bartholow, Sestir and Davis (2005) reported that video game-related violence exposure (VVE) is positively correlated with self-reported aggressive behaviour and found this relation to be robust even when controlling for multiple aspects of personality. Anderson and Carnagey (2009) investigated the effects of violent content in video games which have a competitive nature. Participants played either a non-violent competitive sports game (like football or basketball) or an excessively violent sports game. The authors suggest that violent content uniquely leads to aggressive thoughts and behaviours and hold that this increased aggression has nothing to do with the competitive nature of these games.

Adachi and Willoughby (2013) do not agree with Anderson and Carnagey (2009) and claim that competitiveness in games is a predictor for aggressive behaviour. Their longitudinal study, which followed about 1500 participants over the course of three years, suggests that as adolescents transition into adulthood, they show more aggressive behaviours in various competitions and this aggression is evident in any type of competition including video games. Craig Anderson, one of the researchers who has been very active in the area of video games and its association with aggression, claims that he decided to discontinue the research because the evidence for a positive association between playing video games and subsequent aggressive behaviour is so strong and conclusive that he does not see any need to do more research in this area (Anderson et al., 2010). He and his colleagues, using meta-analytic procedures, report that the exposure to violent video games is a causal risk factor for aggressive behaviour, aggressive cognition, and aggressive affect, as well as for decreased empathy and prosocial behaviour. They claim that there is no difference in terms of culture and sex. Ferguson and Kilburn (2010) discuss the claims made in Anderson et al. (2010) and compare that work to real-world data on youth

violence. They criticize Anderson et al. (2010) for methodological problems, saying that they included many studies that are not related to serious aggressive behaviour and also contending that they concentrated on bivariate correlations rather than controlled estimate of effects.

Ferguson and Kilburn (2010) believe that the effect size in Anderson et al. (2010) is very small ($r=0.152$), equivalent to 2.31% of the variance explained. In a more recent study, Hilgard, Engelhardt & Rouder (2017) report that the large meta-analysis done by Anderson et al. (2010) has three major problems. First, there is a substantial publication bias in experimental research on the effect of playing violent video games on aggressive behaviour. Second, the effect size reported in the study is very small; third, studies which fit authors' criteria for methodological quality do not result in larger adjusted effects than other experiments, but instead yield larger indications of bias, indicating that perhaps those studies were selected for significance.

While there is considerable controversy about violence in video games and their potential risk for causing aggressive behaviour, it is important to note that many video games sold in the U.S. do not carry a mature (M) rating. According to the latest statistics released by the Entertainment Software Rating Board (ESRB), in 2018, only 13% of the games were assigned an M rating. According to this report, 34% received an E rating, which means the game is suitable for everyone; 22% received E10+, which is considered safe for users above 10 years old; 31% were assigned a teen (T) rating (Entertainment Software Association, 2010) and this is due to the fact that there is not yet a definite link between aggressive behaviour and video gaming to convince ESRB to be more strict in this regard.

Depression

Several studies have examined the relationship between playing video games and depression. Lemola et al. (2011) claim that the amount of time spent playing video games is

associated with depressive symptoms. These researchers also report that playing games between 10:00 p.m. and 6 a.m. is related to an increased risk of high depression scores independent of the total amount of playing. Gentile et al. (2011) believe that pathological gaming is associated with higher depression rate among youth and adolescents. Their research, which followed 3034 students in elementary and secondary schools over a two-year period, shows that pathological gaming is similar to other addictions and has the same psychological consequences. Mentzoni et al. (2011) propose a similar argument, saying that in problematic gamers, depression often accompanies other negative consequences like drug addiction, alcohol addiction and conduct problems.

However, there are other studies that claim the opposite. Desai, Krishnan-Sarin, Cavallo and Potenza (2010) report that playing video games is not associated with negative health outcomes including depression. In fact, they even claim that the female players, in their sample of 4028 participants, showed lower scores in depression scales compared to non-gamers. Ferguson, Coulson, and Barnett (2011) analyzed thirty-three published studies in a meta-analysis and they report that comparing excessive gaming habits with gambling or other addictions leads to spuriously high prevalence estimates, potentially due to identifying non-pathological gamers as pathological. They suggest that diagnostic tools which consider the interfering nature of playing games on other life needs and responsibilities are more valid. Snider (2011) suggests that playing video games casually can actually reduce depression. He recruited 59 participants who were already suffering from depression. The researcher divided them into two groups: the first group played casual video games like Bejeweled 2, Peggie, and Bookworm Adventures, and the second group served as the control group. Those who played games showed significant reduction

in their depression scores. This effect was both short term (30 minutes after playing) and long term (one month after).

Despite the great number of studies which focus on the relationship between playing video games and depression, there is still a lack of consensus concerning the results. The potential negative impact of video gaming on depression depends on the individual and contextual factors (Brunborg, Mentzoni & Frøyland, 2014). It is possible that these results are affected by a third variable like anxiety, socio-economic status, family relationships, sensation seeking, etc. Normally, researchers try to control these variables using regression models, and these omitted variables can cause biased results (Verbeek, 2012).

Academic Achievement

There is a growing number of studies which are focused on the relationship between video gaming and academic achievement or work interference. Brunborg et al. (2014) report that video gaming is related to lower academic achievement. However, they add to their conclusion that these negative impacts are likely related to their other facets of life. Many of the studies done in this area are correlational, often finding significant correlations between video gaming and lower academic performance. For example, Peng and Liu (2010) report that online gaming negatively impacts academic achievement and causes professional problems ($r=.71$). Anderson and Dill (2000) suggest that the time spent on playing video games is negatively correlated with GPA scores for a college student sample ($r=.20$). Anand (2007) reports similar results and claims that the time spent on playing video games is negatively correlated with both GPA and SAT scores. However, he is cautious in interpreting the results, saying that his study does not show any cause and effect relationship and these effects may be cumulative considering the complex nature of student life and academic performance. Adachi and Willoughby (2013) reject these

claims and set out to show that the relationship between playing video games and grades at school is an indirect positive relationship. They propose that playing video games is associated with higher self-reported problem-solving skills, and in turn, higher self-reported problem-solving skills predict higher academic grades. However, they studied only strategic video games and did not use any other genres in their study, which raises the question of whether different genres of video games have different impacts on academic performance.

It is possible that a third variable is involved in the relationship between gaming and academic performance. For example, Nielsen (2010) reports that the peak gaming hours fall between 7–11 pm for both males and females. Therefore, it is possible that lack of sleep is responsible for lower academic performance, not the video games per se. However, even in that study, it is not clear whether players stay up late to play video games or whether they play video games because they cannot go to sleep. In a review article, Emes (1997) reported that the research done in this area has produced contradictory results and there is no clear causal relationship between video gaming and academic performance.

Anxiety

Arriaga, Esteves, Carneiro and Monteiro (2006) report that playing violent video games causes higher levels of anxiety and hostility. Ohannessian (2018) suggests that gender moderates the relationship between video gaming and anxiety. In her longitudinal study, she shows that boys who played video games the most had the lowest levels of anxiety, whereas girls who played video games the most had the highest levels of anxiety. González, Espada and Tejeiro (2017) suggest exactly the opposite. In their study, which includes 380 gamers, they show that male gamers spend more time playing online games, with a direct relationship between time spent on gaming and increased anxiety ($r=.24$). They claim that there is no relationship between

gaming and anxiety in female players. Loton, Borkoles, Lubman and Polman (2016) report that coping is a mediator between playing video games and depression, anxiety, and stress. They claim that coping explains a large portion of this relationship; however, they suggest that even after accounting for coping, there is still a direct relationship between gaming and anxiety, and playing video games increases the players' anxiety. Their results show that after accounting for coping, there is no direct relationship between gaming and depression and anxiety. However, there are other studies which suggest that playing video games actually reduces anxiety. For example, Jordan (2010) believes that the effects of playing video games is moderated by the player's attachment styles. Using Bowlby and Ainsworth's attachment theory, Jordan shows that people with insecure attachment and higher social anxiety are positively impacted by their online gaming relationships. In an experimental study, Fish (2016) demonstrates that playing casual video games can decrease anxiety. He claims that playing video games four times a week (30–45 minutes each time) reduces anxiety significantly and the effect is medium to large.

Attention

Playing video games has been associated with greater subsequent attention problems in children and adolescents (Swing, Gentile, Anderson & Walsh, 2010). There are studies suggesting that the amount of time spent on video games is directly related to severity of the attention problems in gamers (Gentile, Swing, Lim & Khoo, 2012). According to these researchers, violent content may have a unique effect on attention problems but total time spent on playing video games seems to be a more consistent predictor. They suggest that their results indicate a bidirectional causality, and therefore individuals who have more attention problems spend more time playing video games, even when the initial video gaming is statistically controlled.

There are other studies that suggest playing video games actually improves attention skills. For example, Boot, Kramer, Simons, Fabiani and Gratton (2008) propose that expert video gamers outperform non-players on measures of basic attention and performance. According to their research, playing action video games increases attentional skills both in terms of speed and accuracy. Gasper et al. (2014) suggest a similar result, but they are more cautious in their interpretation. They claim that gamers are equally susceptible to the costs of dividing attention in complicated tasks, and the perceptual and attentional benefits associated with playing action video games may not translate to performance benefits in complex, real-world problems. West and Bailey (2013) acknowledge these contradictory results in the literature and claim that the reason for these seemingly opposite results may have something to do with the conceptual definition of attention. They divide attention into three separate domains: visuospatial processing, executive functioning and emotional functioning. Their literature review reveals that playing video games can enhance and disrupt various aspects of attention.

Physical Health

Aside from mental health, researchers also debate about the negative consequences of video games on physical health. The research in this area can be divided into four categories: physical inactivity, seizures, eye strain and repetitive motion injuries. The time spent on playing video games may not leave enough time for physical activities such as sports and exercises. Ballard, Gray, Reilly and Noggle (2009) report that the amount of time spent playing video games is positively correlated with body mass index ($r=.27$) and negatively correlated with frequency of exercise ($r=-.21$) and days of walking ($r=-.22$). They suggest that these results are stronger among online gamers. Although their findings are statistically significant, the effect sizes are not large. King and Delfabbro (2009) define “heavy” gamers as those players who play

more than 30 hours a week and at least four days a week. They claim that the majority of heavy gamers don't meet the national guidelines for weekly exercise and report some sleep-related problems. Furthermore, these gamers score significantly lower on measures of physical functioning, mental health, vitality, general health and social functioning.

There are also concerns in the literature regarding repetitive motion injuries acquired due to extensive video game playing. Some researchers have studied the impact of extensive gaming on hands (e.g. Karim, 2009; Macgregor, 2000) due to excessive use of gaming controllers. These injuries can be extended to shoulders and neck as well (Ramos, James & Bear-Lehman, 2005). The famous example of this type of injury in pop culture goes back to 2006, when Detroit Tigers pitcher Joel Zumaya was benched during October's American League Championship series with inflammation in his right arm. At first, the team doctors thought that it was due to playing in different weather, but it turned out that he was a heavy video gamer and that's where he got his hand injury (Orland, 2006).

With all these contradicting results about the negative effects of video gaming on mental and physical health, it seems to me that it all depends on the researchers and their specific view or agenda. For example, the researchers who claim on the negative effects of video gaming on aggressive behavior constantly keep producing results that confirm their view while their critics constantly produce opposite results. It seems that the researchers in this field are divided into two groups: the first group who see video games as a threat to mental health and they are against it and the second group who think that video games are not dangerous at all and they can even be beneficial.

Potential Benefits of Video Gaming

So far, the focus in this literature review has been on the negative effects of video gaming on gamers' mental and physical health. However, there are numerous studies which have investigated the benefits of video gaming. In this section, I present some of the studies done in this vein.

Prosocial Behaviour

The literature exploring the positive effects of video gaming is increasing every year. Some of these studies examine the relationship between gaming and certain psychological aspects. For example, Geritemeyer and Osswald (2010) suggest that prosocial video games have positive effects on prosocial behaviours. The participants in this study who played prosocial video games were more likely to help others who needed help, to intervene and stop a harassment situation, and to spend more time and energy assisting family members in daily chores. The researchers suggest that exposure to prosocial video games primed the prosocial behaviour in players' thoughts and hence that they had more accessibility to prosocial behaviour when needed. In another study, Harrington and O'Connell (2016) report that the prosocial video gaming is positively associated with cooperation, sharing, empathy and positive affective relationships. This association remained significant after controlling for socioeconomic status, playing time, age and gender. The researchers suggest that the content of the video games predicts the consequent violent or prosocial behaviour. Geritemeyer (2013) shows that the element of cooperation in multiplayer games increases empathic concern. In that study, players who played in teams reported more empathy than the players who played on their own.

Educational Benefits

A common claim about video games is that they are addictive or engaging. The question is whether video games can be used to increase engagement and boost motivation in an

educational environment. One of the early investigations studying the potential benefits of gaming on education was done in the U.S. Navy in 1980. In this study, Jones, Kennedy and Bittner recruited U.S. Navy personnel (19–24 years old, males) and gave them a simulation game for air combat in an Atari console. The study lasted for 15 days and the participants played 10 times a day. The researchers concluded that the game increased their performance, adding that “the subjects, so far from becoming bored with their work, become involved with it” (Jones, Kennedy, & Bittner, 1981, p. 151). Since then, many other studies have explored the educational potential of video games. Squire (2011) reports that gaming can be used to develop academic interests and increase learning speed. Ruggiero (2014) shows that video games can be a valuable tool in teaching problem-solving skills, and Gross (2009) suggests that human sexuality issues can be taught more effectively using video games. Barr (2018), using qualitative interview data, claims that games can be useful in developing skills and competencies in university-level students. Lynch, Aughwane & Hammond (2010) suggest that a meta-analysis of 12 journal articles shows that training on video games can improve endoscopic surgical techniques for surgeons in training. In a recent study, Lesser (2019) shows that video games are very effective in teaching music to students. He adds that the benefits also include increased motivation, engagement, and a hands-on approach to learning that is based on the students’ individual needs.

Stress Relief

When gamers are asked about their reason for playing video games, one of the most common answers is stress relief (Game Vision Europe, 2010). Whitbourne, Krauss, & Akimoto (2013) report that their survey of more than 10,000 gamers ranging from 18 to 80 years old shows that stress relief is the main reason for playing video games amongst middle-aged adults. Russoniello, O’Brien, & Parks (2009) suggest that playing video games casually decreases stress

level and improves general mood in gamers. They used the Profile of Mood States (POMS) depression sub-scale score before and after playing games in casual gamers, and they found out that the participants showed lower stress levels after playing games. This relief was also verified by changes in heart rate and relaxation of the autonomic nervous system.

Gaming can also be an effective strategy to distract oneself from an aversive experience. Vasterling, Jenkins, Tope & Burish (1993) suggest that cancer chemotherapy patients who are distracted by playing video games report less nausea before chemotherapy and lower systolic blood pressures after chemotherapy than controls. In another similar study, Pegelow (1992) shows that playing video games in patients with sickle cell disease decreases their pain.

Cognitive Functioning

There is a rich literature on the positive effects of video gaming on various cognitive functions. Wilms, Petersen & Vangkilde (2013) report on the improvements on the encoding speed to visual short-term memory after playing video games, and De Giglio et al. (2015) suggest that gaming increases sustained attention and executive functions in subjects with multiple sclerosis. Using a meta-analysis including twenty experimental studies published between 1986 and 2013, Toril, Reales, & Ballesteros (2014) suggest that playing video games improves cognitive abilities such as reaction time, attention, memory, and global cognition. Glass, Maddox, & Love (2013) suggest that training in action video games enhances the speed of perceptual processing. Using a meta-analytic Bayes factor approach, they show that the games which require fast switches between multiple sources of information lead to a large increase in cognitive flexibility. Pavan, Boyce & Ghin (2016) suggest that video games have positive effects on direction discrimination of parafoveal translational global motion.

Social Interaction

Many video gamers play games online with other people and consider it a social activity. The ESA report (2010) shows that 88% of gamers play online games with others (i.e., they interact online) and 64% of the gamers play games in person with others (i.e., others are physically present). Cole and Griffiths (2007) claim that the gaming environment is a highly socially interactive environment, providing the opportunity to create strong friendships and emotional relationships. Their research introduced the social aspect of gaming as one of the major elements in the enjoyment of playing. They conclude that playing video games provides an opportunity for the gamers to express themselves in a way that they may not feel comfortable doing in real life because of their appearance, gender, sexuality, race or age.

The element of social interactions are more palpable in a certain genre called “massively multiplayer online role-playing games” (MMORPGs), which is an immersive virtual fantasy world in which players cooperate and compete with each other. Although they are still considered games, MMORPGs’ strong social aspect makes them a communication tool in which gamers make friends; form groups, clans and communities; and work together to achieve certain goals. Barnett & Coulson (2010), who studied these games for several years, suggest that these games imitate real-world interactions in which communication skills play an essential role in achieving goals. Their research shows that the leadership skills learned in these games are transferrable to real-world situations.

In sum, based on this morass of contradictory results, it seems that we do not really know what the general effects of video gaming are – because there are no general effects – it all depends on so many other “factors”. Instead of reductionistic approaches which focus on one psychological aspect and its relationship with video gaming, there seems to be a need for a more thorough approach that focuses on the subjective experience of gamers. Without any theoretical

basis for the nature of video gaming subjectivity, these kinds of studies remain mired in methodological and conceptual and interpretive ambiguity.

Studies About Immersion in Video Games

Aside from the literature on positive or negative effects of gaming, there are some studies that focus on particular games or genres and discuss their effects on subjectivity within a specific domain. Another group of studies try to explain immersion in certain video games. For example, Chess (2014) studies games with romantic narratives and shows how these games affect players' notion of romance. She argues that the masculine hegemony of video games creates certain expectations about video games' narratives which may marginalize female players. However, the video game industry aims to extend its market and attract new audiences, and therefore it has extended video game narratives to include the romance genre. Chess (2014) claims that romance is an experience that can be understood as both general and specific as well as generic and subjective. The games in this genre often deal with questions about identity and subjectivity. The researcher argues that the interactive nature of video games and how gamers deal with romance in video games creates a new subjectivity that challenges traditional notions of identity and subjectivity within the romance.

Plymire (2009) analyzes sport video games and explains how video games reflect qualities of immediacy and hyper-mediation to create immersive gaming experiences. Then, he goes on to show how immersion in sport video games creates a relationship to the body and the self that is categorically different from those created by televised sport. He argues that digital technologies are remediating sports in ways that invite users to adopt posthuman subject positions. The researcher focuses on a specific sports game, MNFL, which is an American

football video game series. He argues that American football has represented itself as the quintessence of American masculinity, depicting it as rugged, heroic, violent and heterosexual. The football hero is the embodiment of neoliberal subject, “whose will power and rational, pragmatic intellect propel him to the forefront of masculine endeavours” (Plymire, 2009, p. 18). He suggests that the MNFL video game has challenged this image in the way that has dissociated it from the liberal masculine subject and rearticulated it in terms that are posthuman creating a subjectivity that challenges and normalizes real-life stereotypes around gender, race and sexual orientations in American football.

There are some studies which try to define immersion in video games and explain its causes. Although the word immersion is used a lot in gaming communities, it is not very clear what it actually means. Maybe the closest term in psychology is Csikszentmihalyi’s (2008) concept of “flow” which is defined as an experience during which the person is fully involved in the activity, so much so that the sense of time is altered and sense of self is lost. Any distraction during this experience erases the flow. Similar to flow, immersion is defined as the degree of involvement in a game (Brown & Cairns, 2004). The sense of immersion is positively correlated with the sense of enjoyment in playing video games. Using a grounded theory analysis, Brown & Cairns (2004) interviewed gamers to understand the experience of immersion better. They argue that immersion has different degrees, and they distinguish between engagement, engrossment and total immersion. Although they conclude that the reason for immersion is unclear, they suggest that it may have something to do with the structure of schemas in narrative, which differentiates engagement from immersion.

Bowman and Standiford (2016) focus on a specific genre, role-playing games, and they try to explain immersion alongside player motivation theories. Although immersion and the

motivation to play video games are two separate concepts, the researchers argue that they are directly related to each other. They claim that the individuals have phenomenological differences regarding to how they experience immersion. Other researchers have studied different forms of immersion as well. For example, Adams (2004) talks about “immersion into activity” which focuses on repetitive activity, doing something over and over with a certain degree of agency. This kind of immersion is very close to the concept of flow that we already talked about. White, Harviainen and Boss (2012) talk about “immersion into game” which refers to players’ willingness to pursue the goals and achievements in games, following the rules and guidelines set by the game. Achieving these goals requires cognitive skills, problem-solving, speed, abstract reasoning and cooperation and tactical strategies.

One of the most prominent features of video games is the environment of the game. It is a space in which certain rules apply and these rules are usually unique to that specific game. Calleja (2011) argues that this “immersion into environment” or “spatial immersion” includes inspecting these specific rules and unique aspects of the game’s virtual world. In this type of immersion, players have a virtual presence which inhabits the virtual world of the game. The author suggests that the more realistic this environment becomes, the more immersion will be experienced by the players.

Cover (2010) emphasizes the importance of narrative in video games and attributes the immersion to “immersion into narrative”. Stories are engaging, whether they are experienced in books, movies or video games. Narrative helps the mind to be transported into another time and space which is usually facilitated by the characters in the game. However, McDiarmid (2011) believes that “immersion into character” is actually deeper and stronger than immersion into narrative. He argues that players should pretend to believe what happens in the game and react

faithfully in order to experience an immersion, and he further claims this is only possible by immersion into character.

One of the main features of the modern video game is the social aspect of the game. The social aspect means both in-game and out-of-game social interactions. In-game social aspects include interacting with other players inside the game, which can take different forms such as competing, cooperating or simply chatting. Out-of-game interactions include forums and web pages dedicated to a specific game, in which the players form communities and interact with each other. These social interactions are so engaging that Bienia (2012) attributes the immersion experience to the power of these communities and calls it “immersion into community”.

There are even some studies which try to quantitatively measure immersion in video games. For example, Qin, Rau & Salvendy (2009) suggest that measuring immersion is possible and it requires exploring and analyzing the factors of the games’ narrative that influence players who are immersed in the story. It is evident that these researchers’ definition of immersion matches the “immersion into narrative” category that we described before. They argue that narrative is the basis or framework for the computer games; it is the narrative that puts the games into a logical series. The authors present a questionnaire which measures seven different dimensions: Curiosity, Concentration, Challenge and Skills, Control, Comprehension, Empathy, and Familiarity. They suggest that by adding the players’ scores in these different dimensions, they can evaluate their immersion depth.

Significance of the Current Study

As mentioned above, numerous studies have been conducted to study the negative effects of playing video games on various psychological aspects of the players. However, in almost every case, there are other studies that negate those results or even suggest that the exact

opposite is true. There is no definite link between gaming and its negative effects on psychological health and a consensus is yet to be reached for such claims. As video games became more popular, research investigating the potential benefits of gaming have started to appear in academic literature, which might result in games being less marginalized, particularly by psychologists. This change of attitude led to a paradigm shift in how researchers view video games. I tried to show both negative and positive effects of playing video games, without relative bias towards one or another. I suggest that the function or purpose of playing video games may be more important to consider than the direct effect of use. Thus, I explored studies about subjectivity and immersion in video games.

The literature about immersion in video games is not as rich as the literature about negative and positive effects of gaming. Immersion studies try to explain why video games are so engaging. However, similarly to other psychological studies about gaming, these studies are very diverse and often contradict each other. There are many categories and definitions of immersion, and a lack of a general theory which encompasses all these elements is evident.

In addition to the immediate psychological effects of games on mental health, their effects on subjectivity are the main concern in my study. By subjectivity, I mean a first-person standpoint which includes social characteristics, a body as well as conscious and unconscious positions (Teo, 2017). Players take a role or identity in an open world, interacting with other players in the game environment and they are free to act any way they desire. They can steal, kill, have sex, befriend, cheat, etc.: the game is almost a parallel version of the society but without the socio-subjective variables governing it. How does this experience affect players' identity? Do they adopt a copy of their real social identity in the game environment? Or do they develop a new one? How much of this alternate identity is carried over to their real-life identity?

How does it affect their worldview? The proposed thesis will address a neglected area in the psychological literature related to interactive media by examining the effects of video games on gamers' subjectivity.

I argue that a general theoretical frame discussing the effects of video games on human subjectivity is yet to be developed. I suggest that to achieve this goal, we can use the closest technological medium to video games: cinema. Video games and movies have had an interesting relationship since the late 1980s and early 1990s when the first video games came to market. With improvements in graphics and processing speeds and modern gaming consoles, it's hard to see the difference between movies and video games, except that games are interactive. But the border between cinema and video games is becoming more indistinct every day; on the one hand, graphics in video games are increasingly realistic, and on the other hand, interactive movies are becoming the new phenomenon in cinema and TV. The latest episode of the British show *Black Mirror*, which is called *Bandersnatch*, is interactive, meaning that viewers can actually choose what happens next (Brooker, 2018). When the viewer has made their decision, the film continues uninterrupted, creating a seamless transition effect. If viewers don't choose, the streaming service will make a choice at random. There are many theories in film studies that can be used and revised for video games. For our purpose, exploring subjectivity, the best fit is "suture theory". The theoretical foundation of this theory lies in Lacan's ideas about subjectivity and especially the application of his ideas to cinema. In the next chapter, I explain suture theory in cinema in order to have a template for a subjectivity theory for video games.

Chapter 2: Suture Theory

What a thrill,
My thumb instead of an onion,
The top quite gone
Except for a sort of a hinge
Of skin,
A flap like a hat,
Dead white
Then that red plush

Sylvia Plath, *Cut*, *Ariel* (1965)

The word “suture”, borrowed from surgery, means to stitch over wounds. Suture is used in a context in which we have someone who cuts and someone who is cut, which includes a cutter, “hinge of skin” and the “plush” red blood as in Plath’s poem. In film theory, suture theory began with Jacques Lacan’s ideas about subjectivity and the dialectic of absence and presence (Lacan, 2006). Imagine a scene in a movie in which a mother has lost her young daughter. She goes to a police station, holding a picture of her daughter and showing it to a police officer. To us, as spectators, this picture means presence, and at the same time, to the mother, it means absence. This dialectic between presence and absence is a very simple example of one aspect of suture theory in films, but it should be noted that suture is not about the missing daughter but rather about the effect this missing has on the spectator. Suture explains the delicate relationship between a movie and its spectators. On one hand, a movie creates a meaning using different editing techniques and narrative styles; on the other hand, the spectators create meaning by putting together the concepts of presence and absence in a series of images. Going back to the idea of stitching, suture tries to explain how the spectators stitch themselves to the story world, or fabric, of a movie. The movie, using cuts and editing techniques, stitches together an imaginary reality. Spectators observe a seemingly coherent process without thinking about the artificiality of it and become immersed in the images as narrative. Lacan did not use the word

“suture” in his psychoanalytic discourse talking about absence and presence; it was Jacques-Alain Miller who used this term in his famous article “La Suture” (Miller, 1966), which he presented in Lacan’s seminar on February 24, 1965.

The first person who used this term in film theory was Jean-Pierre Oudart (1969) in the context of describing the nature of narrative in films. He expanded on his ideas in a couple of articles in *Cahiers du Cinema* magazine in 1969. Therefore, in a sense Oudart is the beginning. After Oudart, some other film critics and philosophers continued to explore the idea. Stephen Heath’s article “Notes on Suture” (1978) was the most notable example. Later on, Kaja Silverman (1983) put a feminist touch on suture theory; George Butte (2017) offered a new phenomenological understanding of suture; finally, Sobchack (2004) introduced embodiment to the cinematic experience. For all these theorists, the main argument is that every film is a “discourse” (Butte, 2017). Discourse in this context simply means that something is spoken to someone. Lacan believes that subjectivity starts with socialization through language and other symbolic systems (for example, rules for behaving in a certain ceremony). Therefore, every film as a discourse creates a new subjectivity in spectators, who deal with its discourse according to that specific movie’s narrative (Silverman, 1983). In this chapter, I briefly cover these ideas and then talk about different types of suture in cinema. I work in chronological order to show the development of suture theory in the past 50 years.

Jean-Pierre Oudart’s “Suture in Cinema” (1969)

Before I discuss Oudart’s article, I will explain a very common cinematic technique called “shot/reverse shot”, because Oudart talks about this technique throughout the article. In this technique, we see a character talking to another character, who is often off-screen or seen from behind. Then, we see the listener looking at or talking back to the original speaker. In both

cases, the character is, in fact, talking to the camera; however, since the two characters are shown in opposite directions facing each other, we assume that they speak to each other. This technique is a classical feature of the Hollywood style of “continuity editing”, which refers to editing techniques that try to show a transition between shots in such a way that the viewers perceive it as a continuous, linear, and logical order of images (Bordwell & Thompson, 2013).

Oudart (1969) argues that when one watches a shot/reverse shot, the viewer imagines a source that the film comes from. He proposes four stages: at first, the viewer is just amazed by the sequence of the images and once in a while something in these images (a visual gag for example) reminds the viewer that these images are artificial, which takes the viewer out of the images and returns him/her to the real world: the viewer become someone who is sitting at the theatre and watching some pictures, or as Lacan would say, signifiers. Then, this cycle continues again and again—which, according to Oudart, brings a surprising pleasure to the viewers.

Going back to a shot/reverse shot scene, when character A is talking to the camera/us, the first question that comes to the spectator’s mind is, “to whom is he talking?”. Without/before seeing the reverse shot, the answer is “no one”, an absence. However, when the spectator sees the reverse shot, he sees character B (who was being addressed by character A in the earlier shot) and decides that character A was talking to character B. In fact, the spectator is the subject who tells the story or makes the movie; she is the one who is calling the shots and connecting them together. The subject heals the absence created by the earlier shot, in a sense stitching these shots together. This suture creates the meaning of the film and establishes the spectator as a subject of the film. Therefore, suture theory explains how we see the disparate shots and images one after another without losing the visual, emotional, intellectual, and logical continuity.

This version of suture theory cannot provide a full picture of suture. Shot/reverse shot accounts only for 30 to 40% of the editing techniques in cinema (Bordwell & Thompson, 2013). It seems that this simplified version of Oudart's article should be expanded in order to provide a more general theory that can explain the viewer's subjectivity, which is constantly oscillating between "into" and "out of" the surface of the movie. Stephen Heath, in his article "Notes on Suture" (1978), tries to unpack Oudart's concepts to provide a more generic suture theory that is not limited only to shot/reverse shot scenes. Heath starts his article providing a critique of Oudart's reductionistic attempt to explain suture in cinema and then presents some suggestions to build on the theory.

Stephen Heath's "Notes on Suture" (1978)

At first glance, Stephen Heath's article sets out to explain Oudart's complicated concepts in a more comprehensible way. However, he goes beyond a simple unpacking to provide a critique to some of Oudart's ideas. Heath's article has three sections. In the first section he talks about the Lacanian idea of the "Absent One". Miller (1966) was the first person who used the word "suture" in a psychoanalytic discourse and Heath uses Miller's idea repeatedly in his article. Miller (1966) uses a mathematical analogy to present his concept: all numbers can be explained/derived by zero. Everything that exists has an identity and therefore is self-identical. But what about something that does not exist? What about "nothing"? Because "nothing" does not exist, it cannot be self-identical, and he calls "zero" or "nothing" a "non-identical". However, in mathematics, a set of non-identical sets (zeros) is still considered a set. Although this set is an empty one, it is still counted as a set. This is our primary set and it produces all the subsequent numbers. To clarify this concept, we can use a demonstration: how many numbers are in a blank page? None, zero. Therefore, we write "0" on the page. How about now? Well, we have one

number now, so we should write “1”. How about now? It’s two now, and so on. Miller uses this analogy to talk about the human psyche. He argues that the human psyche has a non-identical part, an empty part, which is called “absence”. When we name this part, we make it a unit, or a whole. This name in fact means “nothing”, or “absence” of something, but it creates a non-identity, and every subsequent word oscillates between non-identity (absence) and an identity (presence). In other words, having the concept of absence enables us to name presence.

Basically, what Oudart did was to apply this concept to the shot/reverse shot technique in cinema and address the constant movement between absence and presence which creates the meaning for the film discourse.

Miller (1966) argues that in classical logic, the concept of “absence” is either non-existent or repressed, and therefore there is no room for subjectivity in the science of truth. For Miller, the subject who speaks and is spoken to in a logical discourse is both existent and non-existent, just like the concept of non-identical zero which is represented by one. Lacan (2006) suggests that the use of language is an act of representation, but what is represented is not present in the language; it’s a re-presentation. This argument applies to the subject too, who is never present but is only represented. However, although the subject is absent in the discourse, its absence creates or causes the language. In a discourse, we add one sentence after another to address the subject who is spoken to. Therefore, the subject is present in language after all. Miller (1966) uses this contradictory state as the heart of his “suture” concept: an oscillation between absence and presence, between existence and non-existence, which leads to the creation of language. In cinema, as in language, the succession of absence and presence (e.g. in shot/reverse shot scenes) creates the discourse and meaning for the film.

Lacan argues that language is composed of two parts: the rules/grammar and the actual use of these rules to make a statement. Making a statement itself is a two-stage process: it involves the words that are spoken and the very act of speaking. This latter part is what Oudart uses in his article to compare language with cinema. The very act of speaking or “enunciation” in film poses this question: who is calling me? And from this point on, whatever is said as the film discourse or presented as the film images is addressed to the subject. It’s a representation of what is not present. The example of the imaginary scene of a lost girl’s picture in the police office is a simple example of this process: the girl is absent but everything else in that scene represents her absence and the same time excludes her presence.

The idea of the “Absent One” occupies the first section of Heath’s article. Applying it to cinema, this absence is the absence of a unified subject that can give a full account of the subject in the movie. Oudart calls this complete account the “Signifying Sum” which is the end goal of any film but which is never fulfilled because it’s imaginary.

The second part of Heath’s article discusses the Imaginary, which is a famous Lacanian concept. To put it in simple words, "Imaginary" refers to the set of images that we create to explain the world around us in the process of splitting from the mother (Lacan, 2006). The infant discovers that he/she is a separate part of the world, with body parts that can be destroyed. This imaginary realm includes the idea of the Absent One, Signifying Sum, and other concepts. Now, if we look at the images in a film as signifiers, the idea of representing a full account of the subject seems unattainable because we see the movie from the lens of a camera and we don’t have control of the camera. We can only see what the camera shows us. This is where cutting techniques come in handy. Cinema uses cutting to overcome the limitation of the camera and to provide a full, seamless account of the subject. A cinematic shot includes objects as well as two

other elements: frame and distance (depth of the field). For example, consider a shot which depicts a few objects. The spectator is looking at those objects in the frame, when suddenly, a character walks into the frame. The spectator realizes that she has to combine this new image with the image before to create a meaning or a story. There is an irreducible distance between the camera and what it chooses to portray. In a classical painting, the objects depicted in the painting always signify the subject's view or the viewers who look at the painting. Because the painting is still, it cannot represent the viewer because it has to leave an empty room that any viewer can occupy. Therefore, a classical painting always shows the objects in it and proposes the way these objects should be viewed (but this does not apply to modern paintings, especially cubism). A film, however, is not still. It is a succession of shots in which each shot posits a different subject—which sets up the condition for ideological communication in cinema. This is where Heath's suture becomes different from Oudart's.

Heath suggests that Oudart puts too much emphasis on “imaginary suture”, which is what happens when the spectators suture with the characters in the movies. Instead, Heath argues that there is another type of suture, “symbolic suture”, in which the spectators suture with the worldviews represented by films. In this sense, suture becomes an ideological operation which is not limited to shot/reverse shot scenes. The symbolic suture explains every two shots that come one after another whether it's a shot/reverse shot or someone entering the frame or any other addition to the previous shot. In the first shot, the spectator sees from the point of view of the Absent One. When we see the Absent One in the second shot, the Absent One becomes part of the fiction or narration of the film. In other words, the second shot creates the meaning for the first shot, which is a “deferred meaning”, meaning that it operates retroactively and remodels the memory. Therefore, Heath suggest that in the cinema, no one speaks. It's the things that speak

themselves, and this is the very definition of ideology. Nonetheless, Heath does not reject imaginary suture. He simply expands this concept from a film's characters to its narration.

Defining suture as an ideological operation makes it an easy target for Althusserian concept of "interpellation". Althusser (1971) describes ideology in the context of power, a power which makes the subject subjected-to. Interpellation is a process, a process in which we encounter our culture's values and internalize them. Interpellation expresses the idea that an idea is not simply yours alone (such as "I like blue, I always have") but rather an idea that has been presented to you for you to accept. Heath addresses interpellation in the third and final section of his article. He argues, "interpellation presumes the subject it is supposed to constitute, and that the existing politicization of suture confuses imaginary, symbolic, unconscious, and ideology ... In fact, suture is a way of naming the relation between these four elements" (p. 71). Heath continues with a critique of Lacan and suggests that whenever Lacan occasionally claims to be the master of truth, he becomes his own worst enemy because there is no final truth and suture confirms this subjective nature of the truth in which the subject creates an ideology based on symbolic presentation of the images in the movie and this ideology can be different based on each spectator's unique subjectivity. Suture works on the basis of adding each shot to the previous one whereas other structural non-psychoanalytic theories tend to lump all the shots together and look at the film in a holistic way (e.g. Gestalt theory in film). Although these theories in film studies came from psychology, their prevalence and popularity in film studies did not depend on their status in the field of psychology. The declining fashion of psychoanalytic discourse in psychology did not impact film studies. Suture theory continued to be discussed by philosophers and film critics. Kaja Silverman was one of those critics: Silverman

added a feminist interpretation on suture theory in her seminal work “The Subject of Semiotics”.

In the next section, I briefly discuss her ideas on suture.

Kaja Silverman's “The Subject of Semiotics” (1983)

Silverman (1983) starts her chapter about suture discussing Oudart and Heath. She expands on their ideas adding one crucial element: suture with camera. She uses Alfred Hitchcock's *Psycho* (1960) to undermine the binary between imaginary and symbolic suture proposed by Oudart and Heath. She argues that in *Psycho*, we are invited to be the voyeurs, watching the killer and the victim through the window. In this scene, we have an “unmediated” relationship with the camera which exceeds Marion's (actor: Janet Leigh) gaze. Silverman (1983) proposes that suture can be even more swaying when not tied to a subject:

Even though we have just lost our heroine, and our own discursive position, we can afford to finance others. What sutures us at this juncture is the fear of being cut off from narrative. Our investment in the fiction is made manifest through the packet of money which provides an imaginary bridge from Marion to the next protagonist... What *Psycho* obliges us to understand is that we want suture so badly that we'll take it at any price, even with the fullest knowledge of what it entails—passive insertions into preexisting discursive positions... threatened losses and false recoveries, and subordination to the castrating gaze of a symbolic Other (p. 212).

Whereas Oudart's spectators are limited to shot/reverse shot and Heath's viewer are entangled with the narrative, Silverman's viewers are supremely passive. She sees the film viewer as a double victim: first, Silverman talks about Oudart's viewer who doesn't have any identity and lacks the adequacy to get engaged with the film, and to compensate for this inadequacy, the viewer gets exposed to the camera's gaze; then she addresses Heath's hopeless viewer whose only chance of compensating for the lack is the narrative but the viewer's search to reach wholeness is betrayed by narrative. Therefore, in her eyes the imaginary and symbolic suture is just part of the story. She argues that the classic film text discriminates between the male and female gaze. The male is depicted as the one who looks (i.e. voyeur) and the female is

the one who is being looked at by a male (i.e. exhibitionist). This characterization is in accordance with cultural roles for men and women, according to which men are active and women are perceived as passive. Even in the imaginary realm, men are the imagined source of the gaze and women are the imagined recipient of it.

In cinema, the apparatus for the gaze is camera. It is the source for producing the images that the spectators like and identify with. Therefore, the camera treats the viewers as subjects. The camera's gaze is a male gaze; it is the active voyeur. Through its lens, the spectators see the film. The camera has potency and authority which injects these qualities into the male subjects. The female subject's role is to signify the lack which in fact belongs to spectators, not just female, who are not speakers but are spoken to and whose gazes are not controlling but being controlled. But the viewers are not the only "lacking" that the female protagonist represents. She is the representative of all cultural norms and values in the context of the film narrative; she doesn't have a phallus (power, privilege, etc.) and her body is used to depict this deprivation. So, the female protagonist is simultaneously attractive (to the gaze) and deprived:

The spectacle of classic cinema promotes a constant re-enactment of the primal "discovery" of the female subject's lack. As we have noted, this "discovery" helps to define the male subject as adequate, facilitates his identification with attributes which in fact belong to the apparatuses of enunciation (Silverman, 1983, p. 223).

However, the depiction of female deprivation can induce fear in male viewers as well, a kind of anxiety or fear of having to live in a similar situation. Therefore, she argues that the depiction of sexual division which determines subjectivity as we currently know it can lead to a castration crisis in male viewers.

Silverman suggests that a more general anxiety is produced as a result of the construction of cinematic fiction as a physical object. The image that we see is limited to the camera's frame,

and hence, it is a fixed and reduced point of view for the viewers. And that's why a form of suturing is at play to make meaning of these images which are stitched together. Suture is the process in the viewers' mind to put the sequences together, both in terms of image and fiction, but the viewer is only limited to what camera decides to depict. In Silverman's idea, suture is more than just putting the images and fiction together: it resides in the space between the images as well. Imagine two sequences of a movie totally unrelated in terms of location, settings and character. What is between these two sequences? It is blank; there is no tissue connecting them together. The viewer starts asking questions about "where" and "who", desperately seeking for clues or markers to know where they have landed in the second sequence. This constant search for markers creates anxiety. Watching postmodern movies (like *21 grams*, *Pulp Fiction* or *Irreversible*) in which the sequences are not linear, this anxiety becomes even more palpable. In these films, the narrative is more thematic than situational. This space between images is very important; it creates an anxiety and hence a response from the viewers. Because the images are projected at such a speed that the human eye cannot see that the images are separate from each other, we don't experience constant imaginary suturing. However, symbolic suturing dominates the whole film and there is no escape from that.

We experience a type of suture in literary writings and poetry as well. The writer counts on the readers' ability to fill in the gaps between different sections of a poem or a novel and this "filling in" helps readers to immerse in the writing, in a sense making it their own.

Silverman uses *Psycho* to debunk many of Oudart's ideas, but *Psycho* is an exception in classical cinema, not a norm. There are many relentless zoom shots in this film without any reverse shots to give us a clue to locate the origin. However, in many other mainstream movies of the classic cinema, there are hundreds and even thousands of cuts throughout the movie which

the viewers actively stitch together. However, Silverman's approach to suture is important in the sense that it shows the gaps in Oudart's ideas, which ignore the intrinsic and extrinsic gaze of the camera.

George Butte's Phenomenological Suture

The most recent variation of suture theory comes from George Butte (2017) who presented his ideas in detail in his book *Suture and Narrative: Deep Intersubjectivity in Narration and Film*. His constant comparison between film and literature sheds new light upon the concept of suture. He offers a phenomenological explanation for suture based on Merleau-Ponty's theory which fills the gap in previous versions of suture theory. He calls this gap, which is present both in literature and film, the "deep intersubjectivity" (p. 3).

In the first chapter, Butte talks extensively about Lacan and his idea of the Absent One which inspired Miller, Oudart and Heath. As he proposes, the idea of the Absent One is the central idea in the classic suture theory that tries to explain the formation of subjectivity in film. He suggests that instead of focusing on what is absent, we should focus on the deep intersubjectivity in film and literature which includes a network of consciousnesses whereby the reader or the viewer can move freely back and forth between these multiple layers. His idea departs from the concept of the Absent One and focuses on the partial presence which is borrowed from Merleau-Ponty (1964) and Derrida (1973). His theory moves from "an ontology of absence to an ontology of loss and occasional and partial presence" (p. 4). This shift gives him the space to move freely from the concept of loss and failure in psychoanalytic models and compare the films of Hitchcock and Bresson to the literary work of Plath, Irigaray and Toni Morrison.

Butte argues that there are some phenomenological elements in Ourdart's article that have not been unpacked. He believes that emphasizing these elements and adding an intersubjectivity layer to Oudart opens a space to discuss the concept of embodiment in suture theory. In his view, embodiment is more important than transcendence and presence plays a more crucial role than absence: "suture is selves embodied, not as shadows" (p. 7).

Butte continues his historical analysis of suture theory and talks about Miller, Oudart, Heath and Silverman's ideas around this topic. Influenced by Merleau-Ponty, he argues that there is always a possibility for a partial and incomplete espousal between bodies and consciousnesses. Here, he talks about Lacan's mirror stage and compares it with the experience of watching a movie through a process which he calls "double identification". Lacan (2006) argues that in the early childhood, the child cannot identify the independent subjects and objects. The child's inability to distinguish between the *self* and the *other* submerges him/her into a confusion in which seeking and identification are inseparable. In the mirror stage, the child starts to distinguish between the self and the other through looking/gaze at the mirror. The child does so by looking in the mirror and seeing himself or herself with the other (usually the mother holding the child in her arms). This is the first time that the baby identifies with an image.

Comparing Lacan's Mirror stage with the experience of watching a movie, the film is a mechanism that reproduces the Mirror stage. The spectators identify with the role of the subject: they put themselves at a starting point (where the movie starts) and then organize the world and their experiences throughout the film narrative. This process gives the spectator a feeling that they are at the focal point of the representation. This is how Butte compares the situation of the child (in front of the mirror) and the situation of the spectator (in front of the screen), as in both cases we are looking at a square limited surface that allows us to see ourselves among other

objects. Maybe the child's limited motor abilities can be compared to spectators' position at the seat. Butte argues that the problem with this model is that the child's complete image in the mirror is incompatible with its subjective experience of a fragmented body, creating a gap or failure so to speak. Whereas Lacan describes the development of children's subjectivity in the Mirror stage by focusing on gap, absence and failure, Merleau-Ponty (1964) emphasizes a sense of identity at a distance, describing the child as an embodied consciousness which prioritizes presence over absence. Butte expands Merleau-Ponty's idea, explaining how bodies and consciousnesses are entangled: "suture is an interleaving of embodiments in a reversal of the absences of classic suture theorists" (p. 37).

Then, Butte talks about the oblique angle, a technique in which the camera is tilted about 45 degrees, producing a tilted image. This technique is often used to emphasize something or show uneasiness and tension in a character of the film. He argues that the oblique angle is used to create oblique intimacy, which is a reference to the Merleau-Pontian chiasmus, the nesting of different embodiments and consciousnesses held together by an often rhetorically fraught narrative point of view. Then, he continues by saying that the oblique intimacy is not limited to cinema and can be found in literature as well, especially in the writings of Henry James. He concludes that "novel and film both make use of the oblique angle of perspective and of an over-the-shoulder gaze to embody the difficulty of encountering the other, and of responding to the other's response to the observing subject" (p. 108). In my opinion, Butte's innovation in comparing cinematography and editing techniques with free indirect discourse is his main contribution to suture theory.

Butte provides many examples from cinema and literature to compare them together; in the final chapter, he explores the possibility of suture as a tool for building communities across time and space, using Coen Brothers' comedy *Raising Arizona* (1987) as his template.

Butte's version of suture allows for narratives that represent insight as well as blindness, love and loss locating connections and disconnections in narratological techniques. The way he talks about the entanglement of viewers'/readers' embodiment and different layers of consciousnesses in films/books can be compared to a matryoshka doll holding different subjectivities that are nested in a work, which are depicted using cinematic/narrative techniques to create a deep intersubjectivity between the viewer and the film/book.

Vivian Sobchack's "Embodiment and Moving Image Culture" (2004)

Butte's phenomenological argument poses an interesting question: is cinema a visual experience or an embodied one? From Rudolf Arnheim's theory of cinema, which was based on Gestalt theory in early 1920s, to Eisenstein's constructivist editing and later suture theorists' emphasis on cutting techniques and camera gaze, an ocular-centric paradigm has dominated film theory, putting visual perception at the centre of cinematic experience. Of course, the cinematic experience is something that we perceive visually, but what is the embodied interplay surrounding this perception? Vivian Sobchak is another scholar who uses Merleau-Ponty's phenomenology to explain the experience of watching a movie: "We do not experience any movie only through our eyes ... We see and comprehend and feel films with our entire bodily being, informed by the full history and carnal knowledge of our acculturated sensorium" (Sobchack, 2004, p. 63). She argues that visual experience of the film, which is followed by intellectual understanding of the film, are accompanied by a strong embodied experience. According to Sobchack (2004), this is a self-reinforcing cycle: cinema is the expression of an

experience and the spectator experiences this expression by the act of watching the film. This reversibility and inherent instability of cinematic experience is the basis of intersubjective experience between spectator, film and filmmaker, with roots in the shared experience of embodied experience. This shared history makes perception of experience and experience of perception essential components of watching a film:

Classical and contemporary film theory have not fully addressed the cinema as life expressing life, as experience expressing experience. Nor have they explored the mutual possession of the experience of perception and its expression by filmmaker, film, and spectator—all viewers viewing, engaged as participants in dynamically and directionally reversible acts that reflexively and reflectively constitute the perception of expression and the expression of perception. Indeed, it is this mutual capacity for and possession of experience through common structures of embodied existence, through similar modes of being-in-the-world, that provide the intersubjective basis of objective cinematic communication (Sobchack, 1992, p. 5).

Sobchack (2004) argues that while watching a film, we first experience it somatically with our whole body, before our cognitive skills start processing the film or our unconscious suture the images. When the spectator watches a movie, there is a simultaneous appropriation of the “other” in which spectator’s self-awareness of the body is a necessary and irreducible condition to identify with the character or the experience shown in the film. Therefore, according to Sobchack (2004), watching a film is not different from other forms of experience, because perception presupposes subjectivity located in a living body. To give an example of what Sobchack means by somatic experience in the movie, I share her eloquent description of the first few shots in Jane Campion’s *The Piano* (1993). In this shot, the spectator looks through the hand held in front of the character’s eyes/the camera. Sobchack claims that her fingers knew before the conscious recognition of the image:

As I watched THE PIANO’s opening moments . . . something seemingly extraordinary happened. Despite my ‘almost blindness,’ the ‘unrecognizable blur,’ and resistance of the image to my eyes, my fingers knew what I

was looking at—and this before the objective reverse shot that followed to put those fingers in their proper place (that is, to put them where they could be seen objectively rather than subjectively ‘looked through’). What I was seeing was, in fact, from the beginning, not an unrecognizable image, however blurred and indeterminate in my vision, however much my eyes could not ‘make it out.’ From the first (although I didn’t consciously know it until the second shot), my fingers comprehended that image, grasped it with a nearly imperceptible tingle of attention and anticipation and, offscreen, ‘felt themselves’ as a potentiality in the subjective and fleshy situation figured onscreen. And this before I refigured my carnal comprehension into the conscious thought: “Ah, those are fingers I am looking at.” Indeed, at first, prior to this conscious recognition, I did not understand those fingers as ‘those’ fingers—that is, at a distance from my own fingers and objective in their ‘thereness.’ Rather, those fingers were first known sensually and sensibly as ‘these’ fingers and were located ambiguously both offscreen and on—subjectively ‘here’ as well as objectively ‘there,’ ‘mine’ as well as the image’s. Thus, although it should have been a surprising revelation given my ‘almost blindness’ to the first shot, the second and objective reverse shot of a woman peering at the world through her outspread fingers really came as no surprise at all. Instead, it seemed a pleasurable culmination and confirmation of what my fingers—and I, reflexively if not yet reflectively—already knew (Sobchack, 2004, p. 63).

Phenomenological approaches to film theory have increased since the 1990s and have generated various differentiated theories with their own differentiation. However, one should keep in mind that putting body at the centre of perception in a cinematic experience does not automatically eliminate the distance between image (film) and body (spectator). In the end, all these phenomenological theories that focus on the body are attached to the representational paradigms familiar from cultural studies because the ideological critiques of the movies cannot be explained by a bodily experience (Elsaesser & Hagener, 2015). The body as the object of the gaze (in feminist suture theories) and also as a projection screen (in Oudart and Heath’s ideas about suture) has had an essential role in suture theory, but the difference is that the phenomenological theories assign a perceiving and affective role to the body in cinematic experience, whereas in classical suture theory, it was more “a locus of erotic fetishisation and of the reified, alienating

commodity form” (Elsaesser & Hagener, 2015, p. 130).

Criticisms of Suture Theory

The history of psychological theories about cinema dates back to the early days of cinema. The first notable theorist is Hugo Münsterberg (1916), who argues that the viewers make meanings through a series of mental activities mediated by the cinematic apparatus (camera, projector, hall, etc.). This argument prepared the context for the future filmological studies in the mid-1940s, spearheaded by Francisco Casetti, whose main goal was to study what he called the “film situation”. Casetti (1993) defined the film situation as “the set formed by the screen, the hall and the spectator, in which processes develop such as the recognition and deciphering of what is being seen, abandoning oneself to enjoyment of the story, identifying with the fringe characters, fantasy, personal re-invention, etc.” (p. 22). In 1953, Etienne Soriau established the institute of filmology and made film studies into an academic field (Bazin, 1967). The first psychological tests in this institute were experimental psychological tests trying to understand the process by which spectators watch a movie and make meaning out of it. Soon after the establishment of this institute, a few journals were founded to publish the articles and essays in filmology. One of the pioneers in this field is Michotte (1953), who explores the strategies that allow the viewers to identify as the protagonist or other characters in the movie and forget their own identity throughout watching a film. However, his argument entails variables like immobility of the spectators, darkness of the cinema theatre, sitting on comfortable seats, etc., which put the spectators in a very focused position to watch the movie and forget about the world around them.

Experimental psychology was not the only player in the field of psychology at that time. Psychoanalysis was wildly popular, and soon psychoanalytic theories found their way into

filmology. The first main psychoanalytic paper about cinema was written by Serge Lebovic (1949), who compared cinema with dreams. He argued that both have a visual nature and both lack the main cause that links different images together to make meaning.

Perhaps the most influential psychoanalytic paper about cinema before Oudart is Edgar Morin's paper, *Le cinéma ou l'homme imaginaire* (1956). In this article he tries to explain the psychological processes which happen in spectators' minds while watching a movie. His main argument is that the process of meaning-making in cinema is the result of a symbiosis between the images in the film and the spectators' imagination. This idea is similar to Lebovic's comparison between cinema and dreams whereby the coincidence of spectator's unconscious material such as obsessions, needs, fears and wishes with those depicted of the characters in the movie which leads into an identification with these characters. Therefore, the spectators don't necessarily forget their existence or subjectivity during the film; they find part of their unconscious desires in the characters and therefore immerse in characters' journey throughout the film. Because the spectators cannot participate in the story of the film physically, they take a regressive stance which brings out their feelings, and it is through these feelings that they participate in the narrative, which intensifies their identification with the characters. This idea foreshadows the psychoanalytic theories about film which were to come, most notably Oudart's suture theory as discussed earlier. Oudart's article (followed by Heath and others) turned psychoanalytic film theory into an influential film theory about subjectivity that dominated film theory for decades after (Butte, 2017). However, these ideas did not go unchallenged.

Suture theory received its first criticisms in the early 1980s. Most of these criticisms targeted the theory's psychoanalytic roots. The most notable criticisms came from Carroll (1988) and Bordwell (1985), who suggested alternative non-psychoanalytic explanations to this

phenomenon. Carroll (1988) believes that the spectators experience suture in films and shot/reverse shot chain because of their familiarity with this media; furthermore, they understand culturally how narrative, simile and metaphors work in other contexts and they can apply this knowledge to cinema. Bordwell (1985) suggests that the viewers are “already ‘tuned,’ prepared to test spatial, temporal and ‘logical’ schemata against what the shot represents” (p. 112). Bordwell sees Oudart’s theory as an early effort to explain cognition in a film context. He sees suture in shot/reverse shot as a cognitive process by which what we see in film is not a point of vision, but rather a field which is defined by off-screen area: “Oudart wants to prove that this backing-and- filling movement, this process of stitching across a gap, helps narration construct space. As a corollary, Oudart’s method plays down narration because in the shot/reverse shot sequence there is no place for the narrator to hide, and with no phantom narrator, there is no invisible-observer account whereby the camera is the eye of an observer” (p. 111). Bordwell’s project is a constructivist model of interpretation which tries to see the viewers as rational agents who learn how to interpret a movie based on social learning theories. Although it’s tempting to think that psychoanalytic readings of suture were precursors to the cognitive reading offered by Carroll and Bordwell, given the way cognitive psychology came after psychoanalysis, they are two very different projects as reflected in film theory as well. Oudart’s theory does not represent a systematic cognition in Bordwell’s topological sense, meaning that Oudart is not trying to logically put the sequence of events one after another and make sense of it. The difference between these two approaches lies in the depth and layers of viewers’ experience. Whereas Carroll and Bordwell are trying to compare a movie scene to day-to-day life experience, Oudart and Heath are trying to describe the layers of consciousness inside and outside the story of the film.

In my view, the difference between the ideas of Oudart and Bordwell echoes the different views that early filmmakers had about editing or montage. There were some filmmakers generally known as the Kuleshov school who believed that montages of shots are just series of shots used to create a coherent image (just like Bordwell's model), while other so-called Hegelian filmmakers believed that montages are collisions of two pictures giving birth to a third idea (Bazin, 1967).

Christian Metz' "Cinema and Psychoanalysis" (1982)

Although Metz is not considered a suture theorist, his psychoanalytic film theories have been heavily influenced by suture theory, and he, in turn, has helped to expand this theory further. His main argument about cinematic identification includes three phenomena that turn cinema into an imaginary signifier. First, Metz agrees with other suture theorists about the Mirror stage analogy, but he adds a crucial detail to it. Metz (1982) argues that the film is unable to represent or reflect the viewer's body and that is why the viewer has to use secondary identification (with characters of the film) in relation to the self. Therefore, the whole representation is upon the viewer, who sees herself a transcendental subject or something imaginary. The primary identification, in Metz's view, is with the eye of the camera. Second, Metz talks about voyeurism in cinema, which is different from Silverman's discussion of the male gaze of the camera. Metz does not attribute voyeurism to a certain gender and instead argues that voyeurism is a desire to see something from a distance without touching it. Cinema provides this opportunity: the spectators watch an image without being able to touch it. Cinematic techniques such as editing and montage make it possible for the spectators to see the image as a material which is a certification of absence from reality. Finally, he talks about fetishism in cinema, which in fact is a kind of anti-suture wherein the spectators come to surface

of immersion and admire the cinematic technique itself (whether it be a stunning visual effect or a beautiful tracking shot or even the settings in a shot). Although fetishism does not contribute directly to immersion in film, but it can be a very important factor in attracting the spectators to cinema theatres.

Summary

Suture refers to a process in which viewers stitch together the film through images and narrative which results in taking the position of subjects in the film and we experience the film-world as a world of its own and we respond to it by making meaning and identifying with the movie. A successful suture does not necessarily mean identification with the characters, although character identification is one of the most common types of suture. Sometimes, we don't identify with characters and instead we take the role of an observer who identifies with the narrative of the film or the story-action. However, the more predominant role is that of the film apparatus or camera-eye, through which we identify with characters or narrative or even the camera gaze itself. A successful suture happens when we forget the film apparatus and the gaps between different shots and images.

Suture theory tries to explain how the movie works on viewers' unconscious psyche so that we enter into the conventional world of the film and engage with the narrative the film creates for us. Throughout this process we largely ignore the codes, apparatuses, techniques and conventions that create this world; we suture with the movie on its own terms. The main focus of suture theory is to explain the invisibility and inaudibility of film techniques and conventions as we forget ourselves temporarily and immerse into the film world. In other words, through suture we lose ourselves in the film and become one with it. These processes, as said above, operate through "imaginary suture" (identification with characters), "symbolic suture" (identification

with the narrative) and “apparatus suture” (identification with camera eye). Finally, there are other scholars who argue that suture is an embodied experience and is not limited to visual experience.

Chapter 3: Methodology and Method

Purpose of the Study

This study explores the subjectivity of video gamers and seeks to develop a general subjectivity theory for video games. Such a theory shall aid researchers in their comprehension of immersion as it pertains to video games, which, in turn, will shed a new light upon the positive and negative effects of video gaming. This theory can also be employed by game developers—that is, to put their experiential knowledge into a theoretical format in order to increase the potential positive effects of video gaming. Finally, this study aims to fill a gap in the literature relevant to subjectivity in digital media and video games.

By using a thematic analysis aligned with theoretical argument, the researcher was able to examine data gathered from semi-structured interviews with gamers who spent on average more than 4 hours a day engaging with video games. The purpose of this study was to identify any themes that emerged from the data in order to develop a subjectivity theory for video games.

Research Design

The main purpose of qualitative research is to gain insight into a concept phenomenon. In this type of research, the researcher tries to find the answer for how and why a certain phenomenon may occur and is not very interested to quantify the phenomenon. Creswell (2007) argues that qualitative research is a process of gaining insight into a methodological practice of

investigation that studies a social phenomenon. For this type of research, the researcher creates a complicated and thorough image by analyzing the words as well as the views of participants. Qualitative research is usually used to better understand a complex situation (Leedy & Ormrod, 2010). This method allows the researcher to comprehend a participants' feelings, words, and behaviours in a detailed manner, which leads to a complete and holistic understanding of an issue (Hoepfl, 1997). What is more, qualitative research employs naturalistic methods to study issues that are very contextual. Therefore, the researcher becomes familiar with the phenomenon under investigation and, in essence, tries to capture the participants' experience within its specific context (Patton, 2002). To get the best results, researchers conducting qualitative research will usually immerse themselves in the issue they are studying, which involves making themselves as familiar as possible with their subject and its matter(s)—that is, in order to have a sounder apprehension during their interaction(s) and interview(s) with the participants. Aside from interviews, textual or image data as well as observation are amongst the tools for qualitative research (Creswell, 2007). Researchers usually practice inductive reasoning in their search for themes and categories, and they present their findings using quotes, personal voice, narratives, and literary styles. Usually, the researchers use participants' own language to report results (Leedy & Ormrod, 2010). Essentially, qualitative research emphasizes the participants' experience and endeavours to bracket the researchers' perspective (Hoepfl, 1997).

In this study, I use qualitative methods to understand the subjective experience of video gaming as it relates to my participants' experience—hence, the methodology involves the examination of the gamers' subjective experience of gaming. Qualitative methodology is a proper fit for this study because, as Rossman and Rallis (1998, p. 29) note, “there are few truths that constitute universal knowledge; rather, there are multiple perspectives about the world.” By

exploring the subjective experience of the gamers, it is possible to obtain "multiple perspectives" that further one's understanding of the gaming experience. Because each individual ascribes certain characteristics and attributes to any given experience, this study aims to gain an understanding of such variations in relation to the perception of the gaming experience. Merriam (1998, p. 1) notes that qualitative research offers "the greatest promise of making significant contributions to the knowledge base and practice of education" because it is "focused on discovery, insight, and understanding from the perspective of those being studied."

Thematic analysis is a tool for analyzing texts, and it involves looking beyond mere descriptions in order to find common themes in the data. My primary focus is to develop a theory of subjectivity for video games. To achieve this goal, I use empirical data to identify emerging themes in gamers' experiences, and then, using suture theory as a template, I develop a new theory by using the empirical data as a guideline for my theoretical speculation. Given that my main interest is finding the differences between the experience of playing video games and watching movies, I use the case examples in my interviews to map out the differences and similarities between playing video games and watching a movie. In other words, I use the data from the interviews to enrich the theoretical framework and build a theory of subjectivity based on cinema-based suture theory. To find the common themes in participants' experiences, I use thematic analysis to to 'identify, analyse and report patterns evident within the data' (Braun & Clarke, 2006, p. 79). Specifically, an inductive (or data-driven) thematic analysis was conducted, in which codes and subsequent themes were directly derived from the raw data itself (Boyatzis, 1998).

The researcher's role is to generate a template or a structure for the phenomenon—as experienced by the participants—and this can be achieved by analyzing the structure of the

phenomenon. By using thematic analysis, I strive to comprehend the gaming experience as it is consciously experienced by my participants, and, to do so, I generate a structure for their experience that shall allow me to develop a theory based on their views of this phenomenon.

Research Questions

This research addresses the following questions:

1. How is the gaming experience different from watching a film?
2. How do gamers perceive their subjective experience whilst playing games?

Design

A variety of sampling procedures are available for qualitative research. In order to directly address the research questions, this study samples individuals who, potentially, have rich information—specifically, for criterion sampling. Criterion sampling involves reviewing and studying “cases that meet some predetermined criterion of importance” (Patton, 2002, p. 238). The criterion for this study is, specifically, gamers who play for more than 4 hours a day (on average), and had been doing so for, at least, six months prior to the study period. Wittek et al. (2015) report that about 3–4% of gamers play more than 4 hours a day. Further, about 94% of said gamers are reported to be male with an ethnicity breakdown of Caucasian (69%), Asian (13%), and other (18%). To have a comprehensive study, I include five various genres from popular video game genres.

The participants ranged from 20 to 39 years of age, and they were from a diverse population of ethnicities. A 25-year-old woman from Toronto, a 20-year-old from Dortmund, a 39-year-old from Warsaw, a 27-year-old from Chicago and a 32-year-old from Tehran. Creswell (2007) suggests that a qualitative study should have three to 10 participants—the sample size of

this study is five participants. As a result, I was able to gain an in-depth understanding of the phenomenon in question, which was five experienced gamers and their subjective experience whilst playing video games. Lincoln and Guba (1985) state that redundancy is the primary criterion for a sample size. For my research, five participants provided an appropriate sample size in which redundancy was achieved, and with no new information in the data.

Potential participants were contacted on gaming forums and via gaming clubs—that is, if they met the criteria of the study. Recruiting players was based upon active online forums, which are used by millions of interacting players. During this time, participants were provided with a brief description of the study, and all recruitment was performed online. After participants had met the checklist of requirements, they signed a written informed consent assuring that the study was voluntary, that confidentiality was provided, and that termination of the interviews was permitted at any time. Participants were given pseudonyms to protect their identity and maintain confidentiality. Participants also received a \$20 gift card as incentive, and the interviews took place via Skype.

Instrumentation

In qualitative thematic analysis, the main instrument is the researcher—after all, they conduct all the interviews. The strategy of inquiry employed in this study is qualitative interviewing. Qualitative interviewing is often seen as being flexible because the interviewer adjusts and responds to the interviewee. Essentially, there is a great interest in the respondent's point of view, detailed and rich answers are desired, the interviewer is permitted to depart from any schedule that is being used, new questions may arise due to a respondent's replies, and the order of questions may be revised (Rossman & Rallis, 1998).

There are different approaches to qualitative interviewing, namely: structured, unstructured, and semi-structured. During an unstructured interview, the researcher might start the conversation with a question, and then actively listen to the respondent, who freely speaks. By contrast, a semi-structured interview follows a checklist of issues and questions that the researcher wishes to cover during the session (Rossman & Rallis, 1998). Semi-structured interviews have been chosen as the method in this thesis. The reason for choosing the semi-structured interview technique is, essentially, due to my desire to encourage the interviewees to freely discuss their own subjective experience of gaming. What is more, the questions that I prepared for the semi-structured interview kept me on track to ensure I was addressing the research questions discussed above. This method, along with open-ended questions, allowed me to adjust questions to the attributes of a specific game and, also, the given type of experience that can arise from a specific genre (see Appendix A).

As the researcher, I used Skype to record participants' responses. Recording the interviews ensured the participants' responses were accurately and legitimately documented. This practice is in accordance with Patton's (2002) argument—that is, recording the interviews helps the researcher avoid misinterpreting the participants' perceptions. Even more importantly, recording data allows the researcher to focus on the interviewees. Patton emphasizes the importance of observation during the interviews, indicating that it is useful to capture the participants' needs and cues. Furthermore, Patton proposes that taking strategic and focused notes that consist of important phrases, lists of main points made by the participants, and important terms or words that reflect the interviewees' in their words. Therefore, during the interviews, the researcher observes the interviewees for cues whilst also taking notes.

Data Collection

For this study, I interviewed five gamer participants who, on average, spend 4 hours per day playing video games. The participants were ensured that their rights are protected, and confidentiality was observed. To achieve this, participants signed a consent form where both the confidentiality details are explained, and the participants were ensured that this was a voluntary act they could terminate at any time. The participants also agreed that their recorded conversation was for research purposes, which means the information was properly stored and protected. To ensure anonymity and identity protection, the participants were assigned either pseudonyms or numbers.

Corbin and Strauss (2008) argue that, in collecting data, researchers should make sure to include participants' perceptions and voices. My interviews were done via Skype, which permits the participants to choose a time and location that is convenient for them and also allows me to interview participants from other countries. This approach allows the interviewees to feel more comfortable whilst answering questions. Prior to the interview, participants are encouraged to ask any questions that they might have regarding the research topic, methodology, interview format, and so on. Next, I conduct the interview using open-ended questions, and the interview lasts between 45–60 minutes. Interviews are recorded with participants' permission.

To foster a comprehensive study, I include five various genres from the most popular video game genres. Normally, individual gamers do not limit themselves to a specific game or genre—that said, although they try many games, individual gamers do have preferences toward specific genres. I suspect the genre of a game plays an important role in a gamer's gaming experience. Therefore, I made an effort to interview at least one gamer who is devoted to a

specific genre. However, if the particular participant plays other genres as well, it shall provide me with an opportunity to question them about the differences between genres.

Games

From the “shooter” genre, I have selected *Call of Duty*, which is one of the most popular shooter games (Snape, 2018). On August 10, 2018, there was a shooting in Fredericton, NB, perpetrated by Matthew Vincent Raymond. Four civilians were killed. In a CBC interview (Fowler & Donkin, 2018), one of Raymond’s close friends claimed that Raymond was addicted to *Call of Duty* and that it was possible that Raymond had a hard time telling the difference between games and real life. In another 2018 story, John Dottenhofer, a 24-year-old from Colorado, who played *Call of Duty* for 13 hours a day, joined Kurd fighters in Syria to fight against ISIS. In an interview with *Daily Star* (Micklethwaite, 2018), he claimed that playing first-person shooter games gave him the basic skills to survive the battle against the vile death cult. He reported that playing these games changed his mentality about war, so he was eager to play out the game scenes in the real world.

The next genre is mobile games. For this genre, because of its unique features (Knapp, 2018), I selected *Pokémon Go*. This game combines virtual reality with actual reality. In essence, one uses the mobile’s camera to look at real world surroundings that are populated or occupied by creatures called “Pokémon”, and then the gamer pursues the creatures with the intention of capturing them. In 2016, after the game’s release, there were numerous reports of people gathering by the thousands in public places as they hunted for particular Pokémon. I believe this augmented reality has interesting effects on subjectivity.

For the role-playing genre, I elected to study *Skyrim*, which is played by millions across the planet (Williams, 2018), making it one of the most popular role-playing games. Whilst progressing through a storyline, this game casts a player in the role of one or more adventurers who specialize in specific skill sets. This game is played in real-time, meaning that the different characters in the game are being played by others at the same time. It is akin to living one's daily life, except, of course, one interacts with others through a fictitious game character. Amongst the myriad of possible interactions, one can talk to others, challenge others, become friends with others, have sex with others, steal from others, and kill others. Essentially, the game allows one to choose how to develop one's character.

The next genre is racing games. One of the most famous games in this genre is the *Need for Speed* series (Botes, 2018), so it was selected for this study. This game is so popular that it became a successful movie franchise with similar storylines. What is more, this game also inspired both legal and illegal street racing events that are annually held all over the world—of course, with real consequences.

The final genre is sports games. For this genre, because of its worldwide popularity, I selected the *FIFA* soccer game franchise. As with most sporting games, the objectives and gameplay in this title are rather self-explanatory.

Analysis

With permission of the participants, the interviews are recorded and transcribed verbatim. The transcriptions are analyzed using the constant comparative method. A thematic analysis provides a rich description of the predominant themes across the entire data set (Braun & Clarke, 2006) it is an approach suited to topics lacking in empirical research. The constant comparative

method of data analysis involves the “process of taking information from data collection and comparing it to emerging categories” (Creswell, 1998, p. 57). Merriam (1998, p. 159) defines the constant comparative method as the researcher beginning “with a particular incident from an interview, field notes, or document” and comparing it with “another incident in the same set of data or in another set.” These comparisons are conducted throughout the data collection processes in order to further inform the collection of data. This means, in analyzing data, the researcher is able to refine interview questions and probes (as needed) whilst, also, focussing on responses that are comparable to incidents described either by other participants or the same participant. Patton (2002, p. 125) discusses the constant comparative method of data analysis as “comparing research sites, doing theoretical sampling, and testing emergent concepts with additional fieldwork.” This method is appropriate for this study because I have a working model—Suture theory—that I intend to modify in order to make it applicable to video games.

Chapter 4: Analysis and Results

The interviews are transcribed and the text is divided into individual units of analysis or "meaning units". The meaning units are partitions of the text that convey a specific meaning, concept, or thought (Fergus, 2011). Each meaning unit is categorized using a word or phrase that best captures and articulates the concept being expressed. After finding and separating the meaning units, each unit is analyzed in relation to various categories that are present in that specific meaning unit. Each meaning unit in this study is composed of three to four various categories. With the definition of each new category, it is compared to the previously defined categories in other meaning units, which is carried-out in order to determine whether or not there is any existing categories that already capture the concept. If not, a new category is created to capture that concept. The categories are considered saturated when no new themes are revealed in the text. The 15 first-order categories are grouped together under five second-order categories, and the defining properties of these higher level categories are presented in a table format. These five second-order core categories are: (1) Identification with Character; (2) Identification with Narrative; (3) Camera Eye; (4) The Embodied Experience; and (5) Beyond Cinematic Experience. The first domain, "Identification with Character", covered the aspects of immersion in video games that are in some way affiliated with characters. "Identification with Narrative" covers the narrative powers of video games. The third domain, "Camera Eye", entails the subcategories that evolve around the issue of camera or point of view (POV) in gaming, and I discuss the different types of angles and POVs in games. The fourth domain, "The Embodied Experience", covers the non-visual experience of gaming, and I discuss how gaming involves embodiment in various forms. Lastly, "Beyond Cinematic Experience" depicts the unique characteristics of the gaming experience that cannot be compared to watching films (see *Table*

1). In the next section, I shall discuss each sub-category in full detail, using some quotes from interview transcriptions.

Table 1. Core Category with Main Domains, Subcategories, and Defining Proprieties

THE SUBJECTIVE EXPERIENCE OF PLAYING VIDEO GAMES		
Identification with Character		
Freedom to Be What You Want	● Gender, looks and physical features	● Background details
	● Multiple aspects of character	
Realistic Images	● Realistic characters	● Realistic game environment
	● Realistic functioning	
Social Interaction	● A new identity: gamertag	● Real people in virtual world
Identification with Narrative		
Gamers as Screenwriters	● Controlling the outcomes	● Engagement through various scenarios
	● Sense of agency and freedom	
Cutscenes	● Live action cutscenes	● Pre-rendered cinematics
	● Stitching the game stages	
Emergent Storytelling	● Ludonarrative dissonance	● Endless possibilities
	● Personal and unique stories	
Camera Eye		
Camera Systems	● Fixed camera	● Tracking camera
	● Interactive camera	
First Person View v.s. Third Person View	● Different immersive experience	● Different reflexes
	● Self v.s. the other	
Player as Camera Person	● Freedom in camera movement	● Exploring the gaming world
	● Similarity to real world experience (a.k.a. simulacra)	

The Embodied Experience		
Holding the Controllers	● Freedom of movement	● Hyperactive “noob”
	● Vibration	
Games Without Controllers	● More embodied experience	● Realistic settings
Virtual Reality Technologies	● Ultimate immersive experience	● All senses involved
Beyond Cinematic Experience		
Duration of Interaction	● Infinite potential hours	● More lasting effects
	● Addictive elements	
Gaining Skills	● Improved reaction time	● Problem-solving skills
	● Game-specific skills	
Rewards and Achievements	● E-sports	● Achievement system
	● Competing with peers	● Winning experience

Identification with Character

As discussed in chapter 2, identification with characters is, to some extent, a major factor in the cinematic experience. This experience exists in the gaming experience, but in a very amplified fashion. When playing video games—especially role-playing games (RPG)—it is the player who chooses the character that they, the gamer, shall subsequently come to identify as their self. This freedom to be what one desires is a common sentiment (or theme) expressed by all five of my participants. For some, this entailed the freedom to choose a character with whom they shared traits or some aspect akin to their actual personality. Participant #3 (PPT003), who is a 39-year-old single woman in Warsaw, Poland, says:

"I love cinema, okay? But let's say I sit and watch *Die Hard*! Yes, I am cheering for Bruce Willis—the badass muscular dude who is fighting the bad guys. But really, what

are the chances that I will ever have a similar experience or even relate with that? These movies are good to kill time, but I won't rush to get home fast to watch it. Whereas when I play *Skyrim*, I choose a character who looks like me, has my name on it, and does what I like to do, which is farming and gardening. Of course, I have to do the quests and missions to advance in the game and unlock the perks, but I only spend my gold to expand my farms and raise my kids! I have adopted two kids and I have another kid from my husband, who was unfortunately eaten by a dragon [laughs]. But really, I enjoy this world more than my restaurant life, and I don't care if my friends call me an addict. (Excerpt from interview with PPT003)

By contrast, for others, the freedom that accompanies the notion of character selection has a different significance. That is, some covet the ability to choose a character that does not look like them, and they admire the character no less. Participant #5 (PPT005), who is a 25-year-old woman in Toronto, Canada, believes that gaming provides for her a golden opportunity to be what she has always wanted to be—a male person. In her words:

[G]rowing up with three older brothers, I always played their games and competed with them. All my friends were boys. Don't get me wrong, I have no problem with my femininity, now—it's just, sometimes I want to explore that masculine side of me, too, and I can't express it any better than playing shooting games. My character is always a tall unshaved and rather sloppy nonchalant guy, who I think I would be if was a man. It's fun! I even have a name for my masculine self. (Excerpt from interview with PPT005)

The game developers have noticed the power of characters in games, and they are constantly improving characterization by adding more detailed and customizable options. Some games have taken characterization to another level by providing players with the option of choosing their characters' background details. For example, a character can be a person who grew up in a gang or they can be entrepreneurial, or they can be specifically educated. These backgrounds change the dialog options for players whilst interacting with other players. What is more, depending on a character's personality, the types of quests are altered. Usually, this further galvanizes curiosity in players, which makes them desire to play with multiple characters in order to discover the differences in a given title's gaming experience. The high-resolution images of the powerful gaming consoles have provided players with detailed and realistic images, which further enrich the experience of choosing characters. As a result, gamers identify with the character more and there is a higher chance of immersion.

Technological advances for creating high-resolution digital pictures have allowed the video game industry to create realistic images that are akin to cinematic pictures. Participant #2 (PPT002) is a 27 year-old single man living in US. He lost his legs in a car accident, so he is now wheelchair-bound. However, after the tragic event, he claims that video games saved him from diving into depression. He is a fan of sports video games and, as a competitive player in the *FIFA* soccer game series, he says:

The reason I love this game so much is that it's unbelievably similar to real soccer game, which I used to play semi-professionally before my accident. The players look exactly like their real counterparts, they move the same and they even dribble the same style. Plus, the game texture is so realistic that, if you look at it, you will have a hard time to

tell that it is a video game. This realistic texture takes me back to my own experience as a soccer player. I can even smell the fresh grass when I play this game. (Excerpt from interview with PPT002)

The realistic characters in the games as well as the highly detailed customization tools provide the gamers with the ability to create a character who is either very much like them or reflects someone they are curious to be. This leads to a better and easier identification with the characters, and it no longer seems futuristic to think that, soon, games shall be capable of using the players' own image to build a character who exactly looks like them. Participant #1 (PPT001), a 32-year-old man in Iran:

[T]he technology to make a game, which provides its users with facility to upload their photos and build a copy of themselves in the gaming world, is already available, but it's not very economical, now. It's just a matter of time, maybe in few years, that these games will come to market. (Excerpt from interview with PPT001)

When I asked him how this technology would potentially change his gaming experience, he said:

Oh man, it would be unbelievable. To see myself driving a Lamborghini and race with my buddies in the streets that are exact copy of Tehran's streets would be a surreal experience. I think I would be one of those people who die of starvation while playing video games [laughs]. (Excerpt from interview with PPT001)

Aside from the realistic characters and game environment, the movements are extremely realistic as well. Using advanced technology—such as motion detectors and sensors—the game developers hire real actors or athletes, and then they record the hired person’s movements in order to recreate them in game world with almost exact precision. Participant #4 (PPT004), a 20-year-old man, believes that the realism in video games can be educational. According to him:

I play tennis, both in real world and on PlayStation. I have seen the development and behind the scenes reel for the game, and they have copied Gael Monfils's movements, who is a professional tennis player. It's so realistic that, sometimes, I replay the movements in slow motion, and I learn from them. If they add a virtual reality goggles and motion detector rackets, I will probably stop going to the court [laughs]. (Excerpt from interview with PPT004)

One of the fundamental features of playing a character in the video game world is the social interaction that gamers have with other gamers. These days, almost every game that comes to market is played online and, therefore, the players get to interact with each other. All players have a unique gaming name, which is called a “gamertag”, and it's through these gamertags that they know each other or add each other to friend lists. Using microphones and headsets, gamers talk to each other in the video game world—addressing each other by their respective gamertags—and create strong bonds. For instance, as Participant #5 explains:

I don't have many friends in real world. In fact, I don't have anyone who is in touch with me on a daily basis. But when I get home and turn on my Xbox, there are always some people there that are more than happy to engage with me. I am guessing they have a similar situation. Sometimes the gaming experience is overshadowed by these social interactions, and these friendships becomes the very reason we play a game. (Excerpt from interview with PPT005)

The in-game interaction is only one of the various ways gamers communicate with each other. There are Facebook pages, Reddit groups, Instagram pages, game forums, and many other websites and platforms where these gamers become members and interact. Streaming is another trend that is becoming more popular. That is, a gamer playing with friends—or alone—starts broadcasting their game live on Facebook or Twitch or Mixer, and then everyone else can watch and converse with them. Discussing this practice, Participant #4 says:

[W]hen I am tired and not focused enough to play myself, I watch other players' stream. I get some chips, put on my headset, and cheer for them. Sometimes I learn from their gameplay because people who are streaming are usually pro gamers—but other times, I just want to be in the loop. There is a donate option when you watch a stream and, if it is good, I usually donate few bucks because those people invest time and energy to entertain us, and they deserve it. They are like families. (Excerpt from interview with PPT004)

Game developers have realized the marked capacity for engagement whilst playing with others. Indeed, games are, increasingly, being designed in a way that requires the collaboration of several people in order to wholly experience a game. To that effect, gamers must devise strategies and execute tactics in order to overcome the obstacles. As Participant #3 says:

[I]t's like a team projects at working place. Every person has a role, and you try your best not to let others down. To be honest with you, sometimes I practice for hours before joining others because I don't want to be seen as a weak player or, as they call it in gaming communities, a “trash”. (Excerpt from interview with PPT003)

Such communal immersion can be very persuasive for younger users trying to fit in. Essentially, it can be a very useful tool for building social skills, and it can even boost confidence. However, community gaming can also be yet another way to feel like a failure. Either way, the social features of the video games are a very powerful and immersive experience that pushes character identification to new frontiers. This identification becomes so strong that, even in the real world, some players call each other by their gamertags—that is, rather than their actual names.

Identification with Narrative

Identifying with a character is not the only factor that transforms filmgoing into an immersive experience. A film's discourse or narrative is a factor that keeps spectators anticipating how the story shall unfold. Many video games have storylines as well and, in terms of their artistic aspects, some of them can be compared to cinematic screenplays. However, there

is major difference: in video games, it is the players who determine how the story unfolds. This places gamers in the position of a screenwriter, which means they get involved and exercise agency over their own version of the story. In some games, the story can unfold in multiple ways, which allows players choose each scenario as they progress in the game. To this, Participant #3 says:

[M]any of the games I play give the player the option to choose amongst several dialog options. Depending on your choice, the story can be different. In some games, there are many different possibilities, and sometimes I play a game several times from the beginning to the end to see different versions of it. (Excerpt from interview with PPT003)

Increasingly, game developers are designing more complicated scenarios for games in order to keep their clients engaged. There are websites and YouTube channels that discuss various possibilities in a game's narrative, and some users even make money by providing and selling step-by-step guidelines or walkthroughs for certain game narratives. However, not all gamers feel the same way about acquiring assistance from a second party, as Participant #5 expresses:

[P]ersonally, I don't like the websites that guide you through the game. They spoil the game. It's like reading a film review before watching it. For me, waiting to see the consequences of my choices on the game story is the most exciting part of playing a game. (Excerpt from interview with PPT005)

Even games that are focused on single matches (such as sports games) have added a career mode that follows a storyline. In terms of immersion in games, the sense of agency and freedom that gamers feel whilst making their own story can be a major factor. "Imagine you are watching a movie," Participant #1 says, adding, "but, at any point, you can decide what is going to happen next! This is the biggest difference between a movie and game, which of course makes gaming a more interesting experience for me" (Excerpt from interview with PPT001).

The length of the story is yet another difference between movie narratives and game narratives. While a typical movie lasts about two to three hours, a game can take hundreds of hours of playing to finish the story. The more engaging the story is, the more likely it is that players will binge the game. This is a phenomenon that Participant #4 touches on:

[T]he reason why I play mobile games most of the time is that they often don't have any story! You play a game for few minutes, you win or lose, and that's it. But with console games, I get hooked up on the games, which have a storyline, and then I can't help playing them. (Excerpt from interview with PPT004)

Game developers use different strategies to provide more engaging narratives. One of the most common strategies is called "cutscenes". In gaming jargon, a cutscene (sometimes called cinematic or event-scene) is a non-interactive segment of the game, which means it is not played by the gamer. In essence, it is more like a movie segment that is weaved into the game, and it is used to advance or transition the narrative. For instance, a cutscene can depict a conversation between the characters, show the consequences of player's choice, or introduce new elements to the game. These scenes often act as a reward system for the players because they frequently

occur at and celebrate landmarks in the storyline, and then players watch the story unfold in a non-interactive way that is akin to watching a film. Therefore, it is not surprising that all the cutting and editing techniques that are employed and deployed by cinema are also used for creating video game cutscenes.

There are several types of cutscenes. For example, "live action cutscenes" are similar to movies. These scenes are either shot on location or on sound stages with real actors (sometimes even famous ones). In some instances, games that are adapted from movies—such as *The Matrix* or *Star Wars*—use the actual footage from the films as cutscenes. As Participant #1 reflects, these cutscenes can be rather effective:

[L]ast month I was playing *Wing Commander IV* and, when I finished the first stage, all of a sudden the screen showed a real live action footage featuring Mark Hamil and Malcolm McDowell. I was pleasantly surprised, and I wanted to finish the next stages because I knew there will be more cinematics. (Excerpt from interview with PPT001)

Similar to animated movies, "pre-rendered cutscenes" also feature a game's characters. These high-resolution animations act as stitches that connect different stages of the game. Slightly different, "real time cutscenes" use the game engine and graphics during the gameplay. These cutscenes are of lower quality resolution—that is, compared to pre-rendered cutscenes—but they can adapt to the situation of the game. For example, if a player dresses their character in a red jacket, the real time cutscene will depict the character in the same red jacket. Moreover, if a player changes their character's clothing, such changes will be reflected in cutscenes. However,

the real time cutscenes and pre-rendered cut scenes are akin to fixed movies, so they do not get affected by a game's situation (Adams & Rollings, 2006).

Although game narratives have some similarities to movie screenplays—that is, in terms of a story unfolding over time via characters—there are major differences as well. Whilst watching a movie, the fictional goal is not aligned with spectators wishes—however, in video games, the developers endeavour to align the fictional goals with what the players want. Regarding the latter, this can be an arduous task because the developer must ensure the player does not feel trapped in "ludonarrative dissonance", which is a situation wherein the game forces the player do something that they, the gamer, do not desire, and so, at the same time, the player becomes irritated or dismayed by not being able to do what they wish (Healy, 2017).

Gamers want to affect the way a story unfolds. Essentially, the more flexible a game is, the more likely it is that the game will be a market success. Therefore, game developers strive to provide more freedom and power to gamers in order to ensure they, the players, can tell their own story. However, this is not easy in practice. Giving players more freedom involves designing new areas in the game world, more missions, more cutscenes, more characters, and so on, which is all costly and time consuming. This is only complicated by the fact that many players will not see many of painstakingly crafted features because they choose a different path to follow within the game and do not intend to replay the entire game (again, beating a game can involve hundreds of hours). This is why game developers try to develop “emergent storytelling” within their products—that is, stories that spontaneously emerge (Healy, 2017). This concept is easier to understand if one compares it to sports. For example, every basketball game is unique. What happens in every game—in terms of development and how the players play—is never repeated in any other game. The people who designed the rules and guidelines for basketball—or

even those who built and continue to build the stadiums—could have never predicted the types of games that would be played. Simply put, the rules, settings, and players' interaction generates an endless variety of games. This is what happens in video games with emergent storytelling. In essence, the developers design a game world with a set of guidelines and characters that allow each player to create their own unique story in the game. In these games, the stories are not written, but, rather, they are made possible by the act of playing, which allows gamers to conjure results that not only surprise them, but, also, the designers. Each player creates a unique story that is deeply personal and often memorable—at least, for those who create it.

Camera Eye

The difference between the camera in cinema and the camera in video games is that, in video games, the camera is a "virtual camera system" (Adams & Rollings, 2006). In 3D video games, the game designers use a set of virtual cameras to show the game world. The gaming world is interactive and, thus, unpredictable. Therefore, the shots are not planned in a manner akin to cinema. Because it is impossible to predict where the players are going to go and which angle they will choose, the game developers use artificial intelligence to choose the best suitable shots.

There are three types of camera systems in video games: fixed cameras, tracking cameras, and interactive cameras. In the *fixed camera* system, game developers decide upon the position and angle of the camera. The camera does not move, so the players will see the same view whenever their characters enter the camera's field of view (Adams & Rollings, 2006). In a way, this camera system is similar to the camera practices in cinema because it is the developer who decides what the players can or cannot see in the game world. As a result, games developed

with this technique have more cinematic qualities, and, also, they are usually considered more artistic. From a gamer's perspective, Participant #5 says:

[T]here are some games, like *Resident Evil* or *Alone in the Dark*, in which you cannot look around. You still control the character, but you don't control the camera angle and the camera doesn't move. It is pretty much cinema. My experience with these games has always been with scary games. I don't know, maybe they use the same techniques in horror movies to design these games. However, they become boring very soon. (Excerpt from interview with PPT005)

The *tracking camera* follows the character from behind throughout the game. In this system, the players do not control the camera and they cannot change the view or look wherever they wish. The problem with this system—at least, in its early days—is that, when players make the character face a wall or an obstacle, they cannot change the angle, so the camera ends up in an awkward angle, which makes the POV jerk about. Most of the time, players must exit the game in order to remedy the issue. To this, Participant #1 speaks:

I used to play *Tomb Raider* and *Crash Bandicoot*, and, although they were very exciting games, I hated the camera system. The camera didn't show what I am interested to see and there was no way to change it, either. Kind of like watching a movie, you know—something is happening in the background, or you hear something, but you only see what the director has decided to see. The difference is you don't end up staring at a wall in a movie [laughs]. (Excerpted from interview with PPT001)

The tracking camera system did not prove to be very successful, so game developers had to find a new system to address the ever-increasing interactive nature of video games. Many modern games use a camera system called *interactive*. In this system, the camera still tracks the character, but the orientation or camera angle can be changed. For gaming consoles, the players use the controller's analog stick to change the camera angle, and, for PC games, the camera angle is controlled by the mouse. This camera system was a revolution in video game development because it provided gamers with the freedom to look anywhere—at any angle—that they fancied. Participant #2 emphasizes the importance of this system, saying:

[P]ersonally, I can't play a game in which I don't have full control of the camera. This feature has made video games more like the real world in which you can look wherever you want. Sometimes, when I play for several hours and there is no noise around me, the gaming world becomes my world, and this is where I get the best gaming experience. (Excerpt from interview with PPT002)

One of the pivotal features introduced by the interactive camera is the ability to choose the distance between the camera and the character. This feature inspired game developers to use "first person view" as opposed to "third person view", which was the dominant viewpoint in early games.

In first person view, the player sees the game world through the eyes of the character while, in third person view, the camera shows the character from behind and follows them. Aside from the technical differences between these two camera systems, there are differences in terms

of the subjective gaming experience as well. The first major difference between them is the immersive experience of the gamers. Although both these camera systems can be immersive, they achieve immersion in different ways.

In first person view, essentially, the gamer becomes the character and sees the world through said character's eyes. By "becoming" the character, the gamer embodies the character's traits and demeanors, which considerably boosts the immersive features of the game. Describing such immersion, Participant #5 says:

[W]hen I play first person shooter games, I feel all the atmospheric tension. I am very jumpy and even anxious. Hmm, no, not anxious. Excited. Because at the end, I know it's a game and I won't really die, but you feel everything that's going on through your character's eyes, which is really cool. (Excerpt from interview with PPT005)

Indeed, this experience can be too stressful for some players, so they prefer to have a distance between them and the action in the game, which is achieved via third person view. Participant #3 provides a first-hand account of this, saying:

I just can't play first person action games—it's too much. I sweat, swear, and get really angry and edgy. Few times, I have thrown my controller to the screen! So, I decided to play only third person games. At least I know and I see that whatever is happening in the game—it's happening to my character, not me! I see the character fall, bleed, and die, but it's the character—not me. Whereas when you play first person games, and you get shot

and you fall, the camera shows the view of a falling man, which is really scary! (Excerpt from interview with PPT003)

While first person games provide a deeper immersive experience—that is, in terms of the interaction between the players and the action in the game—third person games achieve immersion in a different way. The third person games create a bond between the player and the character's avatar. In these games, the players see the characters and watch how the game worlds treat or impact upon their characters. Some games—such as *Need for Speed*—provide the players with the option to choose first person or third person view. For instance, as Participant #1 says:

[M]e and my buddies, we all play *Need for Speed*, which is a racing game. Many of them prefer to play it in first person view, which basically mimics the view that you have in real world driving—you see the road as if you are sitting in the car. They claim that this gives them the feeling that they are driving a real car. However, for me, it doesn't make sense. You play this game to unlock new cars and, sometimes, you have to play for a year or more to unlock a super car. I want to play with third person view to watch my super car roaring the roads and enjoy the view. If I go to first person view, the view is the same for all cars. (Excerpt from interview with PPT001)

The second difference between the first person and third person camera system is the reflexes and speed of action. In games that are fast-paced and require the player to react equally fast (for example, shoot a target the moment it appears), the first-person view gives a higher spatial awareness without the character's avatar blocking part of the screen. However, this level

of speed is unpleasant for some players, and it also creates motion sickness. That said, this fast movement is precisely the element that attracts many gamers because it, more or less, creates an immersive experience in which one does not look at anything except the screen for many hours. In such games, any type of distraction can result in failure. "You want to enjoy a shooting game?" asks Participant #5, and then offering, "Here are my tips: Close the curtains, turn off the lights, put your headset on, and buy the biggest TV that you can afford" (Excerpt from interview with PPT005). Playing without distraction on a big screen is one of the factors that all of my study's participants reported as being an important factor for a more immersive experience.

Aside from camera systems and angles, the fact that the player is the cameraman makes the gaming experience distinctive from watching a film. In cinema, the spectators are limited to seeing whatever the cameraman and director have decided to present within the frame. The spectators cannot change the camera view and examine filming location! In video games, however, the player can look anywhere they desire within a game's world. This piques their curiosity and, as a result, gamers spend a lot of time exploring game worlds. With the new generation of online games, this experience and act of exploring has become even more immersive because the game worlds constantly change. Participant #3 discusses this notion, explaining:

[L]et's say there is a house in the game, and I have already explored it yesterday—but there is a very good chance that there is something inside the house, if I go inside it today. For example, maybe there is a new item or weapon inside the house. The online games are constantly changing their environment so that the players don't get bored, and

this is why I like these games so much everyday, a new experience is waiting for you.
(Excerpt from interview with PPT003)

Having full control of the camera creates an environment that is, in a sense, rather similar to the everyday experience of being. That is, one visually interacts with one's environment through one's eyes, and one has full control when it comes to choosing where, when, and how to look at different things. Again, the interactive camera system in video games creates a similar experience. Essentially, the players feel more in control of their experience, which establishes a sense of agency that creates a subjective experience that vastly differs from watching a movie.

The Embodied Experience

In chapter 2, I discussed the phenomenological arguments pertaining to suture theory that suggest watching a movie is an embodied experience that goes beyond a visual experience. This argument is far more palpable in video games, and there are many ways that make playing video games an embodied experience. First and foremost, every game requires working with a joystick, controller, keyboard, or touch screen. The coordination of one's finger movements and the images on the screen makes playing video games a multi-sensorial experience. Regarding controlling methods, players vary according to their preference—that is, some are hardcore keyboard players and some prefer controllers. Many people play with their cellphones because it is easier to carry it wherever they go. Also, these days, the abundance of smartphones means almost everyone possesses a vehicle for gaming.

Holding a controller in two hands promotes the sensory experience, which becomes much different when one is pressing the keys on a keyboard. The preference for one over the other is reflected by Participant #1, who says:

I don't know how people play with keyboards. Because, when you play with keyboard, your body movement becomes very limited—but when you play with a controller, you can move around and get excited with the game! Sometimes, when it becomes too exciting, I play while I am standing. (Excerpt from interview with PPT001)

There is an expression in the gaming community, "hyperactive noob", which refers to gamers at beginner levels who move their hands according to how the character moves. For instance, say the character jumps over an obstacle in the game, and all player has to do is to press a button. An experienced gamer does this in a way that is almost static. However, a beginner often presses the button and, at the same time, makes a sudden upward movement with their hands, which is, thus, an imitation of the jumping action exhibited by the character. This phenomenon shows how playing a game can be a bodily experience and, moreover, how identification with a character or narrative can literally move a player's body.

There is also a vibration mechanism inside controllers that starts to vibrate depending on what is happening in the game. For example, if someone is playing a shooting game and gets shot or injured, the character's heartbeat increases and, accordingly, the controller begins vibrating, which adds an extra layer of embodied experience to the game. Sometimes this experience becomes so overwhelming that the player turns off the vibration. Participant #5 elaborates upon this, saying:

[S]ometimes, I really like it—it helps to make the game more realistic. But when I am already excited in the game and, let's say, I get shot, my own heartbeat is even faster than the character's, and the vibration just becomes too much to handle [laughs]. (Excerpt from interview with PPT005)

Although many games are played with controllers, there are some games that have their own specific controllers that require the players to use other parts of their bodies, too. For example, Nintendo Wii has games that require players to stand on a special pad and wear gloves that track their movements. On these consoles, if the gamer is playing a tennis game, they should stand up and position their body in a manner akin to a real tennis player, and then they must move their hands as if they are holding a racket. The sensors track the body movements and translate it into the game. This phenomenon adds yet another layer to the embodied experience of gaming because, more or less, the outcome of the game depends on the player's actual body movements.

When combined with live action footage, game-specific controllers can create a very immersive environment in which the players find themselves controlling the game within highly realistic settings. Perhaps one of the best examples of this type of game is *Guitar Hero*, which sees the gamer acting as a guitar player in a rock band. The game developers have filmed real actors and musicians playing on a stage in front of thousands of fans, so the gamer acting as the main guitar player, essentially, plays the songs as shown on the screen. The controller for this game looks like a real guitar, but, instead of strings, it has buttons. Participant #1 is an example of someone for whom this game particularly resonates, as they say:

[S]ince I was a kid, I wanted to be in a rock band, like many other kids. When this game came to market, my dream came true! I am really good at it and I have the highest record amongst my friends. Sometimes, I turn off the lights and I put my headphones on, and play for hours. It's funny, when you play bad, the fans boo you and your bandmates start asking if you are okay. (Excerpt from interview with PPT001)

Probably the ultimate embodied experience in video gaming is playing with Virtual Reality (VR) technology. For these platforms, a player must stand on a literal platform whilst wearing special shoes, gloves, a belt, and VR goggles. There are some gadgets, such as a gun that you can hold in your hand. In essence, the player acts out everything that they do within the game world—that is, they run, dodge, jump, and punch in the real world, which is then translated into gaming world. Although this technology promises an ultimate immersive experience, it shall likely be some time before it is produced at an affordable price that enables the average gamer to purchase it and use it, privately, within their home. Talking about her experience playing shooting games on a VR platform, Participant #5 says:

It was crazy! It was almost too much to bear. Have you seen those old movies that shows the birth of cinema, and people run away when a train approaches them on the screen? It was something like that! I was running and jumping and shooting people, and dodging their punches. But I had to stop because I started sweating and my heart was racing, and to be honest, I was a little bit scared, too. Not scared, shocked. (Excerpt from interview with PPT005)

To provide a more immersive experience, the VR technologies also employ other sensory cues (such as smell, auditory, and tactile). Lazzaro (2004) suggests that body movements amplify a player's engagement level and, subsequently, their pleasure level. Furthermore, by adding body movements to the gaming experience, players get a feeling of presence within the digital world. Essentially, the players identify rather quickly with their role and, thus, engage with the game. Here, the accomplishments and achievements are not the main factor because the experience itself becomes rewarding.

Beyond Cinematic Experience

This category includes the features of the gaming experience that are, of course, beyond the cinematic experience. So far, all the discussed video game experiences have had some common denominators with the cinematic experience, but video gaming is also an independent phenomenon with some of its own unique features. One of these unique features is the potential duration of interaction. Whereas an average movie runs between 90 and 180 minutes, a game has no runtime because it can last forever. It is an open world that one can enter and re-enter many times, and, each time, one can have a different experience. Playing games online has allowed game developers to constantly change a game's world, quests, objectives, and storylines, which encourages the gamers to play the games more and more as well as over and over. However, playing games for long hours can have lasting effects that carry-over into a player's real life. This is something with which Participant #1 was familiar, expressing:

[W]hen I play Need for Speed more than few hours in one sitting, I know I shouldn't drive for few days. I know it sounds funny, but I can't help but reenact the game scenes in streets of Tehran. I know it's not the game world, and I can have an accident and die, but somehow it feels like similar, and I find myself doing some of my moves and maneuvers in the game on real world highways! It's dangerous! (Excerpt from interview with PPT001)

In some extreme cases, playing video games for long hours has killed the player—however, mostly because of mental fatigue and starvation. Alas, immersive gaming can be addictive. "I remember I dropped all my courses one semester when I was doing my undergrad," Participant #5 explains, adding, "I was playing 16 hours a day, and it had become all my life" (Excerpt from interview with PPT005). Although long hours of playing video games can be compared to binge watching TV shows on Netflix, it is different because, for some games, there is actually no end, so the gamer does not play in order to reach a certain and defined end.

Learning new skills is one of the major components affiliated with the gaming experience. Indeed, this is one of biggest differences between watching a movie and playing a video game. That is, some games—such as shooting games, racing games, and action games—require fast reflexes and quick decision-making. Participant #1 offers a person example, saying:

I have participated in street races, myself, which are not very legal in our country [laughs]. *Need for Speed* is extremely realistic in terms of car control and speed dynamics. It's believed, amongst racers, that these games increases your skills in reading

fast in high speeds. I, personally, have learned a lot from these games. (Excerpt from interview with PPT001)

Some games require cognitive problem-solving skills, so the players often sit in front of the screen thinking for a long time. Participant #4 illustrates this, explaining:

[S]ome people say playing chess improves problem-solving skills. I play chess really good, but I believe puzzle games improve problem-solving skills 100 times more than chess. When I have math exam, I play puzzle games for half an hour before the exam. It helps me to focus and process the problem step by step. (Excerpt from interview with PPT004)

However, there are some games where the skills that are required to play them are not translatable into real life skills. In such cases, it is mostly about gamers having a thorough knowledge of a particular game's world as well as its rules, which helps them play more efficiently. Although these skills are game-specific and a player cannot use them in the real world (or even in other games), the players become convinced that they must invest more time into playing certain games and getting better at them. With some subjective insight, Participant #5 says:

I play a game called *World of Tanks*. There are more than 300 different tanks in this game and each one has a weak spot that you should shoot them in, that particular spot to destroy them. You can tell someone is a noob when they keep shooting you in the wrong

spots, and they get angry that you stand there, unharmed. Whereas I know exactly how to destroy each and everyone of these 300 tanks. It's very encouraging to get better at the game. It makes it more fun! (Excerpt from interview with PPT005)

Perhaps one of the most important variables in the gaming experience—that is, something that sets it apart from watching a film—is the reward system and the feeling of accomplishment. Every game has a series of quests that players get "gaming scores" for completing. These accomplishments are visible to a gamer's friends list within gaming accounts. Therefore, by looking at player's account, one can see what games they have played as well as the overall percentage of each game they have completed. Finishing games and getting the 100% score is not easy, so players who finish the games tend to brag about their achievements on gaming forums. However, completing games can be very time-consuming and, in some cases, it can last for several years. This is directly recounted by Participant #2, who says:

I have completed 13 games, so far, which you can see in my profile. Not the best in my friends list, but not the worst, either. However, I have finished *Battlefield: Bad Company* and got the full 100% of the achievements. No one else in my gaming community has finished that game. It took me three years! (Excerpt from interview with PPT002)

Usually, video gamers belong to a group of peers who are also gamers. These peers can be either online friends or friends in the real world. Having a high scoring game is usually considered a sign of intelligence and competitiveness. Sharing an anecdote, Participant #1 adds to this, saying:

You are not gonna believe this, but one of my friends had a fight with his wife and he was asking me for advice, and when I told him that I am not a psychotherapist, he said that I am smart because I have a high gaming score! I mean, this is of course a funny example, but really, when you are a good gamer, your friends respect you and who doesn't like that? (Excerpt from interview with PPT001)

Aside from being acknowledged by friends, there are some gamers who professionally play video games. These gamers compete at tournaments—which are called E-sports (electronic sports)—and such events are becoming more popular. In fact, there are reports (Morgan, 2019) that, starting with 2024, video game competitions will be part of the Olympics. The average professional gamer earns about \$60,000 per year, and the top players can earn up to \$3.5 million dollars at competitions (Krinsky, 2018). Professional players have their own personal coaches, and there are even summer camps. On the topic of professional gaming, Participant #2 says:

I am thinking about going pro. I am a student now and I have one more year to finish my masters, and, after that, I will give it a shot. I have the passion, for sure, and I think I have the talent, too. So far, I have won three small tournaments with total \$8700 winnings. (Excerpt from interview with PPT002)

However, gamers do not necessarily need to win a tournament in order to feel the joy of winning. For many of them, finishing the quests or killing an enemy is satisfying enough.

[S]ome of my friends drink alcohol, some use drugs, and some are sex addicts. They all have one goal: to gain satisfaction. You know where I get my satisfaction from? Headshots! [Killing an enemy by shooting them in the head.] And sometimes, my victims get angry and send me angry messages! Those sore losers make my day! (Excerpt from interview with PPT005)

Discussion

The subjective experience of playing video games was explored in the present investigation of five gamers. Immersion in video games is a multi-faceted and complex phenomenon, but all participants reported having an immersive experience playing video games. Frequency and duration of this experience was related to variables such as the gamer's personality, genre of the game, duration of play, screen size, setting and location of the play, camera system, and so on. This experience was reflected by participants with phrases such as “getting lost in the game” and “becoming part of the game.” In the interviews, I tried to understand the subjective experience of being immersed in a gaming experience and, using suture theory as my template, I categorized my findings into five categories, which were further divided into three subcategories. Labeling these categories, I strived to draw a parallel line between suture in cinema and suture in video games. Thus, four out of five categories were somewhat similar to the experience of watching a movie while, in the final category, I included all the unique features video games exhibit that cannot be applied or compared to cinema.

In the next chapter, I shall synthesize these findings with theoretical concepts from suture theory in order to develop a subjectivity theory for video games. In essence, I discuss the many different ways that playing video games can change or even create a new subjectivity.

Chapter 5: Suture Theory - From Cinema to Video Games

My empirical enquiry began with these two questions in mind:

1. How is the gaming experience different from watching a movie?
2. How do gamers perceive their subjective experience whilst playing games?

After analyzing the empirical data, I identified 15 subcategories that were common themes in participants' responses. To answer the aforementioned research questions, I examine each subcategory in order to see if the empirical findings confirm my theoretical speculations, which were covered in chapter 2. In essence, to what extent is cinema-based suture applicable to video gaming? What are the similarities and differences between cinema-based suture and gaming-based suture? In the data analyzing stage, after identifying the 15 subcategories, I divided and arranged the findings based on whether or not they were similar to cinema. Thus, I ended up with 12 similarities and three differences. In the next step—that is, assigning the subcategories to main categories—I employed the theoretical insights discussed in chapter 2. As previously introduced and unpacked, there are four versions or interpretations of suture in cinema: identification with character, identification with narrative, camera gaze, and embodied experience. These four variations of suture theory are the titles I elected to use for the names of the four main categories that address the similarities between cinema and video games. The final category, which includes features of the video gaming experience—which is not found in cinema—is titled “Beyond Cinematic Experience”.

Similarities

In cinema, suture theory's main argument for "identification with character" is rooted in editing techniques. These techniques are used to "suture" between shots and, as a result, the spectators regard a scene from a character's point of view. In video games, editing techniques are rarely used because the players control their chosen characters. The camera does not change to show the point of view of other characters during the game play, so, therefore, what the players see is a very long single take without any cuts (the exception being, perhaps, when the game enters a new stage or when gameplay is interrupted by cutscenes). Thus, there is only one character (the one that the player controls) with whom the player identifies, so the rest are considered "the other". While the cutting and editing is used to create a sense of visual continuation between shots, such continuation is inherently present in video games.

In cinema, the film does not necessarily narrate the movie through the perspective of the character that the spectator identifies with. However, in video games, the players choose their characters and follow them throughout the whole adventure. The depth and level of this choice varies from game to game—that is, sometimes the players choose a character from a list, teams, cars, and so on. But sometimes players have a deeper control of character details. For instance, there are games where players can name the character, modify physical features, create a background story, and even determine the character's personality—essentially, the player customizes the character with which they identify (sometimes to literally identify with the character as a reflection or extension of the self). According to my empirical findings, if one compares gaming to the experience of watching a character in a movie, the freedom to choose and customize a character creates a deeper bond between the players and the characters with whom they identify.

Of course, one can argue that the characters in cinema are a live-action presentation of real people whereas, in video games, the characters are digitally created or animated and, therefore, the identification with real people is easier or deeper than non-real digital characters. That said, the rapid technological advancements in digital programming—as well as the emergence of faster and more powerful processors—has equipped game designers with the means to create more realistic characters and environments that, in some cases, are almost indistinguishable from live-action movies. However, as Elsaesser and Hagener (2015) argue, there is no indication that spectators identify less with digital characters and, what is more, the identification experience seems to be similar across live-action movies, digitally created scenes or characters, or even fully animated movies.

Another aspect of character identification in video games that distinguishes it from cinema is the fact that, in video games, the players interact with other players from the perspective of their characters. Therefore, identification is not just limited to game world, but, rather, it can be expanded to include interaction with other people who know and regard other players via their respective characters. This interaction is sometimes continued in non-gaming environments—that is, people are known to interact with each other using gamertags and character pictures in order to create a profile for themselves within the social media realm, which, in some cases, attracts millions of followers.

Hence, the identification with character is something that video games in fact share with cinema. At the same time, however, there are some unique features in video games that make the act of identification deeper than that of cinema, which, in turn, leads to a deeper immersive experience. The empirical findings of this study confirm the character identification aspect of

suture theory, which suggests that this aspect of gaming-based suture is deeper than cinema-based suture.

“Identification with narrative” is yet another aspect of suture theory that video games have in common with cinema. Essentially, the narrative in video games can be divided into two types: cinematic storytelling and emergent storytelling. In cinematic storytelling, the game designers write the screenplay for the game—which includes all the dialogue and narrative(s)—but it is still different from cinema because, in video games, there are multiple possible scenarios that a player can choose in order to direct the trajectory of the story. All told, the players have the freedom to choose the narrative, but said choice is limited to the options that the designers have provided. Although this type of narrative is similar to ones in cinema, gamers report a deeper identification because they feel as if they have a role in deciding how a story unfolds. This sense of agency provides the player with a sense of “being part of the game” and “having a say” in how the narrative develops. The narrative in video games includes cutscenes, which, of course, is an element that has been borrowed from cinema and, therefore, all the aspects of narrative suture in cinema applies to cutscenes as well.

The “emergent storytelling” in video games, however, is completely different from a cinematic narrative because, instead of a specific narrative, the designers provide a framework in which the players create their own unique story. In such games, the players experience a unique scenario every time they play the game, so, therefore, the narrative is neither predictable nor reproducible. The structure of narrative in this type of storytelling provides an almost unlimited number of scenarios in which the players are the only ones deciding and determining how the story should unfold. What is more, online gaming has provided an opportunity for players to collaborate and compete with and amongst other gamers whilst not only creating, but also

sharing their own unique narrative(s). For this reason, video game streaming is becoming more and more popular—that is, users paying or subscribing to watch others play a game. The participants in this study—who also watched other players streaming games—said of the experience that it is “as if they are watching a movie”.

In this study, the empirical findings confirmed that identification with narrative is a major aspect of a player's subjective experience whilst playing video games—also, it is one of the main reasons for an immersive experience. The participants in this study described narratives in video games as being more “involving” and “interactive” than cinema, which provides players with a sense of agency and freedom as they choose their own story and try different approaches to fully experience a game. As previously discussed, wholly experiencing every avenue of a game’s narrative structure can sometimes take several years of playing the same game. This alone is a fascinating and very remarkable aspect of gaming and the experiential narratives therein.

To create visual and narrative continuation in cinema, filmmakers use editing techniques—however, the apparatus for creating and editing these images is the camera. That is, the spectators see the movie through the lens of the camera. What spectators see is limited by what the camera frame shows them, and it is the director who makes this decision. Of course, there are different methods for showing a scene with a camera—for example, a static shot or a tracking shot. But aside from the camera’s movements, the filmmaker also decides the point of view or angle of each shot. By comparison, the camera in video games has a similar role, but it does not have as many of the limitations that preoccupy the cinematic camera. In essence, there are three types of camera systems in video games: fixed, tracking, and interactive. The fixed and tracking camera is very similar to cinema, but, that said, what distinguishes camera system in video games from that of cinema is the interactivity of the camera system. Because this camera

system is a digital one, it can be moved around by the players. The interactive camera system in video games provides the opportunity for players to look wherever they desire in the game world, with the only limitation being the game world itself. This creates a *real lifelike* experience in which the players feel a sense of freedom during their visual experience.

The point of view in video games is also similar to cinema. In cinema, there is the first person view (POV shots), the third person view, the over-the-shoulder view, and so on. In video games, the use of a fixed or tracking camera system as well as the variety of different points of view is exactly akin to that of cinema. However, in the games that employ an interactive camera system, there are only two types of angles: first person and third person view. All of the participants in this study agreed that games using the first person view create a more immersive gaming experience. However, this immersive experience might also be “too much” for some gamers, which is why some game developers took notice of this issue and, in order to avoid losing customers, now provide players with the option of choosing a preferred POV.

The camera gaze in cinema and video games have a similar role, so, therefore, all the arguments pertaining to cinema-based suture are also applicable to gaming-based suture. The only difference is the interactive camera system in some games—which offers a player the freedom to control the camera as well as the angle—leads to a deeper immersive experience.

The phenomenological aspect of suture in cinema is suggested by Sobchack (2004) and Butte (2017), but they are also aware of the limitation associated with the embodied experience in cinema. Sobchack (2004) argues that the embodied experience that occurs whilst watching a movie is dependent upon the content of the movie and, in some movies, this aspect is non-existent. Butte (2017) proposes a similar limitation, saying that the deep intersubjectivity that transpires between the viewer and the film is limited to both personal experience as well as the

history of the viewer and the filmmaker. He also claims that identification with character, narrative, and camera gaze plays a larger role in suture than in the embodied experience. However, in video games, the embodied experience is, I argue, more palpable than cinema.

Whereas cinema spectators sit and watch a movie without much physical movement, gamers are more physically active during the gaming experience. Of course, the scope of such activation is varied and depends on the console as well as the game. For instance, physical interaction can range from the moving of a mouse or the pressing of a button on a controller to full body movements—at least, in virtual reality games. Currently, the ultimate physical and embodied experience is created by virtual reality games. Said games are so immersive that the players react with screaming, sweating, pounding heart, excitement, and so on. Even in regular console games, the embodied experience can be observed whilst watching a gamer play a game. It seems that the more experienced a gamer becomes, the less they seem to exhibit signs that they are experiencing a game in an embodied way. This can be due to their past experience and the notion that “it’s just a game.” However, in comparison to watching a movie, even the most experienced gamers are more physically involved in the process of playing a game. The participants in this study agreed that the inherent physical involvement of video games leads to a more “exciting” experience in which “you lose yourself” in the game.

Thus far, I compared cinema-based suture with gaming-based suture—that is, in terms of their similarities. This study’s empirical data suggests that the gaming experience involves all four aspects of suture in cinema. However, there are some differences between cinema and gaming that allow each of these four aspects and differences to promote a deeper immersive experience in video games. The empirical data, so far, confirms my theoretical framework for applying suture theory to video games and, furthermore, it shows that gaming-based suture goes

beyond cinema-based suture and creates a more immersive experience. However, there are some fundamental contrasting differences between video games and cinema that must be taken into account. Do these differences undermine the immersive experience of gaming—or do they intensify it?

Differences

Because some games employ open narratives or emergent storytelling, the game is potentially endless, so the players can play it for an infinite number of hours without repeating the story. From what my participants reported, it seems there is a positive correlation between the duration of play and immersion in the game. The game developers endeavor to add new features in order to keep the game “alive” and, recently, some bestseller games—such as *Apex Legends* and *Fortnite*—have started using “season mode”, which means the game is presented in seasons. This idea, which is borrowed from the production and broadcasting of television series, keeps players engaged because each season brings new challenges, accomplishments, and even changes in the game world.

Another unique feature of playing video games—that is, one that distinguishes it from watching movie—is the added element of learning new skills. The eye-coordination that is essential whilst playing video games is improved by, of course, playing video games (Chen & Tsai, 2015). It is suggested that playing strategic video games can improve problem-solving skills (Adachi & Willoughby, 2013), which is even transferable to non-gaming problems. Moreover, players also get more familiarized with a game’s world and game-specific skills, which increases their chances performing better. Morlock, Yando, and Nigolean (1985) suggest that frequent gamers are motivated to master games and compete with others. My empirical data confirms the results reported in the literature, and, also, all of participants in this study claimed

that their competitiveness whilst playing a game is positively correlated with the duration of the play, which, in turn, is likely linked to a more immersive gaming experience.

Finally, the video gaming experience is distinguished from the experience of watching a movie because the players' experiences and accomplishments are recognized and awarded. This reward system can be a very transient moment when either winning a game against a friend and bragging about it amongst other friends to, on a much vaster scale, competing at international tournaments where the winners collect millions of dollars. In 2014, more than 40,000 fans attended the final stage of the *DOTA2* championship at Seoul's World Cup Stadium, which was broadcasted onto big screens inside the stadium. The prize pool for the winner was more than \$11 million (Tassi, 2014). The number of fans who watch competitions online can be compared to the biggest sports events. For example, in 2018, more than 100 million unique viewers watched the final stage of *League of Legends* online, which is about two million more viewers than the fans who watched the Super Bowl that same year (Pei, 2019).

E-sports is becoming an important part of all game designers' strategies. As e-sports continues to gain attraction and become more popular—with both viewers and players increasing in number—investments are being poured into it by game industry. Zhang Jiang, an analyst from Macquarie Group who has studied the trend of e-sports over the past decade, declares that, “In medium-term, I expect e-sports to gain Olympics status, and long-term mobile e-sports will continue to gain followers, catering to a broadening audience as virtual reality and augmented reality technology becomes evermore sophisticated, offering dynamic viewing experiences” (Chen, 2017).

The participants in this study suggested that the sense of achievement and competition is the biggest factor in their gaming experience. To be more competitive, the players need to

improve their skills and achieve a higher skillset, so they invest more time and energy in their gaming. The cycle of competitions and gaining skills is something that does not exist in cinema, but it is an essential factor in gaming because it encourages players to spend many hours playing games, which then leads to a very immersive experience that the gamers in this study believe is not achievable in cinema.

To sum up my empirical findings, both the similarities and differences between cinema and video games lead to a more immersive suture in video games. According to this study, the basic principles of cinema-based suture theory are applicable to video games. However, the only difference is that the gaming-based suture seems to be deeper, stronger, and more enduring due to the differences that have been outlined. This study aimed to fill the gap in the psychological literature pertaining to a theory of subjectivity whilst also explaining immersion in video games.

The Problems of Traditional Immersion Theories in Psychological Literature

As discussed in chapter 1, the majority of video gaming literature in psychological studies focuses on the negative effects of video gaming. While there are a few studies that try to explain the phenomenon of immersion in video games, there are still some problems in said studies that make them a less than ideal vessel for a general theory of subjectivity in video games.

The first problem is the concept of immersion that overshadows immersion studies in video games. Essentially, participants describe their different experiences in various ways and the researchers attempt to place them under the same category. Some researchers even believe that this concept should be wholly abandoned because it is not a single definable concept (White, Harviainen, & Boss, 2012). A group of researchers (Adams, 2004; Holopainen & Björk, 2004; Ermi & Mäyrä, 2005) see immersion as playing, again and again, the same repetitive game. For

these researchers, the execution of a particular task or an activity defines immersion. The psychological studies that use this definition are mostly concentrated on the concept of “gaming addiction”. However, this is a problematic definition because the players rarely repeat the same thing in a game. That is, gamers enjoy making new narratives, exploring a game’s world, and discovering new things. In the case of emergent storytelling, it is impossible to create the same scenario twice. Therefore, for the gamers, playing long hours of the same game does not mean repeating the same tasks, strategies, or objectives. Alas, the researchers are more concerned with the duration of the activity rather than why and how immersion happens.

Another group of studies (Adams, 2004; Ermi & Mäyrä, 2005; Bowman, 2016; Björk, 2011) define immersion as being absorbed whilst achieving the game’s goals—that is, whether a puzzle must be solved or a certain tactic must be learned in order to overcome obstacles. This achievement-oriented definition of motivation is, of course, part of the broader definition of immersion that I discuss in my theory—but that is not all of it. The aforesaid researchers suggest that the competitive nature of the gaming and the reward system that is embedded in these games are the main reasons gamers lose themselves in games. However, as I discussed before, there are many other reasons, formats, and permutations of identification with which a game as well as all these variables work together in order to create an immersive experience. Thus, these studies merely graze the surface of the subject and, even at that, they only do so over a small portion of this phenomenon.

The majority of the psychological studies focussing on the negative effects of gaming define immersion as identifying with the content—or rather, what I call “narrative”. Because the content of many games includes some form of fighting or competing, these researchers focus on these issues and try to show that immersion in such games leads to aggressive behaviour. There

are multiple problems with these studies. First of all, there is no consensus on whether or not there is a causal relationship between violence or antisocial behaviour and playing video games, which I fully discussed in chapter 1. Second, immersion in content is only a small portion of why gamers are attracted to video games. And third, there are many external variables that may affect why certain gamers choose certain games as well as why some gamers may act violently afterward—that said, most do not. Violence and antisocial behaviour is a complicated issue that can involve social, political, economical, ideological, environmental, and biological causes, so trying to link and pin it on playing video games seems rather simplistic and reductionistic.

It is interesting that many of these studies that concentrate on a specific aspect of immersion in video games are pathologizing and attempting to make it yet another entry in DSM. Concepts such as addiction, violence, stress, and anxiety end up being linked to playing video games without a thorough study of what happens when gamers play video games and why they do so. These studies are not trying to come up with a subjectivity theory in order to explain the phenomenon, but, rather, they are more interested in the outcome of the phenomenon and how they can pathologize it. Even the few studies that focus on the phenomenon itself are either specific to a certain game or genre, or they only recognize some aspects of immersion without seeing the whole picture.

Limitations

The sample size for this study was small, which was mainly due to the methodological considerations that differentiate this study from a typical qualitative research. I used qualitative methods to extract the differences between video gaming and cinema, and the empirical findings were merged with theoretical contemplation in order to edit and adjust an existing theory to make it applicable to a new phenomenon. A full empirical study with more participants or a full

theoretical enquiry could very well lead to different results. The rationale behind merging empirical and theoretical data was to take advantage of both realms.

The process of analysis and the deriving of categories, subcategories, and themes is a subjective process, which means different researchers can analyze this data differently than the current study. However, the transparency that I exercised whilst presenting my findings shall, hopefully, allow other researchers reproduce the same analysis with different samples. Another limitation of this study—that is, as a study that explored a psychological phenomenon—is that it does not cover all the potential and possible factors that lead to the experience I trying to explore. For instance, a gamer who has had a military background and combat experience probably has a different subjective experience whilst playing a shooting game—that is, compared to teenage student who has neither held nor fired a gun. Similarly, someone who is a sports fan or an athlete—somebody who follows every nuance of a game—probably has a different experience whilst playing that sport as a video game, which cannot be compared to someone who does not know or follow the sport outside of the gaming context. However, these variables are not limited to personal history—for example, someone who plays a game alone with no one around probably has a different experience than someone who is surrounded by people as well as other stimulants. One can imagine that somebody who plays a game under the influence of alcohol or drugs can also experience a certain game in a very unique way. Alas, trying to pinpoint all the variables that lead to a certain experience is extremely demanding—if not impossible. Because of said limitations, the theory of gaming-based suture should be considered an emergent theory.

Further Studies

One of this study's limitations was the sample size. A further study that interviews a larger number of people could help polish gaming-based suture theory because it would likely

add or change some of the concepts. That is, adding more variables and exploring other factors that can influence a gamer's subjective experience whilst playing video games could lead to a better understanding of this phenomenon. Social and economical factors, personality traits, family and peers, background history and life experiences, and even political and ideological factors can impact a gamer's experience, which would explain why some gamers experience immersion in some specific situations or with certain games. More studies can be done on the nature and quality of an immersive experience in order to explain why immersion can lead to frustration and anger in some players, which can lead to a "rage quit"—that is, when a gamer throws the controller or turns off their gaming device in the middle of the game. There are other gamers who explain immersion as a very calm state of mind wherein they forget about their daily life and, essentially, set themselves free in the game world.

Additional research is also recommended in order to defy the existing quantitative literature that tries to pathologize the gaming experience. Once in a while, in the media, one learns of a violent story that, later on, is linked to a perpetrator playing video games. In such cases, after a few months, a plethora of psychological articles are published warning the "public" against the hazards of video gaming. In these situations, a case study could shed more light on the incident and clarify the role gaming actually held in the incident.

Conclusion

At the outset of this study, I began with a literature review followed by unpacking cinema-based suture. Later, with the help of empirical findings, I outlined the differences and similarities between video games and cinema, as a result of which 15 themes emerged. Out of the 15 themes, 12 could be explained by four types of cinema-based suture. However, I suggested that these 12 themes lead to a deeper immersion in video gaming compared to cinema. I also

argued that the other three themes, which were not explainable by cinema-based suture theory, still intensify and deepen the suture in video games.

Therefore, gaming-based suture can be divided into five categories:

- Identification with the characters
- Identification with the narrative
- Camera gaze
- Embodied experience
- Achievement and reward-oriented motivations

Each one of these main categories is divided into subcategories which create an immersive experience for gamers. Nonetheless, not every gamer experiences immersion all the time. Moreover, even when gamers do experience immersion, they do not necessarily experience all of the five categories that I outlined. That is, a gamer might experience only one of these aspects or, in some cases, they might feel them all. Essentially, different genres as well as different games within the same genre have different capacities for creating immersion. Therefore, gaming-based suture is a general theory with specific details that vary for each specific experience. In conclusion, this study contributes to the body of literature by investigating both the psychological aspects of video gaming as well as the subjective experience of immersion that goes beyond gaming addiction and the effects of violent games. The findings of this study, which help to develop a general theory of subjectivity for video gaming, might help researchers in this field to redirect or ask more diverse research questions regarding the effects of video gaming on gamers' lives.

As I discussed in literature review, researchers in this field are often preoccupied with the idea of linking video gaming to psychological disorders. However, before attempting to ‘explain’ a phenomenon and establishing correlations, one has to ‘understand’ that phenomenon. A research question regarding video gaming that is more critical will take into account the complicated nature of subjectivity in video gaming and try to contextualize psychological constructs such as aggression or addiction before rushing straight to correlations. For example, why do some gamers experience deeper immersion than others? What is the role of cultural, social and economical variables in gaming experience? Why do people have different experiences playing a similar game for a similar duration of time? Why does a gamer experience some emotions during his/her gaming experience in one day and not the following day? Hopefully, the results of this study shed some light on these complicated questions.

References

- Adachi, P. J. C., & Willoughby, T. (2013). Demolishing the competition: The longitudinal link between competitive video games, competitive gambling, and aggression. *Journal of Youth and Adolescence*, 42(7), 1090-1104.
- Adams, E. (2004). *Postmodernism and the three types of immersion*. Retrieved from http://designersnotebook.com/Columns/063_Postmodernism/063_postmodernism.htm.
- Althusser, L. (1971). *Lenin and philosophy, and other essays*. London: NLB.
- Anand, V. (2007). A study of time management: The correlation between video game usage and academic performance markers. *CyberPsychology & Behavior*, 10(4), 552-559.
- Anderson, C. A., & Carnagey N. L. (2009). Causal effects of violent sports video games on aggression: Is it competitiveness or violent content? *Journal of Experimental Social Psychology*, 45(4), 731-739.
- Anderson, C. A., & Dill K. E. (2000). Video games and aggressive thoughts, feelings and behaviour in the laboratory and in life. *Journal of Personality and Social Psychology*, 78(4), 772-790.
- Anderson, C. A., Shibuya, A., Ihori, N., Swing, E. L., Bushman, B. J., Sakamoto, A., . . . Saleem, M. (2010). Violent video game effects on aggression, empathy, and prosocial behavior in eastern and western countries: A meta-analytic review. *Psychological Bulletin*, 136(2), 151-173.
- Arriaga, P., Esteves, F., Carneiro, P., & Monteiro, M. B. (2006). Violent computer games and their effects on state hostility and physiological arousal. *Aggressive Behavior*, 32(4), 358-371.

- Balhara, Y. P. S. (2018). Behavioural addictions: Need to correct misnomers. *Asian Journal of Psychiatry*, 36, 118.
- Ballard, M., Gray, M., Reilly, J., & Noggle, M. (2009). Correlates of video game screen time among males: Body mass, physical activity, and other media use. *Eating Behaviors*, 10(3), 161-167.
- Barnett, J., & Coulson, M. (2010). Virtually real: A psychological perspective on massively multiplayer online games. *Review of General Psychology*, 14(2), 167-179.
- Barr, M. (2018). Student attitudes to games-based skills development: Learning from video games in higher education. *Computers in Human Behavior*, 80, 283-294.
- Bartholow, B. D., Sestir, M. A., & Davis E. B. (2005). Correlates and consequences of exposure to video game violence: Hostile personality, empathy and aggressive behaviour. *Personality and Social Psychology Bulletin*, 31(11), 1573-1586.
- Bazin, A. (1967). *What is Cinema? Vol. 1*. Berkeley: University of California Press.
- Björk, S. (2011). Immersed in Virtuality. *Digital Sprog*, 3(1), 27-32.
- Boot, W. R., Kramer, A. F., Simons, D. J., Fabiani, M., & Gratton, G. (2008). The effects of video game playing on attention, memory, and executive control. *Acta Psychologica*, 129(3), 387-398.
- Bordwell, D. (1988). *Narration in the Fiction Film*. New York: Oxford University Press.
- Bordwell, D., & Thompson, K. (2013). *Film art: An introduction* (10th ed.). New York: McGraw-Hill.
- Botes, A. (2018, August 21). *The 19 Best Racing Games in 2018 For The Ultimate Experience*. Retrieved from <https://www.nochgames.com/best-racing-games/>

- Bowman, S. L., & Standiford, A. (2016b). Enhancing healthcare simulations and beyond: Immersion theory and practice. *International Journal of Role-Playing*, 6, 12-19.
- Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. California, CA: Sage Publications Inc.
- BradyGames. (2010). *Guinness world records gamers edition 2010*. Brady Games.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Brooker, C. (Writer), & Slade, D. (Director). (2018, December 28). Bandersnatch. [Television series episode] in Brooker, C. (Producer), *The Black Mirror*. London: Netflix.
- Brown, E., & Cairns, P. (2004). *A Grounded Investigation of Game Immersion*. CHI, April 24-29. 1297-1300.
- Brunborg, G. S., Mentzoni, R. A., & Frøyland, L. R. (2014). Is video gaming, or video game addiction, associated with depression, academic achievement, heavy episodic drinking, or conduct problems? *Journal of Behavioral Addictions*, 3(1), 27-32.
- Butte, G. (2017). *Suture and narrative: deep intersubjectivity in fiction and film*. Ohio: Ohio State University Press
- Calleja, G. (2011). *In-game: From immersion to incorporation*. MIT Press.
- Carroll, N. (1988). *Mystifying Movies: Fads and Fallacies in Contemporary Film Theory*. New York: Columbia University Press.
- Casetti, F. (1993). *Teorie del cinema. 1945-1990*, Milano: Bompiani.
- Chen, C. (2017, October 26). *League of Legends World finals tickets gone in seconds, showing how e-sports continues to boom in China*. Retrieved

from <https://www.scmp.com/tech/china-tech/article/2117163/league-legends-world-finals-tickets-gone-seconds-showing-how-e>.

- Chen, Y., & Tsai, M. (2015). Eye-hand coordination strategies during active video game playing: An eye-tracking study. *Computers in Human Behavior*, 51, 8-14.
- Chess, S. (2014). Strange bedfellows: Subjectivity, romance, and hidden object video games. *Games and Culture: A Journal of Interactive Media*, 9(6), 417-428.
- Cole, H., & Griffiths, M. D. (2007). Social interactions in massively multiplayer online role-playing gamers. *CyberPsychology & Behavior*, 10(4), 575-583.
- Cover, J. (2010). *The Creation of Narrative in Tabletop Role-playing Games*. Jefferson, NC: McFarland.
- Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage.
- Creswell, J. (2007). *Qualitative Inquiry and research design: Choosing among five approaches* (2nd ed.). Thousand Oaks, CA: Sage.
- Csikszentmihalyi, M. (2008). *Flow: The psychology of optimal experience* (1st Harper Perennial Modern Classics ed.). New York: Harper Perennial.
- Dauphin, V. B. & Heller, G. M. (2010). Going to other worlds: The relationship between video gaming, psychological absorption and daydreaming styles. *Cyberpsychology, Behaviour and Social Networking*, 13(2), 169-172.
- Dauriat, F. Z., Zermatten, A., Billieux, J., Thorens, G., Bondolfi, G., Zullino, D., & Khazaal, Y. (2011). Motivations to play specifically predict excessive involvement in massively multiplayer online role-playing games: Evidence from an online survey. *European Addiction Research*, 17(4), 185-189.

- De Giglio, L., De Luca, F., Prosperini, L., Borriello, G., Bianchi, V., Pantano, P., & Pozzilli, C. (2015). A low-cost cognitive rehabilitation with a commercial video game improves sustained attention and executive functions in multiple sclerosis: A pilot study. *Neurorehabilitation and Neural Repair*, 29(5), 453-461.
- Derrida, J. (1973). *Speech and phenomena, and other essays on Husserl's Theory of signs*. Evanston: Northwestern University Press.
- Desai, R. A., Krishnan-Sarin, S., Cavallo, D., & Potenza, M. N. (2010). Video-gaming among high school students: Health correlates, gender differences, and problematic gaming. *Pediatrics*, 126(6), e1414-e1424.
- Elsaesser, T. & Hagener, M. (2015). *Film theory: An introduction through the senses* (2nd edition.). New York: Routledge.
- Entertainment Software Association. (2010). *Essential facts about the computer and video game industry: 2018 Sales, demographics and usage data*. Retrieved from http://www.theesa.com/wp-content/uploads/2018/05/EF2018_FINAL.pdf
- Ermi, L. and Mäyrä, F. (2005). "Fundamental Components of the Gameplay Experience: Analysing Immersion." In *Changing Views: Worlds in Play, Selected Papers of the 2005 Digital Games Research Association's Second International Conference*, pp. 15-27.
- Fergus, K. D. (2011). The rupture and repair of the couple's communal body with prostate cancer. *Families, Systems, & Health*, 29(2), 95-113.
- Ferguson, C. J. & Kilburn, J. (2010). Much ado about nothing: The misestimation and over interpretation of violent video game effects in Eastern and Western nations: Comment on Anderson et al. (2010). *Psychological Bulletin*, 136(2), 174-178.

- Ferguson, C. J., Coulson, M., & Barnett, J. (2011). A meta-analysis of pathological gaming prevalence and comorbidity with mental health, academic and social problems. *Journal of Psychiatric Research*, 45(12), 1573-1578.
- Fish, M. T. (2016). *Casual video game play as an augmentation intervention for anxiety: A controlled study* (Order No. AAI3682153). Available from PsycINFO. (1780495677; 2016-99020-235).
- Fowler, S. & Donkin, K. (2018, August 13). *Fredericton man accused in shootings was 'recluse' addicted to video games, friend says*. Retrieved from <https://www.cbc.ca/news/canada/new-brunswick/matthew-raymond-new-details-1.4783579>
- Game Vision Europe. (2010). *Video Gamers in Europe 2010* (p. 82). Interactive Software Federation. Retrieved from https://www.isfe.eu/wp-content/uploads/2018/11/isfe_final_combined.pdf
- Gaspar, J. G., Neider, M. B., Crowell, J. A., Lutz, A., Kaczmariski, H., & Kramer, A. F. (2014). Are gamers better crossers? an examination of action video game experience and dual task effects in a simulated street crossing task. *Human Factors*, 56(3), 443-452.
- Gentile, D. A., Choo, H., Liau, A., Sim, T., Li, D., Fung, D., & Khoo, A. (2011). Pathological video game use among youths: A two-year longitudinal study. *Pediatrics*, 127(2), e319-e329.
- Gentile, D. A., Swing, E. L., Lim, C. G., & Khoo, A. (2012). Video game playing, attention problems, and impulsiveness: Evidence of bidirectional causality. *Psychology of Popular Media Culture*, 1(1), 62-70.
- Glass, B. D., Maddox, W. T., & Love, B. C. (2013). Real-time strategy game training: Emergence of a cognitive flexibility trait. *PLoS One*, 8(8)

- González, M. T., Espada, J. P., & Tejeiro, R. (2017). Problem video game playing is related to emotional distress in adolescents. *Adicciones*, 29(3), 180-185.
- Gorman, T. E., Gentile, D. A., & Green, C. S. (2018). Problem gaming: A short primer. *American Journal of Play*, 10(3), 309-327.
- Greitemeyer, T., & Osswald, S. (2010). Effects of prosocial video games on prosocial behavior. *Journal of Personality and Social Psychology*, 98(2), 211-221.
- Greitemeyer, T. (2013). Playing video games cooperatively increases empathic concern. *Social Psychology*, 44(6), 408-413.
- Griffiths, M. D., & Meredith, A. (2009). Videogame addiction and its treatment. *Journal of Contemporary Psychotherapy: On the Cutting Edge of Modern Developments in Psychotherapy*, 39(4), 247-253.
- Griffiths, M. D., Antonius J., Kardefelt-Winther, D., Starcevic, V., Király, O., Pallesen, S., Müller, K. (2016). Working towards an Inter- national Consensus on Criteria for Assessing Internet Gaming Disorder: A Critical Commentary on Petry et al . (2014), Assessment of Internet Gaming Disorder. *Addiction*, 111, 167–175.
- Gross, M. S. (2009). Sexuality education in video games: Recommendations for the use of video games to teach human sexuality issues. In E. Schroeder, & J. Kuriansky (Eds.), *Sexuality education: Past, present, and future, vol 4: Emerging techniques and technologies; sexuality education: Past, present, and future, vol 4: Emerging techniques and technologies* (pp. 137-145, Chapter xx, 321 Pages) Praeger Publishers/Greenwood Publishing Group, Westport, CT.

- Harrington, B., & O'Connell, M. (2016). Video games as virtual teachers: Prosocial video game use by children and adolescents from different socioeconomic groups is associated with increased empathy and prosocial behaviour. *Computers in Human Behavior*, 63, 650-658.
- Healy, M. (2017, January 26). *How the rise of narrative design is revolutionizing the craft of video game storytelling*. Retrieved from <https://www.ceros.com/originals/narrative-design-video-game/>
- Heath, S. (1978). Notes on suture. *Screen*, 18, 48-76.
- Hilgard, J., Engelhardt, C. R., & Rouders, J. N. (2017). Overstated evidence for short-term effects of violent games on affect and behavior: A reanalysis of Anderson et al. (2010). *Psychological Bulletin*, 143(7), 757-774.
- Hoepfl, M. (1997). Choosing qualitative research: A primer for technology education researchers. *Journal of Technology Education*, 9, 47-63.
- Holopainen, J, and Björk, S. (2004). Game Design Patterns. Retrieved from http://www.gents.it/FILES/ebooks/Game_Design_Patterns.pdf.
- Jordan, N. A. (2010). *This is why we play the game: A quantitative study of attachment style and social anxiety's impact on participation in online gaming relationships* (Order No. AAI3410013). Available from PsycINFO. (853491034; 2010-99240-301).
- Karim, S. A. (2005). Playstation thumb; a new epidemic in children. *South African Medical Journal*, 95(6), 412.
- King, D., & Delfabbro, P. (2009). The general health status of heavy video game players: Comparisons with Australian normative data. *Journal of Cybertherapy and Rehabilitation*, 2(1), 17-26.

- King, D., Delfabbro, P., & Griffiths, M. (2009). The psychological study of video game players: Methodological challenges and practical advice. *International Journal of Mental Health and Addiction*, 7(4), 555-562.
- Knapp, M. (2018, June 28). *Pokemon Go creators are making augmented reality even more realistic*. Retrieved from <https://www.techradar.com/news/pokemon-go-creators-are-making-augmented-reality-even-more-realistic>
- Kostere, K., & Percy, W. H. (2006). *Qualitative research approaches in psychology*. Minneapolis, MN: Capella University.
- Ko, C., Yen, J., Chen, C., Chen, S., & Yen, C. (2005). Proposed diagnostic criteria of internet addiction for adolescents. *Journal of Nervous and Mental Disease*, 193(11), 728-733.
- Krinsky, J. (2018, June 5). *How much do pro gamers and esports players make?* Retrieved from <https://info.jkcp.com/blog/professional-gamer-salary-esports/>
- Lacan, J., & Fink, B. (2006). *Ecrits: The first complete edition in English*. New York: W.W. Norton & Co..
- Lazzaro, N.(2004). *Why we play games: Four keys to more emotion without story*. New York: XEO Design Inc.
- Lebovic, S. (1949). Psychanalyse et cinéma. *Revue Internationale de Filmologie*, 2(5), 49-56.
- Leedy, P. D., & Ormrod, J. E. (2010). *Practical research: Planning and design* (9th ed.). Upper Saddle River, NJ: Allyn & Bacon.
- Lemola, S., Brand, S., Vogler, N., Perkinson-Gloor, N., Allemand, M., & Grob, A. (2011). Habitual computer game playing at night is related to depressive symptoms. *Personality and Individual Differences*, 51(2), 117-122.
- Lenhart, A., Jones, S., & McGill, A. R. (2008). *Adults and video games*. Retrieved from <http://www.pewinternet.org/2008/12/07/adults-and-video-games/>

- Lenhart, A., Kahne, J., & Middaugh, E. & Vitak, J. (2008). *Teens, Video Games and Civics*.
Retrieved from <http://www.pewinternet.org/2008/09/16/teens-video-games-and-civics/>
- Lesser, A. J. (2019). *Video game technology and learning in the music classroom* (Order No. 13427524). Available from ProQuest Dissertations & Theses Global. (2195483697).
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- Lofgren, K. (2017, April 5). *2017 Video Game Trends and Statistics – Who's Playing What and Why?* Retrieved from <https://www.bigfishgames.com/blog/2017-video-game-trends-and-statistics-whos-playing-what-and-why/>
- Loton, D., Borkoles, E., Lubman, D., & Polman, R. (2016). Video game addiction, engagement and symptoms of stress, depression and anxiety: The mediating role of coping. *International Journal of Mental Health and Addiction*, 14(4), 565-578.
- Lynch, J., Aughwane, P., & Hammond, T. M. (2010). Video games and surgical abilities: A Literature review. *Journal of Surgical Education*, 67(3), 184-189.
- Macgregor, D. M. (2000). Nintendonitis? A case report of repetitive strain injury in a child as a result of playing computer games. *Scottish Medical Journal*, 45(5), 150.
- McDiarmid, R. (2011). *Analyzing Player Motives to Inform Larp Design*. Los Angeles, CA: Wyrd Con
- McNary, D. (2019, January 3). *2018 Worldwide Box Office Hits Record as Disney Dominates*. Retrieved from <https://variety.com/2019/film/news/box-office-record-disney-dominates-1203098075/>
- Mentzoni, R. A., Brunborg, G. S., Molde, H., Myrseth, H., Skouverøe, K. J. M., Hetland, J. & Pallesen, S. (2011). Problematic video game use: Estimated prevalence and associations with mental and physical health. *Cyberpsychology, Behavior, and Social Networking*, 14, 591–596.

- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.
- Merleau-Ponty, M. (1964). *The child's relation with others*. Evanston: Northwestern University Press.
- Metz, C. (1982). *The imaginary signifier psychoanalysis and the cinema*. Bloomington: Indiana University Press
- Miller, J. (1966). Suture. *Cahiers pour l'analyse*, 1(1), 110–154.
- Michotte, A. (1953). La Participation émotionnelle du spectateur à l'action représentée à l'écran: Essai d'une théorie. *Revue Internationale de Filmologie*, 4(13), 87-96.
- Micklethwaite, J. (2018, February 23). *Call of Duty gamer battled ISIS in Syria after playing shooter for 13-hours a day*. Retrieved from <https://www.dailystar.co.uk/news/world-news/684042/ISIS-Call-of-Duty-soldier-raqqa-john-duttenhoffer-syria-colorado-america-YPG-Kurdish>
- Morgan, L. (2019, February 25). *E-sports is coming to the Olympics after all as Paris 2024 reveal ideas to improve fan engagement*. Retrieved from <https://www.insidethegames.biz/articles/1075990/liam-morgan-esports-is-coming-to-the-olympics-after-all-as-paris-2024-reveal-ideas-to-improve-fan-engagement>
- Morin, E. (1956). *Le cinéma ou l'homme imaginaire*. Paris: Minuit.
- Morlock, H., Yando, T., & Nigolean, K. (1985). Motivation of video game players. *Psychological Reports*, 57(1), 247-250.
- Münstenberg, H. (1916). *The film: A Psychological Study: The Silent Photoplay in 1916*. New York: Dover.
- Nielsen Company. (2010, April 21). Who, when and how? A closer look at video game measurement. *Nielsen Wire*. Retrieved from <https://www.nielsen.com/us/en/insights/news/2010/who-when-and-how-a-closer-look-at-video-game-measurement.html>

- Ohannessian, C. M. (2018). Video game play and anxiety during late adolescence: The moderating effects of gender and social context. *Journal of Affective Disorders*, 226, 216-219.
- Orland, K. (2006, December 14). *Guitar Hero benches big leaguer*. Retrieved from <https://www.engadget.com/2006/12/14/guitar-hero-benches-big-leaguer/>
- Oudart, J. (1969). Suture in cinema. *Cahiers du Cinema*, 56(5), 213–311.
- Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Pavan, A., Boyce, M., & Ghin, F. (2016). Action video games improve direction discrimination of parafoveal translational global motion but not reaction times. *Perception*, 45(10), 1193-1202.
- Pegelow, C. H. (1992). Survey of pain management therapy provided for children with sickle cell disease. *Clinical Pediatrics*, 31(4), 211-214.
- Pei, A. (2019, April 14). *This esports giant draws in more viewers than the Super Bowl, and it's expected to get even bigger*. Retrieved from <https://www.cnbc.com/2019/04/14/league-of-legends-gets-more-viewers-than-super-bowlwhats-coming-next.html>.
- Peng, W., & Liu, M. (2010). Online gaming dependency: A preliminary study in china. *Cyberpsychology, Behavior, and Social Networking*, 13(3), 329-333.
- Plath, S. (1965). *Ariel*. New York, NY: Harper & Row, Publishers.
- Plymire, D. C. (2009). Remediating football for the posthuman future: Embodiment and subjectivity in sport video games. *Sociology of Sport Journal*, 26(1), 17-30.
- Ponterotto, J. G. (2005). Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *Journal of Counseling Psychology*, 52(2), 126-136.

- Pusateri, J. S. (2006). *The effects of video game violence on boys' articulated thoughts of aggressive behavioral intentions* (Order No. AAI3211751). Available from PsycINFO. (621574284; 2006-99020-019).
- Qin, H., Rau, P. P., & Salvendy, G. (2009). Measuring player immersion in the computer game narrative. *International Journal of Human - Computer Interaction*, 25(2), 107.
- Ramos, E. M. A., James, C. A., & Bear-Lehman, J. (2005). Children's computer usage: Are they at risk of developing repetitive strain injury? *Work: Journal of Prevention, Assessment & Rehabilitation*, 25(2), 143-154.
- Rossman, G. B., & Rallis, S. F. (1998). *Learning in the field: An introduction to qualitative research*. Thousand Oaks, CA: Sage.
- Ruggiero, D. (2014). In Gosper M., Ifenthaler D. (Eds.), *Problem solving through video game creation* Springer Science + Business Media, New York, NY.
- Russoniello, C. V., O'Brien, K., & Parks, J. M. (2009). The effectiveness of casual video games in improving mood and decreasing stress. *Journal of Cybertherapy and Rehabilitation*, 2(1), 53-66.
- Sanchez, D. (2018, August 7). *The Music Industry Generated \$43 Billion in Sales Last Year. Artists Only Received 12% of That*. Retrieved from <https://www.digitalmusicnews.com/2018/08/07/citigroup-music-industry-sales/>
- Silverman, K. (1983). *The subject of semiotics*. New York: Oxford University Press.
- Snape, J. (2018, November 14). *Best FPS Games: The top shooters you can play right now*. Retrieved from <https://www.trustedreviews.com/best/best-fps-games-3526310>
- Snider, M. (2011, Feb). Casual video games can reduce depression, research suggests. *Miami Times* Retrieved from <http://ezproxy.library.yorku.ca/login?url=https://search-proquest-com.ezproxy.library.yorku.ca/docview/894258858?accountid=15182>

- Sobchack, V. (1992). *The Address of the Eye: A Phenomenology of Film Experience* (Princeton, NJ: Princeton University Press).
- Sobchack, V. (2004). *Carnal Thoughts: Embodiment and Moving Image Culture* (Berkeley, CA: University of California Press, 2004),
- Squire, K. (2011). *Video games and learning: Teaching and participatory culture in the digital age. technology, education--connections (the TEC series)* Teachers College Press, 1234 Amsterdam Avenue, New York, NY 10027.
- Swing, E. L., Gentile, D. A., Anderson, C. A., & Walsh, D. A. (2010). Television and video game exposure and the development of attention problems. *Pediatrics*, 126(2), 214-221.
- Tassi, P. (2014, October 19). *40,000 Korean fans watch SSW Win 2014 'League of Legends' World Championship*. Retrieved from <https://www.forbes.com/sites/insertcoin/2014/10/19/40000-live-korean-fans-watch-ssw-win-2014-league-of-legends-world-championship/#2ad560f7735f>.
- Teo, T. (2017). From psychological science to the psychological humanities: Building a general theory of subjectivity. *Review of General Psychology*, 21(4), 281-291.
- Toril, P., Reales, J. M., & Ballesteros, S. (2014). Video game training enhances cognition of older adults: A meta-analytic study. *Psychology and Aging*, 29(3), 706-716.
- Vasterling, J., Jenkins, R. A., Tope, D. M., & Burish, T. G. (1993). Cognitive distraction and relaxation training for the control of side effects due to cancer chemotherapy. *Journal of Behavioral Medicine*, 16(1), 65-80.
- Verbeek, M. (2012). *A guide to modern econometrics* (Fourth ed.). Chichester: John Wiley & Sons.

- West, R., & Bailey, K. (2013). Video games and attention. In K. E. Dill (Ed.), *The oxford handbook of media psychology; the oxford handbook of media psychology* (pp. 403-420, Chapter xviii, 558 Pages) Oxford University Press, New York, NY.
- Whitbourne, S. K., Krauss, S., & Akimoto, K. (2013). Reasons for playing casual video games and perceived benefits among adults 18 to 80 years old. *Cyberpsychology, Behavior, and Social Networking*, 16(12), 892-897.
- White, W. J., Harviainen, J. T., & Boss, E. C. (2012). Role-playing communities, cultures of play and the discourse of immersion. In E. Torner, & W. J. White (Eds.), *Immersive gameplay: Essays on participatory media and role-playing; immersive gameplay: Essays on participatory media and role-playing* (pp. 71-86, Chapter viii, 222 Pages) McFarland & Co, Jefferson, NC. Retrieved from <http://ezproxy.library.yorku.ca/login?url=https://search-proquest-com.ezproxy.library.yorku.ca/docview/1801881376?accountid=15182>
- Wijman, T. (2018, April 30). *Mobile Revenues Account for More Than 50% of the Global Games Market as It Reaches \$137.9 Billion in 2018*. Retrieved from <https://newzoo.com/insights/articles/global-games-market-reaches-137-9-billion-in-2018-mobile-games-take-half/>
- Williams, A. (2018, June 12). *The best RPGs to play on PC today*. Retrieved from <https://www.techradar.com/news/gaming/10-best-rpgs-to-play-on-pc-today-1320387>
- Wilms, I. L., Petersen, A., & Vangkilde, S. (2013). Intensive video gaming improves encoding speed to visual short-term memory in young male adults. *Acta Psychologica*, 142(1), 108-118.
- Wittek, C. T., Finserås, T. R., Pallesen, S., Mentzoni, R. A., Hanss, D., Griffiths, M. D., & Molde, H. (2015). Prevalence and Predictors of Video Game Addiction: A Study Based

- on a National Representative Sample of Gamers. *International journal of mental health and addiction*, 14(5), 672-686.
- Yee, N. (2006). Motivations for Play in Online Games. *CyberPsychology and Behavior* 9, 772–775.
- Yen, J., Liu, T., Wang, P., Chen, C., Yen, C., & Ko, C. (2017). Association between internet gaming disorder and adult attention deficit and hyperactivity disorder and their correlates: Impulsivity and hostility. *Addictive Behaviors*, 64, 308-313.

Appendix A: Interview Protocol

1. How many hours a day do you usually play?
2. Why do you play video games?
3. Do you prefer playing in large screens or small screens? (Discuss the differences)
4. Do you use headphones?
5. Are you usually alone in the room?
6. Do you play alone or with friends?
7. Have you noticed thinking about the game when you are not playing it?
8. Have you ever experienced a change in your behaviour as a result of the game? (e.g. dangerous driving as a result of playing car racing games)
9. Do you ever lose yourself in the game in a way that you are totally oblivious to what is going on around you?
10. Have you ever cried, smiled or felt empathy towards your characters in the game?
11. Do you get startled easily when you play?
12. Why do you prefer this specific genre that you are playing?
13. Do you prefer first person views or third person views?
14. Can you describe your role in the game? What makes it so appealing to you?
15. Do you talk about the games with your friends/peers?
16. Do you prefer playing video games to watching a movie? Why/Why not? What do you think is the difference between watching a movie and playing video games?