Summer 8-2017

Born to Run: A Grounded Theory Study of Cheating in the Online Speedrunning Community

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BORN TO RUN: A GROUNDED THEORY STUDY OF CHEATING IN THE ONLINE SPEEDRUNNING COMMUNITY

by

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A Thesis
Submitted to the Graduate School,
the College of Science and Technology,
and the School of Criminal Justice
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Master of Arts

August 2017

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ABSTRACT

BORN TO RUN: A GROUNDED THEORY STUDY OF CHEATING IN THE ONLINE SPEEDRUNNING COMMUNITY

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Video games represent a growing genre of media quickly becoming one of the leading forms of entertainment (Jordan, 2014). This popularity has allowed new playstyles to emerge across the video game genre, such as e-Sports and speedrunning. In particular, the speedrunning community has somewhat redefined what it means to "cheat" in a video game by accepting the use of certain software and hardware violations that could be seen as "cheating" to the general gaming community. This paper examined the social construction of cheating in this digital community through the use of grounded theory methods.

ACKNOWLEDGMENTS

The completion of this thesis would not have been possible without the guidance from my committee members: Dr. Joshua Hill, Dr. Kimberly Chism, and Dr. Laura Gulledge. I would like to thank them for their valuable time and unwavering support throughout my graduate experience here at USM. The lessons I have learned from them will undoubtedly follow me into the next chapter of my life. I would like to thank Dr. Dean Bertram for the experiences and training I have been given. I would also like to thank Dr. Lisa Nored and the rest of the department for allowing me to be a part of this great program.

Graduate school is definitely a large undertaking. I would like to thank my fellow graduate students for their support as well. The relationships I have developed throughout my time here has helped tremendously in shaping my graduate experience.

Lastly, I would like to thank speedrunners GothicLogic, JazzyChoi1991, IHNN, ItsJabo, MikeMint, and EZScape for their valuable and rich descriptions of the speedrunning phenomenon.

DEDICATION

To my mom and my sister, who have been with me from the very beginning, who I can always rely upon in helping me through the difficult times, and who I love very much.

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LIST OF ABBREVIATIONS

ESA	Entertainment Software Association
WADA	World Anti-Doping Agency
IOC	International Olympic Committee
PED	Performance enhancing drug
NES	Nintendo Entertainment System
FPS	First-person shooter
VAC	Valve Anti-Cheat
MMOG	Massively multiplayer online game
DLC	Downloadable content
RNG	Random number generator
PC	Personal computer
OoT	The Legend of Zelda: Ocarina of Time
TAS	Tool-assisted speedrun
RPG	Role-playing game
N64	Nintendo 64
ROM	Read-only memory
AI	Artificial intelligence
SRL	SpeedRunsLive.com
SDA	SpeedDemosArchive.com
IRC	Internet chat relay
VR	Virtual reality
DMCA	Digital Millennium Copyright Act

IP	Intellectual property

CHAPTER I – INTRODUCTION

Video games represent a growing genre of media that is quickly becoming one of the leading forms of entertainment (Jordan, 2014). According to the Entertainment Software Association (2016), 63% of households in America contain at least one individual who is a regular video game player. Of those 63% who are gamers, over half are 35 years old or younger (ESA, 2016). This booming industry has gone from small program development of the games *Pong* and *Space Invaders* to hundreds of video game and software companies using budgets that rival Hollywood's film business (Harron, 2014; Jordan, 2014). The chief distinction between film and video games, however, is that video games sustain interactive worlds where players immerse themselves in the storyline and/or gameplay (Granic, Lobel, & Engels, 2014). Video games are played on multiple platforms (e.g. Xbox, Playstation, Wii, PC, etc.) and vary widely in socialness and gameplay.

There are tens of thousands of video games in existence, each with their own objectives and game mechanics (Granic et al., 2014). These games cover an entire spectrum of playstyles, from cooperative to competitive gameplay, and from solo to local to online interaction. Specifically, multiplayer games, or games played with more than one person, have allowed for the growth of a genre of gaming known as "e-Sports," or competitive electronic gaming (Martoncik, 2015; Taylor, 2016). In fact, 50% of gamers are aware of e-Sports and enjoy the spectacle through social media platforms, television, and online streaming services (ESA, 2016). Parallel to traditional sports such as football or baseball, large crowds gather to watch professional video game players compete on national stages. In 2014, over 27 million people tuned in to watch a video game

championship that was broadcast on ESPN (Tucker, 2015). To place these numbers in perspective, only around 23.5 million people watched the 2014 World Series of baseball (Tucker, 2015). The monetary prizes are also astounding and rival prize pools in major professional sports championships. A monetary prize for one video game championship surged over $11 million for the team who won (Hinds, 2015). In contrast, the 2015 Masters Golf Tournament awarded $10 million to the top golfer (Hinds, 2015).

Teams who succeed in the top brackets of video game tournaments of this magnitude require sharp wit, flexible tactics, and quick reflexes in order to win over their opponents (Tucker, 2015). Due to the large monetary gain that accompany sports, however, cheating can be tempting (Sumner, 2013). There have been some tournaments in which players were clouded in suspicion for being "too good," similar to professional sports players who are accused of using steroids. For example, Joseph Leigh, who goes by the online name "Joee," was removed and banned from a United Kingdom video game tournament after he was caught by the tournament's anti-cheat software (Nordmark, 2016). Leigh later admitted that he had bought cheating tools and did not appear phased by the consequences of his actions (Nordmark, 2016). There have been at least two other occurrences where professional players were banned for cheating (Lam, 2016). Incidences and perceptions of cheating in professional gaming can severely undermine the integrity of the sport and possibly affect the livelihoods of players who dedicate their lives to their team and the game (Lam, 2016). Even universities have implemented athletic scholarships to those who excel at certain video games (Keilman, 2014; Tucker, 2015). Robert Morris University was the first university in the U.S. to reward scholarships for the game *League of Legends* (Keilman, 2014). For Robert Morris, this

type of athletic scholarship is a great recruitment tool that can be used to reach a wider audience and, in turn, grow their student population (Keilman, 2014).

Besides e-Sports prizes and scholarships, there are several reasons that demonstrate why video game cheating should not be neglected. Video game cheating can be detrimental to both the game's player-base as well as the developers of the game (Wu & Chen, 2013; Yahyavi & Kemme, 2013; Yeung & Lui, 2008). The use of cheats in video games can give one player an unfair advantage against other players, which can frustrate individuals playing the game legitimately (Yahyavi & Kemme, 2013). This frustration can potentially drive away honest players who no longer view the game as fun due to the unfair cheats being used against them (Yeung & Lui, 2008). As a consequence, game developers suffer at the hands of cheaters who reduce their player base (Yeung & Lui, 2008). Not only would they lose their existing audience, but they may also fail to attract new players due to their declining reputation in keeping the cheaters out (Wu & Chen, 2013).

Due to the real and virtual consequences of video game cheating, this is an issue worth exploring. The definition and interpretation of cheating is one of the central inquiries to the current research. This investigation will be modeled after Steinmetz's (2015) analysis of the online "hacker." Specifically, a grounded theory approach will be used in order to examine how the concept of cheating is constructed in one online community – the "speedrunning" community. Speedrunning is different than simply playing through a video game to completion. The object of a speedrun is to complete the game as quickly as possible (Speedrunning Glossary, 2017). To develop a well-rounded look into the ontology of cheating within the speedrunning community, this study will

engage in qualitative analysis using sources such as online message boards, forums, and videos.

The speedrunning community is unique in that it does not completely conform to the traditional idea of cheating in video games. What constitutes cheating in the digital world varies widely across online communities and establishing what constitutes cheating can be complicated. Other domains of sport, like the Olympics, have established outside entities such as the World Anti-Doping Agency (WADA) to define, detect, combat, and enforce their established rules of doping (Alexander, 2014; Morente-Sánchez & Zabala, 2013). Online communities are attempting to accomplish this same feat through third-party proactive and reactive prevention techniques. Still, there exists no universal set of rules that define cheating across all games and all players (Chen & Wu, 2015). The existing cheating literature has focused on several components of digital cheating, including the outside effects towards in-game cheating (e.g. anonymity) (Chen & Wu, 2015; Wu & Chen, 2013), the perception of game cheating (Consalvo, 2005b; De Simone, Verbruggen, Kuo, & Mutlu, 2012; Vázquez & Consalvo, 2013), and the influence of game cheating over other fields such as education (Hamlen, 2012) and music (Karppi & Sotamaa, 2012), to name a few. While studies like these have advanced our understanding of cheating, little effort has been dedicated towards the development of a comprehensive, conceptual understanding of cheating as it relates to the broader video game cheating subculture.

CHAPTER II – LITERATURE REVIEW

In the video game literature, cheating is a multifaceted phenomenon that is loosely defined (if at all). It is a complex issue within video games as there currently exists no universal set of rules that apply to all games and programs (Chen & Wu, 2015). Cheating, however, is not limited to the context of video games or e-Sports. It is a wide ranging cultural phenomenon that affects areas as diverse as school, sports, and businesses, as well as video games (Kücklich, 2007). This literature review will examine the cheating literature in these areas to help identify common themes among them in order to better inform the approach to the content analysis below.

Cheating in Sports

The 2016 Rio Olympic Games hosted over ten thousand athletes from all around the world who competed in over 300 events (Snyder & Itasaka, 2016). Although the Olympics were marked by positive milestones, such as Rio being the first South American city to host the Games, the events were not without controversy (Snyder & Itasaka, 2016). For instance, the All-Russia Athletic Federation was suspended from the International Association of Athletics Federations by a 24 to 1 vote over allegations that Russia engaged in state-sponsored doping – the use of banned substances in order to improve an individual's physical performance ("Doping in sport," 2015; Pearson, 2015). Russia was accused of myriad performance enhancement cover-ups, ranging from bribing officials to destroying samples collected from athletes that would have undergone testing for illicit drugs (Pearson, 2015). A month before the games commenced, Russia's attempt to appeal the suspension failed and over 60 Russian athletes were not allowed to compete, further solidifying the contempt of doping in sports (Masters, 2016).

Cheating, like the doping mentioned above, is bound to occur at some point within any sport and is usually defined as an act of anti-social behavior (Mewett, 2002; Palou, Ponseti, Cruz, Vidal, Cantallops, Borràs, & Garcia-Mas, 2013). Cheating behavior in sports can involve both direct and indirect methods of cheating. Direct methods involve one player purposefully placing an opposing player at a disadvantage (Palou et al., 2013). Cheating can also indirectly affect the game as well, through such methods as the use of performance enhancing drugs (PEDs) (Schermer, 2008). According to the UK Anti-Doping Agency (2012), doping is any banned substance that augments an individual's performance, poses as a health threat, and "violates the spirit of sport" (p. 1). In the eyes of the International Olympic Committee (IOC), true "sport" should epitomize the highest ideals of mankind, thereby acting as a moral compass for the rest of the world (Alexander, 2014). If an individual uses something that allows him or her an unfair advantage over other competitors, it violates the nature of "sport" and qualifies as "cheating" (Alexander, 2014; Vázquez & Consalvo, 2013).

Sometimes the sports arena is not cut-and-dry when trying to define what is and is not cheating. Similar to the diverse genre of games within the video game industry, there is no ubiquitous ruleset that is applied to all sports. Simply put: every sport is different, including the goals and the means to achieve them. For example, running (i.e. track and field) and baseball are two sports that are different in terms of both mechanics and gameplay. Mewett (2002) conducted an ethnography based on interviews with 100 runners in Australia to study the nature of cheating in the professional running circuit. Other than running legitimately, Mewett (2002) explained the different categories of cheating that runners will often engage in: "clean" cheating and "dirty" cheating. "Dirty"

cheating usually involves "unconscionable" actions, such as deception for monetary gain (Mewett, 2002). This can involve a coach who lies to his/her runners about the odds of a race in order to receive a large payout (Mewett, 2002). On the other hand, "running dead" is one common type of clean cheating where runners will lose on purpose in order to increase their handicap (e.g. shorter markers for shorter running distances) for the next race. This can be done in various ways, including runners putting lead in their shoes or running with bad technique, enough where the player who is "running dead" will finish just before the other runner (Mewett, 2002). "Blanket finishing" (which is finishing *right* before everybody else) is what the runner will attempt to do to reduce suspicion from officials (Mewett, 2002). The researcher explains that the officials are fully aware that clean cheating occurs (some being ex-runners themselves), and they will sanction those who get caught; however, officials will not actively seek out runners who are engaging in clean cheating (Mewett, 2002). The rationale Mewett (2002) explains is that officials believe that clean cheating will continue to be an integral and constructive phenomenon in competitive running – it cannot be *completely* eradicated.

In similar fashion, Broshuis (2013) examined two types of cheating in baseball: "traditional" cheating and "new age" cheating. New age cheating was discovered when multiple players were hitting more than fifty homeruns in a season (Broshuis, 2013). It was later discovered that steroid use was a big problem, and penalties became more severe after the late 90s and early 2000s (Broshuis, 2013). As new age cheating was defined by PEDs, traditional cheating was more subtle. For example, players would sometimes spread Vaseline on their person in an inconspicuous location to minimize suspicion (e.g. brim of the hat or side of the pants) (Broshuis, 2013). The player would

then rub that location – keeping suspicion low – whereby their control of the ball would be enhanced from whatever substance they were using (Broshuis, 2013). In terms of enforcement and sanctions, actions such as these were banned according to the official rules of baseball. Traditional cheating, however, is much harder to detect, and more emphasis has been placed on banning new age cheating, such as steroids (Broshuis, 2013). Broshuis (2013) concludes that due to the lack of enforcement from officials, they have indirectly permitted the use of traditional types of cheating.

Cheating is not always viewed as black and white. There is a grey area of sports that relates to the current research: gamesmanship. Gamesmanship is defined by Palou et al. (2013) as one player placing another player at a disadvantage that may be perceived as cheating, but is not. An example of gamesmanship is when a player fakes an injury in order to stop the game clock when he or she is not really injured (Palou et al., 2013). These types of loopholes found in traditional sports resemble the grey areas found in video games. Similar to traditional sports, video games are bound to have certain glitches and cheats that mainstream players may find to be a violation against the game's rules (Brainbridge & Brainbridge, 2007). For some gamers, however, these glitches are not seen as a violation against a game's rules since they derive themselves from the developer's software (Brainbridge & Brainbridge, 2007). The speedrunning community, for example, seems to allow certain violations such as video game glitches. Similar to how certain discrete cheats are encouraged in other sports (Broshuis, 2013; Mewett, 2002), finding new glitches that players can use to their advantage is not only glorified, but also seem to act as an intrinsic challenge for these speedrunners (Brainbridge &

Brainbridge, 2007). Finding how these cheats are defined and allowed in certain games within the speedrunning community is the central inquiry of this study.

Studies exist, however, that provide counter-arguments for cheating in sports. Questions have risen surrounding the bans placed on certain PEDs. For some, it does not seem wrong for athletes to enhance either their cognitive or physical abilities due to the overall goal of sport being human excellence (Schermer, 2008). Keeping in mind the exponential growth of technology over the past 40 years, new technology is bound to find its way into the area of sports. Broshuis (2013) and Schermer (2008) both argue that authoritative figures run into problems with new technologies in relation to that game's rules. If no rule exists forbidding an action, then the action is not illegal regardless of how heinous that behavior is. For example, if a rule does not exist about a new type of performance-enhancing drug that is released into the market, then that biotechnology is not illegal. Even if a rule was then put into practice outlawing those new technologies, the problem lies with enforcement, either by game-masters, coaches, referees (Broshuis, 2013; Mewett, 2002; Sumner, 2013), by fellow teammates (Palou et al., 2013), or by third-party anti-doping programs (Morente-Sánchez & Zabala, 2013).

Similar problems exist within the digital realm. Whereas athletes have traditionally followed the "spirit" of sport to remain fair in their play, many video game communities follow the "spirit" of gaming. Much of the online community strive to enter into mutual agreement on how the game *should* be played. These implied rules are often disputed across several games and platforms and are interpreted differently from gamer to gamer. Also, whereas there may be new PEDs that are discovered in sports, there are always new tools that are being made by third-party developers for video games. The

capabilities of outside software can vary widely, from simply changing the user interface of an in-game menu, to running "scripts" that can help a player execute a plethora of functions in mere seconds. Examining the digital norms that pervade a certain genre of games is a central focus of this study.

Cheating in Education

Cheating in our educational system has been assessed among a wide array of grade levels ranging from elementary school to college. For the most part, educational outlets are geared in guiding youth toward ideologies that reflect the values of the current culture (Fu, Heyman, Quian, Guo, & Lee, 2016). One group of researchers concluded that children, by the time they reach the age of five, understand that cheating is a negative, anti-social behavior that can lower their reputation (Fu et al., 2016). Despite this, the literature also shows a steady increase in academic misconduct (Heckler, Rice, & Bryan, 2013). Specifically, plagiarism, combined with the instant nature of today's technology, is fairly pervasive among students (Heckler et al., 2013). Heckler and colleagues (2013) examined the effects of cheating detection software – Turnitin – as an academic misconduct deterrent. They found that when students were aware that the professor used the Turnitin software, the likelihood of plagiarism decreased.

Faculty mentality also played a large role in deterring academic dishonesty. When faculty followed through with cheating prevention and punishment, students were less likely to cheat (Heckler et al., 2013). Another study assessed adolescents and how reputation can affect cheating behavior. Fu and colleagues (2016) found that when children were told they had a positive reputation among their classmates, they showed

substantially lower rates of academic misconduct than those who were not prompted about their reputation.

The studies by Heckler and colleagues (2013) and Fu and colleagues (2016) show how both oversight and social elements affect whether or not someone engages in cheating behavior. These elements are further explored through Cole and Swartz's (2013) study in understanding students' perception of academic integrity. They asked students if the precepts of academic integrity in the classroom are the same as in an online environment. Cole and Swartz (2013) concluded that online courses are more susceptible to cheating behaviors since students are mobile, lack supervision from faculty, and have multiple resources that can be used to help them. These studies are relevant when studying how video game cheating is monitored in virtual environments. Often, social norms of a game are formed *and* enforced by its own digital community to reduce unfairness (Wang, Haines, & Tucker, 2011; Whitson & Doyle, 2008), similar to how educational environments promote modern ideologies and values within their own classroom to reduce academic dishonesty (Fu et al., 2016). Unlike educational research, however, studies that engage in the virtual world do a great job explaining *why* certain rules are formed and *what* certain cheats are, but fall short when explaining the conceptual understanding of *how* these rules are established. Current educational environments label cheating as inherently negative and a violation of school policy (Fu et al., 2016; Heckler et al., 2013), whereas video game communities such as the speedrunning community value some cheats and glitches in the games' software as valuable assets (Brainbridge & Brainbridge, 2007). The social norms of the speedrunning community become redefined, and metagaming – the phenomenon where a community

will redefine the rules and nature of a game – becomes the new norm (Brainbridge & Brainbridge, 2007).

The current education literature has also found discrepancies in definitions between teachers and students when asked what are and what are not cheating behaviors (Hamlen, 2012). Burrus, McGoldrick, and Schuhmann (2007) conducted a study surveying students' perceptions of cheating in school. They found that students justified their behavior when rules were not explicitly stated by either the instructor or by the school's honor code (Burrus et al., 2007; Jordan, 2001). In some cases, students may be unaware of a school's academic integrity policies as highlighted by Jordan's (2001) findings where the lack of knowledge of the school's institutional policy was a significant predictor in the rate of cheating among college students. These inconsistencies highlight the fact that some definitions of cheating are individualized and are not always clear or understood (Burrus et al., 2007). In another study, Hamlen (2012) combined both education and digital research. In her study, Hamlen (2012) launched an investigation that assessed behaviors in school and behaviors in video game play. Specifically, she wanted to see if students' cheating tendencies and alternative strategies in video games would affect their traditional learning strategies in the current educational model. She speculated that strategies that are usually required in video games to succeed will carry over and be applied to traditional learning strategies. Hamlen (2012) distributed an online survey to assess students' video game habits, as well as asking them to define what cheating meant to them. Even though Hamlen (2012) found limited evidence to support her hypothesis, she did find that video game players employed alternative, sometimes unconventional problem-solving strategies that made tasks easier to work through.

Interestingly, students who cheated in video games were more familiar with school rules about academic dishonesty than students who did not cheat in video games (Hamlen, 2012). She concluded that students who worked around the difficult tasks in school applied those same strategies by using alternative methods in video games.

These studies, however, fail to examine the full understanding of how cheating becomes the accepted norm. For example, many of these studies do not consider the degree or level of cheating that some may find acceptable (De Simone et al., 2012). Also, the discussion provided by Burrus and colleagues (2007) and Hamlen (2012) is a good segue into the current research. A part of the reason why Hamlen's (2012) research may have diverged from her original question is due to the point addressed by Burrus and colleagues (2007): there is a disparity in the definition of "cheating" between students and teachers. This is a similar problem within the digital community. As seen in previous studies, the ability to discover new cheats and glitches is occasionally glorified rather than shunned in certain gaming groups (Hamlen, 2012). The current research will attempt to uncover why and how cheats within the speedrunning community become the norm.

Cheating in Digital Communities

Cheating is one of the main concerns of game designers in protecting the integrity of their products (Yahyavi & Kemme, 2013). Companies usually provide periodic security "patches" for their games, especially online multiplayer games (Yahyavi & Kemme, 2013). Within certain gaming communities, however, cheating still occurs. There are always new programs being developed that can gain unauthorized access to a game's code. Once access is obtained, unauthorized users can manipulate the digital environment to provide them with an unfair advantage against other players. This section

will cover the general rule and norm violations, the types of cheating that can occur within games, and some explanations of why people cheat. Table 1 details some of the definitions attached to the notion of cheating.

Table 1

Video Game Cheating Definitions

Author	Suggested Definition
Brainbridge & Brainbridge (2007)	"Cheats are tricks for mastering games by circumventing the official rules for play and they occasionally exploit glitches." (p. 62)
Yan & Randell (2009)	“Any behavior that a player uses to gain an advantage over his peer players or achieve a target in an online game is cheating if, according to the game rules or at the discretion of the game operator (that is, the game service provider, who is not necessarily the developer of the game), the advantage or the target is one that the player is not supposed to have achieved.” (p. 38)
Consalvo (2007)	“All players define cheating in a game as an activity that confers unfair advantage to the player.” (p. 103)
Kücklich (2007)	“With respect to genre, cheats emerged as a tool that makes it possible to examine the underside of the textual weave of games.” (p. 365)
Goodman (2008)	“Players that do not adhere to the game rules can gain unfair advantages or cause disadvantages to others. As a result, such behavior is rarely tolerated and for many simple games cheating can be characterized as the violation of one or more specific game rules. However, determining the exact definition of game rules in online games is a daunting task.” (p. 17)
Yeung & Lui (2008)	"As in all aspects of life, some players may use various forms of cheating to gain an unfair advantage over honest players. With the use of cheats, a cheating player may have an overwhelming superiority when destroying other avatars in the virtual world." (p. 222)

Note. This table shows how some researchers define, or attempt to define, video game cheating.

Deviance in Gaming Communities

The notion of cheating is broad and cheats, exploits, and glitches can be viewed differently depending on the gaming community (Kücklich, 2007; Vázquez & Consalvo,

2013). Given the large number of video games that have been released since the early 1980s, the ways to cheat in games are almost endless. For this research, it is important to take a step back and have a general idea of how cheating has been classified within the context of deviance in the current literature. This can be done through a discussion of how rules and norms function within video games. As mentioned earlier, the social norms of a game are controlled within its own digital community to reduce unfairness (Wang et al., 2011; Whitson & Doyle, 2008). An example of this phenomenon is the closely-studied online community of *Second Life* (Wang et al., 2011; Whitson & Doyle, 2008).

Linden Lab (2013), the developer of *Second Life*, has shared their creation with millions of users. *Second Life* is an online digital world comprised almost entirely of user-generated content where "residents" (users) control their own avatars that can create, build, and trade goods. This virtual experience has been studied for its unique approach to controlling deviance within its community (Wang et al., 2011; Whitson & Doyle, 2008). Due to the large number of account logins, minimal coverage of surveillance software, and the deviance encouraged by digital anonymity, the digital experience that is *Second Life* has been an interesting topic when discussing how deviance is governed (Wang et al., 2011; Whitson & Doyle, 2008). Since there is a lack of formal controls by Linden Lab, the player-made communities that surround *Second Life* have emerged as the main source of law and order. Wang and colleagues (2011) found that interdigital relationships, or bonds that form over an online medium, act as a deterrent of deviant and cheating behavior. Strong social bonds, where the consequences of social norm violations include public shaming and ostracism from the online community, are essential in keeping law and order within the *Second Life* community (Wang et al., 2011).

Besides the community surrounding a video game, games themselves are operated and governed by code programmed by its developers. When a game's code is altered to suit an individual's needs or wants, that player is engaging in violations against the game's rules. These violations occur when an individual gains an unfair advantage by causing changes to the game that defies the rules or that goes against the intent of the developers (Bycer, 2015; Yahyavi & Kemme, 2013). Given the extensive history of video game alterations, the following section will attempt to categorize the different layers of software and hardware violations. Figure 1 is a flow chart constructed from the existing video game literature detailing the types of hardware and software video game violations.

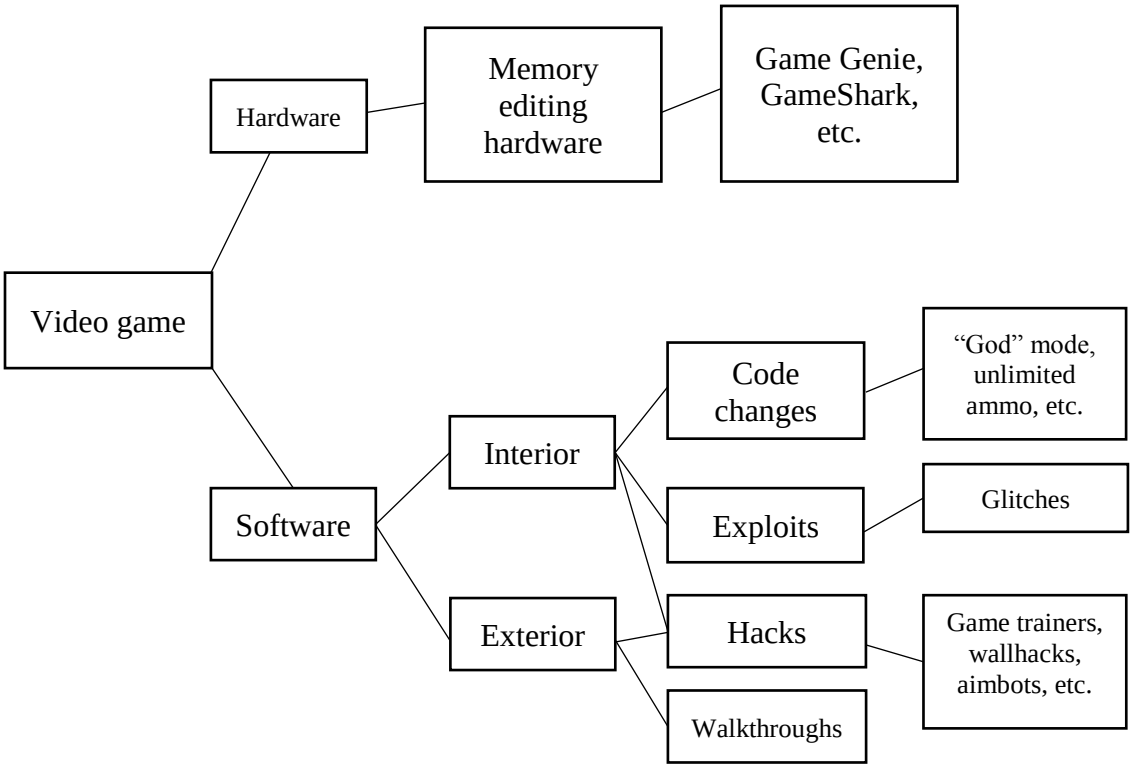

Figure 1. Video game violations

This is a flow chart detailing the different categories of software and hardware violations that can be made to a video game.

Generally, a game's code can be changed through the use of either hardware devices or software alterations. A Game Genie is one example of hardware that changes the game's code. This mechanism allows the gamer to input commands prior to a game being booted that cannot be accessed through normal gameplay (Nielsen, 2008). Specifically built for the Nintendo Entertainment System (NES), the user would attach their game cartridge to the Game Genie before inserting it into the console. Since the Game Genie, there have been several other software manipulation devices made for different consoles since the 1990s.

Alternatively, a more popular and accessible way to access special functions is through a variety of software manipulation codes and programs. Special codes are usually implemented by the developers and are concealed within the code of the game (Sezen & Isikoglu, 2007). Some codes may be purely aesthetic, such as changing the character's outfit, while others can give the player unlimited ammunition or the insusceptibility to damage – or "God mode" (Aboukhadijeh, 2009). Another way individuals can enhance their gameplay is through downloading and/or executing hacks. "Hacking" a video game can either refer to altering the code itself or writing a script that will change the code (Sezen & Isikoglu, 2007). Hacks are notorious in the first-person shooter (FPS) genre of multiplayer video games, such as Call of Duty and Counterstrike. Certain hacks allow the player to gain an unfair advantage against other online players and can include the following: "aimbots" (scripts that assist the player in aiming), "no-spread" (the reduction or elimination of the bullet spread of weapons), "no-recoil" (the reduction or elimination of the natural recoil/kick-back of a weapon when fired), "wallhacks" (allows the player to

see through walls and objects in finding opposing players), and "speedhacks" (allows the player to vastly increase or decrease his/her speed) (Yahyavi & Kemme, 2013).

Next, digital exploits are under constant scrutiny concerning their legitimacy in gameplay. One of the most commonly exploited phenomenon in games are "glitches." Since video games are very bureaucratic, meaning they follow strict rules of code, games are bound to have glitches due to a variety of software and/or hardware compatibility issues (Brainbridge & Brainbridge, 2007). Glitches, therefore, are inconsistencies between the environment that appears on screen, which the user perceives, and the behaviors of objects that are in relation to that digital environment (Brainbridge & Brainbridge, 2007). These are known as the display model and world model, respectively. Glitches that are used for enhancing gameplay are usually ones that help the gamer with some aspect of the game, such as overcoming some obstacle without the expected work (Brainbridge & Brainbridge, 2007; Hamlen, 2012, Yahyavi & Kemme, 2013).

Debates exist whether or not exploits are actually cheating since the players are using the game's own code to alter gameplay rather than bringing in an outside program (Bycer, 2015). According to Brainbridge and Brainbridge (2007), it is hard to argue that the exploitation of a glitch is not allowed since it was the game's developers who created and approved the software. They give an example of playing Super Mario 64 for the Nintendo 64 game console. The written instructions (in other words, "formal rules") tell the user that the goals are to collect in-game stars, to defeat Bowser (Mario's primary enemy), and to save Princess Peach. It, however, does not explicitly state *how* the player should go about completing those tasks. Sometimes, it is at the discretion of the

developers whether or not they fix the exploit. Other times, the community revolving around the game will decide upon the legitimacy of the exploit.

Lastly, "walkthroughs" and "griefing" are two ideas that are said to be unfair behavior, depending upon the end-goals of the player and game design (Hamlen, 2012). Walkthroughs – or strategy guides – are books that can be written by either the developers or a third-party that suggests the best routes to complete the game, along with other tips and tricks to further game mastery (Sezen & Isikoglu, 2007). Some researchers suggest that if a player were to don the "purist" perspective, then any and all sources of help, including strategy guides, would be considered cheating (Consalvo, 2005a). Most of the time, however, players consult walkthroughs for various reasons, including getting past an area of the game in which the player might be stuck (Hamlen, 2012). Another act that is considered unfair, especially prevalent within massive multiplayer online games (MMOGs), is griefing. Griefers are synonymous to bullies in the real world. "Griefers" are usually high level players that use aggressive means in an effort to do whatever they please, ultimately ruining the gaming experience for others (Johansson, 2013; Yahyavi & Kemme, 2013). Griefers are well known to "gank" other players, an act in which high level gamers repeatedly dominate another player within the game – many times weaker in level or skill – in order to establish power over them (Johansson, 2013). Subsets of griefing include harassment (emotional stress), power imposition (player killing), scamming (exploits of in-game trading systems), and greed play (concern with winning rather than the "spirit" of the game, such as kill stealing and camping) (Johansson, 2013).

In reaction to cheating behaviors, many video game companies, especially those that revolve around online gameplay, will engage in constant anti-cheat efforts in order to

secure their own gaming community. For example, Valve, creators of some of the most successful gaming franchises such as Half-Life and Counter-Strike, have their own anti-cheat software known as Valve Anti-Cheat (VAC). VAC can detect minute alterations in a game's code as well as detect hacks or other code-altering programs running in the background on the user's computer (Yahyavi & Kemme, 2013). Game companies can spend millions each year combating cheating alone (Aboukhadijeh, 2009). If VAC identifies and confirms that a player is using hacks during gameplay (e.g. aimbots), that player will usually receive a permanent ban on all VAC-secured servers. Other companies such as Blizzard, creators of the popular World of Warcraft MMOG, have implemented a reputation system that will track a registered player's history of any deviant acts against other players, the community, or the company (Yahyavi & Kemme, 2013). Evidence of wrong-doing will most likely result in a ban of the users account.

Motivations for Cheating in Games

There are several reasons why individuals would want to cheat in games that would violate the "fair play" mentality. Vázquez & Consalvo (2013) divulged some of the motivations gamers had in trying to beat the system. Some of these motivations include fast-forwarding through the game because it was too onerous or too boring, activating "God" mode (cannot be killed) in order to receive the harder rewards, or skipping some of the challenges and puzzles because they were too difficult. Sometimes there is a monetary reward, especially at the national level, if a game is won. Schurr, Ritov, Kareev, & Avrahami (2012) conducted an experiment with a trivial pursuit-like game that challenged the integrity of their sample. They found that monetary motivation could very well be a prerequisite for unethical behavior. It must also be stated that there

is a widely-accepted notion among several communities that cheating can only occur in multiplayer environments: there must be other gamers who are actively being taken advantage of during the game (Vázquez & Consalvo, 2013). Lastly, the popularity of emerging sports, such as e-Sports, cannot be ignored. Due to the increasingly large prize pools for the best e-Sports players, motivations for cheating may be increased (Schurr et al., 2012). Some players may try to use discrete software and/or hardware to illegally enhance their gameplay in order to win large cash prizes.

There are certain online communities that view cheating behaviors in a positive light and accept this behavior as an integral part of the gaming experience. Take for instance speedrunning, which is popular and interesting way to play video games. "Speedrunning" is the act of an individual playing a game with the intention of finishing the game as quickly as possible (Speedrunning Glossary, 2017). This community would fit Hamlen's (2012) description of a digital milieu that regards glitch discovery as significant milestone. Anecdotally, and according to Hamlen's (2012) review of the literature, glitches can many times be valued by an online community, with those who discover new glitches given credit and praise. Many of these glitches are discovered experimentally (Brainbridge & Brainbridge, 2007), and game designers will sometimes place "Easter eggs" (certain hidden features within the game) on purpose, encouraging non-traditional means to find them (Brainbridge & Brainbridge, 2007). Many of these Easter eggs reference things or ideas referring not only to the video game community at large, but also to cultural phenomenon. This is where "metagaming" becomes an important phenomenon to understand for this study.

Metagaming transcends the traditional confines of gaming. Brainbridge and Brainbridge (2007) summed it up best with their discussion regarding glitches and cheats within this context. Specifically, metagaming involves the community outside of the video game and in online forums; most of these communities disregard the formal rules of the game and establish their own rules that define a new nature and rules of gameplay (Brainbridge & Brainbridge, 2007). For example, in the speedrunning community, there are certain glitches that are permissible in a legitimate speedrun, and others that are either not acceptable or placed in another category with different rulesets. Brainbridge and Brainbridge (2007) end by discussing future research that could use "ethnographic methods to study the extended subculture represented by the numerous web sites that offer walk-throughs of how to win games, hints about cheats, and occasional information about interesting glitches" (p. 75). This study will strive to fill that gap by providing a better and more well-rounded discussion of how cheating is constructed in online communities.

CHAPTER III - METHODOLOGY

This study gathered two forms of data through the use of an ethnographic field study and content analysis. Grounded theory methods were determined to be the best approach since there is currently no research that explores the perceptions of cheating in the speedrunning community. This allowed the researcher to form emerging theories that developed from the originally collected qualitative data (Charmaz, 2014). In order to explain the perception of cheating among the speedrunning community, participant observation, interviews, and field notes were used.

A purposive non-probability sampling technique was applied to digital field sites to recruit interviewees. The criteria for this study consisted of active speedrunners and moderators of the speedrunning community. Participants were recruited first by examining the leaderboards on speedrun.com, moderators of those leaderboards, and well-known speedrunners in the community. Moderators of speedrunning forums, such as speedrun.com, were also notable speedrunners within that gaming community, which provided great insight into processes such as video-run verification and category creation. Due to the nature of this study, it was crucial to only involve active speedrunners rather than the general video game population since this is a niche video game community. Specifically, the researcher assumed that only active members and moderators would have updated knowledge of the processes that occurred in their respective communities. Thus, theoretical sampling (Charmaz, 2014) was used to ensure that the runners being interviewed were active speedrunners and had the ability to provide rich, in-depth descriptions of their communities.

Out of the 27 inquiries sent to members of the speedrunning community, 15 speedrunners responded. Several speedrunners declined to participate in the research, but six semi-structured interviews about the nature of cheating within the speedrunning community were conducted. Of the six participants, three of them were moderators on speedrun.com that were familiar with the video submission/verification process. The researcher obtained consent from each participant while assigning them pseudonyms for purposes of confidentiality. Every interview was audio recorded, fully transcribed, and ranged anywhere from 16 minutes to 43 minutes. Table 2 displays the demographic information for each participant.

Table 2

Descriptive Statistics of Interviewees from the Speedrunning Community

Characteristics	n
Age	
18-20	1
21-23	4
24-26	1
Ethnicity	
White	3
Hispanic	1
Chinese	1
Unknown	1
Gender	
Male	6
Marital Status	
Single	5
Engaged	1
Children	
No	6
Education	
Some college	4
Associate's degree	1
Bachelor's degree	1

To increase the scope of knowledge pertaining to the speedrunning community, content analysis was also used to examine posts on specific speedrunning websites. The researcher used knowledge obtained from the interviews as a guide for notable sites in the speedrunning community. Two websites in particular were analyzed: speedrun.com and the speedrun subreddit (i.e. a specific "niche" forum) in Reddit. Speedrun.com is one of the main sites for the speedrunning community and provides both streamers and audience with updated leaderboards, open forums, and in-depth filters to find specific games by year, platform, game type, and so on. Websites such as Reddit are very popular among active internet users. Based upon the website's traffic (i.e. the number of users who view the website) in 2017, Reddit ranks as the seventh most visited site in the United States, losing only to other big names such as Google and Facebook (Alexa, 2017). Reddit is a popular site where gamers can visit to discuss matters regarding their community. In particular, discussions regarding the nature of cheating and cheaters themselves were able to be searched using the speedrunning subreddit. These forums became especially important when discussing how cheating is defined by video game speedrunners. Table 3 lists the number of threads used for the content analysis.

Table 3

Content Analysis Descriptive Statistics

Items	n
Threads	
Reddit	40
Pokemonspeedruns.com	2
SpeedDemosArchive.com	2
Speedrun.com	1

This study used a grounded theory approach to draw conclusions from the collected data. This method consists of strategies for gathering and processing qualitative data in order to provide the researcher with the understanding of the realities observed (Saldaña, 2015). By using grounded theory methods, recurring themes and patterns regarding the nature of cheating were able to be found. The current research will push the video game cheating literature toward a better understanding of this phenomenon. Microsoft Word was used to transcribe the interviews, while Atlas.ti, a qualitative analysis software, was used to organize and analyze content obtained from the interviews and the online forums.

CHAPTER IV – DATA

This study was steered by the methods of grounded theory (Charmaz, 2014). Codes were constructed to better organize ideas from the speedrunning community, whereby they were then grouped by their thematic similarities. The creation of these categories allowed the development of a theoretical framework explaining the social construction of cheating within the speedrunning community.

A Reintroduction to Speedrunning

Both the online threads and the first-hand knowledge of speedrunning given by the interviewees themselves provided the material necessary to deliver in-depth explanations of this gaming phenomenon. Before exploring the data, however, it is worth noting the infrequent criticisms the speedrunning community receives from gamers and non-gamers alike. The arguments against the validity of speedrunning stem mainly from the community's acceptance of glitches. Speedrunners themselves run into the problem of trying to explain speedrunning to those unfamiliar with the activity. Many times, these arguments end up on the speedrunning subreddit forums where individuals involved in this community claim that speedrunning is misunderstood. The issues most frequently brought up against the speedrunning community are about glitches and about the intent of the developer.

Arguments Against Glitches

The notion that the use of video game glitches is cheating is nothing new. A revisit to Consalvo's (2007) extensive research of how people negotiate and define cheating shows that there are many definitions given by the players themselves. One popular perspective of cheating is that "code is law" (Consalvo, 2007). Playing the game

is limited to the actual code of the game. This code dictates what the player can and cannot do within the game (Consalvo, 2007). If a flaw in the code were to be exploited (i.e. glitches), then that would be cheating (Consalvo, 2007). There are many speedrunners who claim that friends and strangers alike see any use of glitches as cheating wherein they attempt to delegitimize speedrunning. Most of these individuals usually combine "cheating" with "glitches," even though those two categories are completely separate in the speedrunning community. Even one of the runners themselves had a similar mentality when they were first introduced to speedrunning. Interviewee Berry had this to say: "And then… in these videos, you see a lot of people complaining about that, 'oh, he's using glitches, that's cheating. That's not legit.' But, I understand these views, and like I said, I used to similarly have these views, but maybe not as strongly... After doing it myself, it feels like, it's something that's definitely not that simple.... There's no… black and white, essentially. It's a bit of a grey area." It is apparent through these interviews that some speedrunners, when they first began speedrunning, held views consistent with the traditional idea of cheating established by Consalvo (2007). This "grey area" of cheating mentioned by Berry will be explained later in this chapter.

Arguments Against Developer's Intent

Another argument that occurs almost directly after discussing glitches is when users try to establish the intent of the developers. Users with arguments against speedrunning usually begin by stating that the developers intend for players to have a certain gaming experience based upon the game's code (as established earlier). Individuals who use glitches in speedruns to complete the game are not actually playing

the game as the developer intended it to be played. Reddit user orangegluon introduces this dilemma by using an example of Super Mario 64. In Super Mario 64, the ultimate goal of the game is to save Princess Peach from Bowser. The player accomplishes this goal somewhat linearly by unlocking certain areas in the game. Players must first collect 16 stars (minimum) in the starting area before they can advance to the next area. Then, once they collect 70 stars, players can then proceed to the final boss area to defeat Bowser and save the Princess.

User orangegluon introduces a compelling argument that, in order to beat the game – which, "beating the game" has also been established by the speedrunning community as "when the credits roll" – you *must* collect these stars and defeat Bowser. He states that it's "unambiguously clear that this is the path the player is intended to take to experience the game." So, when speedrunners use glitches in order to circumvent the sixteen-star door or the seventy-star door (or both), they are found to be in violation of the developer's intent. User orangegluon justifies his argument by stating that, with more time in development, these "unintended" bugs and glitches would have been removed prior to the game's publication. He concludes by labeling speedrunning as an ethical problem, making any run that uses glitches illegitimate.

Rebuttals

Glitches, supplemented with developer's intent, are the two most frequent arguments seen in the speedrunning community. Speedrunners and moderators, however, consistently rebut these claims. Simply put, glitches are not viewed as cheating within the speedrunning community as they believe the rules are defined by the members in each of their respective gaming communities. The community somewhat agrees that the majority

of people who bash speedrunning are either "trolling" or sincerely do not understand the concept of speedrunning and the rules that accompany it. Trolling is defined by McIntosh and Pavlik (2011) as the "practice of posting deliberately obnoxious or disruptive messages to discussion groups or other online forums simply to get a reaction from the participants" (p. 215). Trolling is fairly pervasive in the online environment, and the speedrunning community is no exception. Having no knowledge of speedrunning, however, is a different issue and one that interviewee Eric explained with his scenario: "Now… let's say someone like me, that kinda… let's say I don't even know about speedrunning actually, but I kind of know about fast playthrough-I just wanna see-I donno, someone that's kind of confused. Um, I wanna see a *Fallout 3* fast playthrough, and I see all these crazy out-of-bounds, you're-you're being a little kid walking around the wasteland: 'whoa, dude, you're cheating'… it's not cheating." What Eric described is a speedrun of a game known as *Fallout 3*. Bethesda Game Studios, the developers of the award-winning *Fallout* and *Elder Scrolls* game series, are notorious for their vast open-world gameplay. Those two game series, after accounting for their main quests, side quests, exploration, and expansion packs (more commonly known today as downloadable content, or DLC), offer gamers hundreds of hours of gameplay. Even though the main quest in *Fallout 3* could take gamers anywhere from 20 to 40 hours to complete, the current speedrunning world record for finishing *Fallout 3* (i.e. reaching the end of the game and rolling the credits with any percent of the game completed) is 14 minutes and 47 seconds. For gamers who have no knowledge of speedrunning, this type of gameplay could be amazing and jarring to watch at the same time.

As far as the intent of the developers, reddit user OverlordLork puts it bluntly: "There will ALWAYS be disagreements if you try to list every single action that was 'unintended' by developers. While there are certainly techniques that are 100% unintended, there's also gonna be a fuckton of grey area unless you have the whole dev team supervising someone's run." Gamers may not *always* know the intent of the developers based on the code of the game alone, neither do developers provide documentation dictating *exactly* how players are *supposed* to play the game (aside from gaming manuals that occasionally describe the story and the controls). There have also been at least two occasions on the speedrunning subreddit where speedrunners simply asked: who cares about the developer's intent?

One argument that warranted deeper investigation was posted by reddit user IhavenonameSDA. This user introduced a very interesting concept stating the rationale in favor of speedrunning was attributed to the ideology presented in *The Death of the Author*. This essay redefines the concept of authorship, as well as examining the relationship between the author and the reader (Barthes, 1967). Through modern interpretation, authorship is not only limited to writings, but other areas of artistic expression such as film and music. Barthes (1967) argues that text is not created from "original" ideas stemming from the author, but rather it is a multifaceted creation fixated within a historical and sociological context. Barthes (1967) states that "the writer can only imitate a gesture forever anterior, never original" (p. 4). Simply, the work is influenced by a multitude of different languages, cultures, and ideologies (among other ideas and beliefs) that came before the author. This means that the words and ideas used

to create the text was derived from earlier cultures and their interpretations of those words (Barthes, 1967).

The part where *The Death of the Author* becomes relevant to the speedrunning community is explained more so by Barthes' (1967) beliefs about the interpretation by the reader. Barthes (1967) implies that the reader should search within themselves the meaning of the creation, that the author becomes irrelevant concerning the interpretation of the work itself. User IhavenonameSDA applied this interpretation to games. Specifically, once the developers publish their game to consumers, the developers are no longer in control. The possibilities are endless regarding the way gamers modify their own gaming experience. This rationale is not only applied to phenomenon such as speedrunning, but other areas such as roleplaying. *Grand Theft Auto 5* is another game where the community constructed their own playstyle. If users were to play through the main storyline, they take control of three criminals and their attempts to commit heists across the city. The online community, however, transformed the game into a "real-life simulator" of sorts, which is steadily gaining popularity among Twitch streamers (Messner, 2017). Simply, the power rests with the player in transcending any "intent" the developers may or may not have planned for the player.

Definitions from the Community

Aside from the criticisms, certain parts of the speedrunning community are well established. Preliminary definitions from the literature review were confirmed through in-depth interviews and content analysis. To begin, Interviewee Eric provided a conceptual definition of speedrunning: "speedrunning in my opinion is a different way of playing a game all together. You have your way of casually playing the game, and you have your

way of playing it properly, uh like you knowing what to do and stuff, but speedrunning takes it to a new level." When asked how they defined speedrunning, every interviewee had close to the same description: achieving a goal within a game as fast as possible. There are slight variations to this definition since "beating the game as fast as possible" depends on the category of the run. No matter the type of run individuals engage in, runners will use shortcuts that the developer may not have intended in order to "optimize the route" or "optimize the run." According to one forum, optimization in speedrunning is "[f]inding a faster way to accomplish goals, a better route, a more efficient method of movement: all are part of the approach in achieving a good speed run." Two interviewees also stated that most runs are done with the original version of the game without accessing any of the game's files. Although there are exceptions, this chapter will also cover categories and emulators that are allowed in certain speedrunning communities.

Cheating as Defined in the Speedrunning Community

One of the most interesting observations of the speedrunning community is seeing exactly where this video gaming niche fits into the rest of the cheating literature. The video game community at large have a general idea of what constitutes cheating within each one of their games. The speedrunning community breaks that mold, but not completely. Interviewee Eric addresses this conundrum by establishing that there is "general viewer cheating, and then there's actual speedrun community cheating." He makes the point that glitches, for example, can be seen as cheating to the "general viewer." To speedrunners, however, glitches are essential to their craft. In this next section, Figure 1 will be used in order to systematically define how the speedrunning community views cheating.

It is important to understand what the community outlines as cheating for two reasons. First, the definition of cheating can vary wildly across gamers, game genres, and gaming communities (Chen & Wu, 2015; Consalvo, 2007; Hamlen, 2012; Vázquez & Consalvo, 2013). This was also addressed by Burrus et al. (2007) where, again, they found that students at one university did not understand how their institution defined cheating. Only after given a definition did those students identify as cheaters, but there were still disagreements. This section brings to light certain behaviors and if they are allowed or not allowed within the community. Second, providing clear definitions of cheating is important in understanding category and rule creation. The following presents information gathered from the community on what they view as allowable hardware and software cheats. There are certain techniques that are simply not allowed, such as video game hacks since one of the reasons why gamers speedrun is to test their skill in finishing the game as fast as possible. On the other hand, glitches, or software errors that have been traditionally seen as cheating, are allowed. According to the literature, this is a result of metagaming (Brainbridge & Brainbridge, 2007), which is the very premise of the speedrunning community. In speedrunning, the idea of what is cheating has been tailored specifically to that particular subculture while bypassing the original limitations of the game itself. Therefore, a blanket definition on what is cheating will not suffice. In order to investigate how cheating comes to be defined, it is beneficial to know what the community views as cheating behavior.

Hardware

When it comes to cheating within the speedrunning community, the actual hardware pertaining to the game is much less of a concern to speedrunners. If a

discussion does arise concerning hardware, however, the individual game community will decide upon the legality of said hardware. The basis of whether or not hardware gets banned is based upon a "fair play" rule. If that piece of hardware does not give users an unfair advantage, then it is generally allowed. An example of hardware that is constantly inquired about is controllers. Depending on the game, controllers other than the original could be used. Reddit user RestartGaming explains that the "functionality has to be limited to the same as the original controller" for some communities to consider using modified controllers.

Software

When code changes, exploits, hacks, and walkthroughs are discussed within the speedrunning community, the conversation about video game cheating diverges slightly from traditional video game cheating. Also, problems that arise with "splicing" and emulators, which are not represented in the preliminary cheating categories in Figure 1, will also be discussed as it relates to software cheating.

Code Changes. For the speedrunning community, most anything that changes the actual code of the game is not allowed. The speedrunning community often goes to great lengths to separate "cheating" from glitch use, which will be described in the next section. Interviewee Daniel confirms the difference between the two: "cheating in the game is, you know like, if you open up commands and you make your character run faster, that's-that's straight up cheating, that's not like actually playing the original game. That's accessing the game's files and adjusting it. That's cheating, and that is completely different to glitches, in a sense." Another example on how these two are different would be clipping through a wall to continue through an area of a game. If a player were to use a

technique (that was allowed) that allowed them to clip through a wall, skipping portions of an area, then that would not be cheating. On the other hand, if a player were to clip through the same wall by accessing a command prompt and putting in a code that allowed them to do so, then that would be cheating. In this context, speedrunners will only run what interviewee Eric calls "vanilla gameplay." This means, as two interviewees put it, playing the original version of the game without accessing and changing any of the game's files by entering a code that would allow your character to run faster, to clip through walls, etc.

Common examples of changes to the game code include changing what is known as "RNG" values, and altering frames or load times. RNG stands for "random number generator." RNG is a function within the game's code that allows for randomness in games (Speedrunning Glossary, 2017). This allows for each playthrough to be somewhat unique as things such as in-game "loot" (or treasure), or even the attack cycles of a game's boss, might change based on a certain set of values for that specific gaming session. RNG is a unique problem within the speedrunning community as opinions regarding randomness in games can vary from speedrunner to speedrunner. As interviewee Charles puts it, there's "an audience out there for pretty much every kind of run." When asked if the randomness in games are a detriment to speedrunners, Charles pointed out that, even though a lot of runs could be lost due to "bad luck," some speedrunners tend to rather enjoy a "heavily random game." Charles believes that people enjoy these types of games because the element of luck "keeps runs fresh." Games with too much RNG, however, could be very frustrating to most runners. Runs that have been on world-record pace have been lost due to bad luck, or bad RNG, not necessarily

because of the mistakes made on behalf of the runner. Most speedrunners, as they practice the fastest route in the game to completion, will know exactly which events are to occur at different points in the game. RNG could be very frustrating when the route speedrunners have been practicing suddenly changes, regardless of the skill of the player. When asked why people may or may not like RNG, supplemented with a question of skill, Charles concluded: "Yea, it's like… like it's a thing to um, be good with a route and be able to get a good time with a given route with any given run. It's another thing to be good at an entire game and know how to react to basically anything the game can throw at you." Regardless of the opinion about RNG, players who change the game's RNG values to work in their favor are cheating since those players are assigning fixed values to elements of the game that should be completely random. These instances of unfairness are what the speedrunning community tries to avoid.

Another way to cheat in a speedrun is by altering lag frames and loading zones. Though this is more of an issue that will be discussed with emulators, players can still cheat by taking advantage of the game's load times. As addressed by SpeedDemosArchive user tonic, games typically lag (or slow down) depending on the number of events that are happening within the game or on screen. For single-player games, most gamers have experienced lag if gameplay has ever looked "choppy." This is mainly due to either the poor optimization of the game or the limited processing power of the device running the game (e.g. console, computer, or mobile device), among other reasons. If a player has the ability to control lag in the game, they could potentially reduce the overall lag of the game, possibly saving them time in the run. This also becomes a problem for speedrunners with slower computers. Massively-sized games,

such as the *Fallout* and *Elder Scrolls* series, can sometimes be very taxing on either older PCs or PCs that don't have as much processing power. Loading times for users with slow PCs can last much longer than players with fast PCs. Many communities, however, have remedied this problem by stopping the timer during loading screens in order for those with slower PCs to have a fair chance at the fastest time. Still, altering the lag or loading zone times of a game to favor the runner is considered cheating.

Exploits. The exploitation of glitches and bugs within games are the bread and butter of any speedrunner. Their definition, use, and legality, however, are debated almost endlessly. Perhaps it is most appropriate to begin this section with an example from the Pokémon speedrunning community.

The Pokémon game series' popularity has been soaring ever since the release of *Pokémon Red, Green,* and *Blue* in 1996 (Game Freak, 1996). Even though some games may enjoy a relatively short lifespan (depending on the game or game series), the Pokémon franchise is still going strong. Toward the end of March 2017, the official Pokémon company reported that all Pokémon-related software has sold over 290 million units worldwide (The Pokémon Company International, 2017). In addition to that popularity, the Pokémon speedrunning community is very strong and active. Currently, the *Pokémon Red/Blue* series has over 380 registered players on one of the official sites for speedruns, speedrun.com.

In 2015, a thread was created on the forums of the Pokémon speedrunning website, pokemonspeedruns.com. This thread introduced a discussion regarding a trick (loosely used term) known as the "bike shop instant text" in *Pokémon Red/Blue*. In the game, there is a bike shop where the player can acquire a bike to move around the

"overworld" (or game space) faster. It should also be noted that in the game, whenever the player interacts with other "sprites" (objects or people on screen), text appears on the screen and is displayed in a scrolling-like manner, almost as if someone was quickly typing the message right in front of the player. It was discovered that if the player were to interact with the bike shop owner without a bike voucher, then clear the text that popped up on the screen by pressing the "B" button, the player's text would appear instantly for the duration of the game session, at least until the player were to open a menu or open specific dialogue boxes. In turn, this would save speedrunners a significant amount of time during their run, optimizing the route even further. The discussion warranted the opinions of the speedrunning community on whether or not the use of this technique was allowed. The conversation, however, quickly diverged into how members in the community defined what constitutes a glitch, as well as comparing the "instant text" trick to other exploits found in the game. After an intense discussion and 35 posts later, the staff on the Pokémon website found that the majority of members agreed that the "instant text" exploit should be allowed.

Discussions such as these occur often within the speedrunning community. As interviewee Daniel states: "Um, glitches are pretty much always common… It's very rare to find a game that's so perfectly done where glitches aren't common… Most games will contain glitches." This is in part due to the imperfect nature of game development. No game is mechanically perfect, and this can be seen when developers release patches for their games, regardless of whether the game is old or had just been released. These imperfections can be interpreted in several ways, one of them being in the form of glitches or "bugs." Again, since glitches are an essential part of the speedrunning

experience, it is of upmost importance for members to decide on their legality. In tackling what exactly constitutes a glitch and if they are allowed, the simple answer would be that it is up to the members of that specific video game speedrunning community on how they define these "software loopholes." Reddit user dannyb21892 pragmatically explained, "it is completely impossible to accurately and succinctly define what is or is not a glitch." The more complex answer required an in-depth look at exactly what the essence of a glitch is.

To begin, there have been multiple attempts from the speedrunning community in trying to provide a general definition of a glitch. Some runners refer to the actual code of the game. User OU7C4ST states that "a glitch occurs when you manipulate the coding itself within the game." This is a sound argument since code alterations, as established earlier, are not allowed and should be considered when trying to establish the definition of a glitch. Other users have tried to establish that glitches are based on "intent." For example, reddit user fluuxx defined a glitch as a player "using an *unintended* mechanic to achieve something **intended or unintended**." One of the main problems with this definition is also trying to define what game mechanics are "intentional" and what a "mechanic" actually is within the game.

Where speedrunning breaks from the traditional cheating literature comes with the speedrunning community's decision about glitches: within the context of speedrunning, glitches are not cheating. As interviewee Andrew states, "Well I would imagine a lot of these people would consider glitches like that people use in speedruns everyday to be cheating, but they're not. As you've said that um… things that are allowed by the game's code, that's not cheating. Glitches are allowed by the game's code." Andrew's point is

that the player is not adding anything to the game itself. Rather, the player is using the game's own code to execute techniques and maneuvers that "casual" video game players would consider cheating. For the majority of speedrunners, glitches are as integral to the gaming experience as taking control of your character and playing through the game.

This does not mean, however, that glitches are allowed in all areas of speedrunning. Sometimes, glitches are not even used for speedruns. In speedrunning, what has been deemed the central hub of the speedrunning community – speedrun.com – have the records of players for each game. Each game has categories that users have arbitrarily assigned to the game based on a goal either they or the community have developed. For example, *The Legend of Zelda: Ocarina of Time* (OoT) is a very popular game to speedrun with over 1200 players on record. Every game that users speedrun will always have an "any%" category. This literally means completing the game as fast as possible, bypassing any goals or missions the game might have the user perform. This category is in the true definition of speedrunning where getting to the "end" of the game (however the community defines the "end") is the primary objective of "any%". Also, if the game is very popular to speedrun, users will create categories that present additional challenges besides completing the game at any percentage. OoT has a category called "All Dungeons" where speedrunners must collect all "spiritual stones" and all "medallions" by (literally) completing every dungeon in the game, while also completing the game as fast as possible. Finally, as stated earlier, there are certain glitches that aren't allowed in certain categories. "Glitchless" categories are popular for some games as well. Some of the "glitchless" categories are *truly* glitchless: playing the game how a casual gamer would play through the game, but as fast as possible. Other "glitchless" categories,

however, do allow certain glitches, and this is one place where debates over the definition of a glitch can originate. Even though the category is named "glitchless," some games will actually allow and not allow certain glitches to be used. For example, OoT has a "glitchless" category, but there are many techniques, some that could be considered glitches, that can be used for this category. How speedrunners remedy this is by discussing rulesets between members of their own community. In the rules for their "glitchless" category, the moderators of the OoT leaderboard gathered "a group of OoT players" to define the rules of the category. In a reddit post explaining the "glitchless" OoT category, the community consulted "experts" who knew much about the game's inner workings to develop the category. Even though the moderators admit that it is not a perfect system, it does seem to work for the community. At the very least, they were able to construct standards to where players can compete and compare runs fairly.

Hacks. Using hacks in a game to gain an advantage in speedrunning is not only prohibited, but it is also a very small problem within this community. As interviewee Daniel states: "They… uh, speedruns will never – well, for as much as I know – they will never contain hacks, uh or anything like that. Those are, I'm pretty sure, illegal." When submitting a video for record time, the two closest practices that would be close to "hacks" in the speedrunning community are tool assisted-speedrun (TAS) videos and scripts or script devices.

TASs are a unique way of completing games as fast as possible. Technically, TAS videos are not a part of the speedrunning community in terms of runs submitted on the official leaderboards. TASs are made with software acquired online that allow the user to record their actions frame-by-frame. Users can then program actions or sequences to each

frame of the game, providing them with an optimized playthrough. This means users can perfect movement through the use of "bots," resembling close to what the website calls "superhuman-like playing sessions" (FAQ, 2013). Again, even though these videos are not *really* a part of the community, TAS videos do provide useful insight to speedrunners on maneuvers that are technically possible in the game. As interviewee Berry states: "It's, it's [TAS] technically not part of the speedrunning community, but you can use these tool-assisted speedruns and watch them to see what they do, maybe…"

Another practice that could be considered cheating is the use of scripts. Even though scripts are not technically hacks, they can loosely fall under this category because of their tool-like nature. Essentially, scripting is the act of binding (assigning) actions or multiple actions to the individual's hardware in order to achieve a certain result. This would usually make inputting a complicated series of actions much easier. For example, in fighting games, special moves would require a specific input of both button and directional analogue movements. With scripts, however, those moves would be bound to just one key. In terms of legality, the SpeedRunsLive webpage reiterates that these decisions are community-driven. Even though the majority of game communities do not allow scripts, there are some that do, such as the *Half-Life* game series.

Walkthroughs. Walkthroughs serve their own purpose within the speedrunning community. As stated in the video game literature, walkthroughs serve as guides for gamers in helping them to complete goals and tasks within the game. Even though speedrunners do not need and do not use the same conventional walkthroughs since they are almost certainly familiar with how to complete the game, speedrunners will sometimes use notes to guide their run. This is especially true if the runner is somewhat

new to the game, or if the runner is playing a game such as a role-playing game (RPG) that would take hours to finish. RPG games could be daunting for some speedrunners, at first, with what it takes to memorize and execute a plethora of actions throughout the game. As echoed by the community, as long as those notes do not directly affect the actual gameplay, such as entering inputs for the user or changing/reading the game's code, then notes are fine to use.

Emulators. Emulators did not exactly fit the mold in the preliminary cheating categories in Figure 1. Emulators are unique in that they are not exactly "hacks," but rather their own stand-alone programs. For purposes of this discussion, an emulator is a program that is designed to imitate another program. For example, Project64 is an emulator for Windows that imitates the Nintendo 64 (N64) console on the user's PC. Users can then download something called "ROMs" (read-only memory). These ROMs imitate the data found in the original N64 video game cartridges. Thereby, users can execute these ROMs via Project64 and play N64 games on their PC, usually with a controller that is decided upon by the community. This is, of course, if the community allows emulators to be used.

Emulator use in speedrunning is heavily debated within the community at large. Although there is no "blanket rule" banning emulators, speedrunners from various communities will bring it up as a point of contention. Simply, emulator use depends on the individual game communities. There are generally three actions taken by the community regarding emulator use: the emulator is accurate enough to be compared to the original console on an online leaderboard; the community will create a completely separate category for emulator runs; or the emulator is banned altogether. Sometimes, if

the game is so old and no original copy of the game can be found, the emulator leaderboard is the *only* leaderboard. If the emulator is allowed, the community will only allow certain emulators. For example, the Super Mario 64 speedrun community leaderboards on speedrun.com will only allow the Project64 emulator versions 1.6 and 1.7. All other emulators are banned. This is most likely due to the closeness those versions are to the original N64 console. If the community is unable to decide upon emulator use, or if it is mostly accepted by the community, then it is common that community will simply create a different section within the online leaderboards for emulator runs. For example, Super Mario 64 has three different leaderboards: one section for speedrunning through the game on the original N64 console; another section for speedrunning the Super Mario 64 ROM on the Project64 emulator; and finally, the last section is for speedrunning the game on Nintendo's official emulator called "Virtual Console" for the Wii and WiiU video game consoles.

There are justifications for emulator legality on both sides of the aisle. Emulators are usually allowed due to their accuracy of the original game console. As interviewee Charles states: "As long as it's slower than that and still trying to be accurate – you can't… do anything with the emulator, you can't do anything with the actual game – it's generally allowed. If you look up PS2 or Gamecube, some Gamecube games will allow it – most won't – because there are emulation inaccuracies so." As long as the emulator is a close-to-accurate representation of the console and game, and any inaccuracies do not give the player an unfair advantage during the speedrun, then the emulator is usually allowed. These "inaccuracies" as Charles described refers to functions, controls, or glitches that may not be exactly the same due to the emulator's attempt at imitating the

original console and the original game's code. Reddit user kirbymastah addressed these behavioral differences in an emulator simulating a game called *Fire Emblem*. The user noticed slight differences in the game's "AI" (artificial intelligence, or the game's computer-generated characters) between the emulator and the console versions. They also found some glitches that worked on the console version did not work on the emulator and vice-versa. Even though the community does not care if players practice on emulators, regardless of accuracy issues, those emulator runs would not be able to be submitted in the same leaderboard as the original version.

Splicing. Like emulators, the act of splicing did not necessarily fall into any specific category in Figure 1. The practice, however, is one of the main problems of cheating speedrunners, especially those who verify the speedrunning videos, encounter. According to reddit user tonic, splicing is "probably the #1 thing people associate faked speedruns with, and it is definitely a large issue." Splicing is the use of a program to piece together segments of a different run and pass it off as one "complete" speedrun. Users who engage in splicing try to mask this cheating behavior by using gameplay elements to their advantage, making it harder for moderators and verifiers who look at these runs to confirm their authenticity. For example, loading screens, which can sometimes be as simple as a stagnant picture, are easy for users to string together different segments of runs. Another gameplay element verifiers look for is sound. Users who attempt to splice a run will sometimes look for moments of silence in a game (which can also be in the loading screens) or simple repetitive in-game music to try to splice together runs. Verifiers will sometimes even look into the audio file of a video to see if there are any anomalies or skips in the sound waves. This practice also highlights another

type of cheating that is inherent in splicing: stealing other players' speedruns. Interviewee Charles recounts an incident where one speedrunner stole a run directly off one of the speedrunning leaderboards. He stated that one runner "took the third place video for '*Spyro 2* any%,' sped it [the video] up twenty percent, and submitted it as a different category *(laugh)*," only to later exclaim that "Yes! This happens! Some people will do that."

How Cheating Comes to be Defined in the Speedrunning Community

The speedrunning community is fairly organized, but it is segmented by different websites, multiple individual gaming sub-communities, and various communication venues. This section covers the online nature of the speedrunning communities before discussing the nature of rule development and implementation within these communities.

Speedrunning Communities

There are seven websites known to the general speedrunning community that are used anywhere from discussing speedrunning to posting speedrunning videos: speedrun.com, SpeedRunsLive.com, SpeedDemosArchive.com, YouTube, Twitch, Discord, and the speedrunning subreddit (reddit.com/r/speedrun). In order to see the evolution of speedrunning, it is good to have a brief history of the practice that's been around since the 1990s. Information provided by the interviews and content analysis revealed that two of the first websites to provide a somewhat central hub for the general speedrunning community were SpeedRunsLive.com (SRL) and SpeedDemosArchive.com (SDA). Before these websites, speedrunning communities that have been around for decades mainly communicated with themselves using their own standalone websites. SDA was created for the purpose of hosting speedrunners' videos

that were submitted to the website. SDA was created in 1998, appealing only to certain titles (FAQ, n.d.). In 2004, the site opened its doors to all games (FAQ, n.d.). This is also around the time YouTube was developed and allowed runners to post their videos online for others to watch. As technology for live-streaming advanced, SRL was developed in 2009 that allowed users to watch speedruns in real time. Nowadays, most speedrunners use Twitch, a very popular real-time video service, to live-stream their videos, then link their live-stream to the SRL website. Information gathered from the interviewees, however, revealed that SRL's and SDA's popularity has dwindled. As interviewee Berry states: "Um, the way that speedrunning is nowadays, they used to-well, it used to be the hub of SpeedDemosArchives, that used to be the main hub, and then kind of SpeedRunsLive, but again that kind of died off a bit." For some speedrunners, these websites are seen as "outdated," and other emerging platforms such as speedrun.com and Twitch are more efficient.

Today, most discussions of anything speedrunning-related are done either on game-specific speedrun.com forums, on the speedrun subreddit, or in individual gaming Discords. Besides a couple of older speedrunning communities keeping their own individual gaming websites, speedrun.com is currently the central hub for videos and forum discussions. Recently, Discord has become a popular communication tool that allows members to discuss matters in real-time. Interviewee Eric called it "the video game freakin' Facebook app." According to other interviewees, the Discord program is the up-and-rising "modern thing now," where speedrunners can join channels to discuss all matters of sorts, similar to the popular internet chat relay (IRC) program that some gamers used in the 1990s. Although Discord is a general communication application and

not specifically geared *towards* speedrunning, members of the speedrunning community find this medium efficient in discussing matters within their own community.

Rule Creation

As seen throughout the data, individual gaming communities are the authoritative figures in defining what is allowed and not allowed in their speedruns. Figure 2 illustrates the process the general speedrunning community goes through to create the rules that govern their own individual game community.

Initial Phase. The first stage of the rule creation process can occur for several reasons. Any time a new glitch is discovered, new software or hardware is introduced to a game, or a category needs to be brought up for discussion, the community surrounding the game is addressed. When asked when a new glitch is discovered, for example, interviewee Charles stated that "it gets discussed, people work out if it's actually faster and how to make it fit into the route, it just fits into the route. If it does… it's a pretty smooth process, generally." Even if a game is decades old, there are still new glitches to be found. For example, one interviewee described a glitch discovery during a speedrun of a game called Ape Escape 2. This game requires the player to explore each map to catch monkeys bent on ruling the world. The interviewee found that if the player were to try to catch a monkey in the exact same frame the monkey tries to get in a vehicle, it duplicates the monkey and the player is able to catch it twice. After the discovery, the glitch did cause a small discussion within the Ape Escape community. Another example where hardware use was debated was with Nintendo's Amiibos. In short, these are toy figurines for Nintendo consoles that unlock special functions or features for Nintendo games. The

Zelda community debated on the legality of these devices as it could help the player finish the game faster.

Decision Phase. The Decision Phase occurs when the problem has been introduced to the speedrunning community. It should be noted that there is not a specific website or location where problems within the Initial Phase are discussed. If a new glitch, for example, were discovered, then wherever that discovery is first addressed is where the first discussion would take place. The discovery would then be posted as an announcement on an online forum to reach more members within that specific speedrunning community. As interviewee Charles states, these discussions would normally be done in "either game-specific forums on speedrun.com or very specific Discords [channels]…"

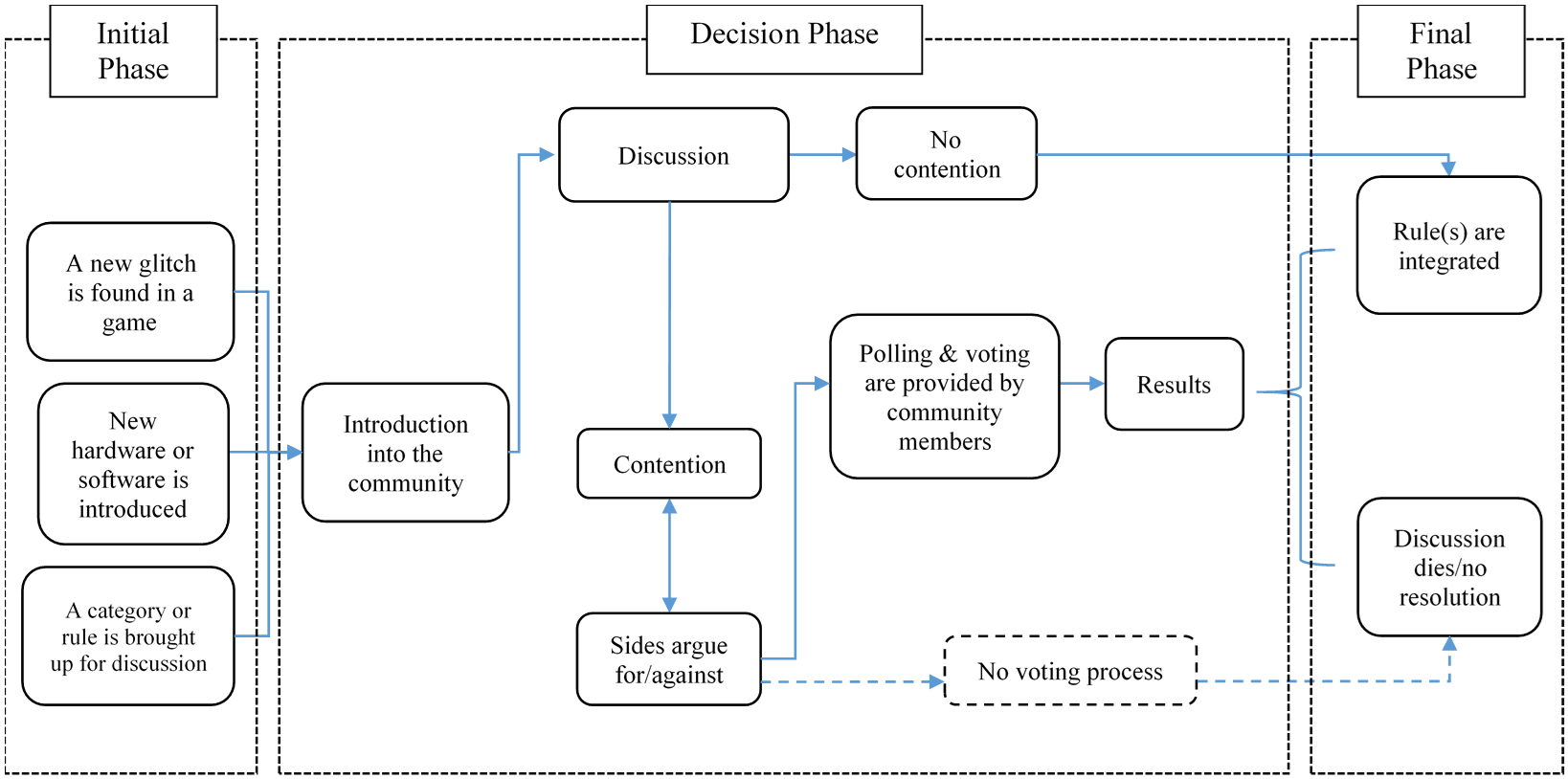

Figure 2. The process of rule creation

Discussions then divert to points of no contention or contention. If there is no argument against either implementing or banning a new technique or piece of hardware for that speedrunning community, those rules are implemented into that community. For example, if a glitch was discovered that could be replicated, that helped shave off time in completing the run, and that stayed within the rules of that specific speedrunning category, then the community would accept that glitch. There are also two special circumstances where arguments would be almost nonexistent: if the glitch was too minor or if the community for that game did not exist. There are some communities that are so small, there are very minimal points of contention within them and rules can be passed with almost no dispute.

If arguments do present themselves over discoveries found in the Initial Phase, members of the community will engage in a debate over that issue. As a speedrunning community that has been around for a long time, the Pokémon community is a perfect example of this discussion process. Although members of the Pokémon community decided to allow the "instant text" trick, there was a new argument months later to decide on whether or not that trick should be allowed in the "Any% Glitchless" category. The moderators on the Pokémon speedruns website polled the community to see their thoughts on the matter. Votes consisted of members posting on a forum in a chain of messages using a five point Likert scale: strongly agree to strongly disagree if they feel as though "instant text" should be allowed in the category. Some communities are not as organized, however. If there is no voting process, members of the community end up

stuck in a cycle of arguments. If the arguments continue with no clear voting process or middle ground, then the issue will remain unresolved.

Final Phase. As one interviewee stated, the rule creation process is generally smooth, which is why the Final Phase is fairly straight forward. Either if there is no contention, or there is a majority vote among members of a specific gaming community about an issue, that rule is integrated into the community. For example, the Pokémon community decided on a majority vote that the "instant text" trick was not allowed for the "Any% Glitchless" category. The moderators then created a separate category labeled "No Major Glitches" that allowed the "instant text" trick. It is worth noting, however, that decisions may not always be final, and discoveries and issues from the Initial Phase could be addressed again by the community, which would restart the rule creation process.

Verification

There exists a verification process for speedruns that are submitted online. To begin, the verification process is done by moderators. On speedrun.com, for example, you can find the moderators listed beside that specific game's leaderboard. Moderators are speedrunners themselves that are elected by their individual game community. These speedrunners chosen to be moderators are usually players who have speedrun the game and know the game fairly well. Verifiers should also be very active within their own speedrunning community. Verifiers, however, do not necessarily need to be *the* top speedrunner of that game in order to qualify. As interviewee Charles states, moderators "should know a lot about the game and a lot about the run to be able to look over the runs

and make sure that they're timed correctly and all that." When looking at the submissions of speedruns, it is the verifier's job to watch the video to be sure the rules of the category are enforced and there is no cheating.

Each website has their own verification process and submission. The oldest website for speedruns, SDA, has a very stringent verification process. Reddit user tonic labeled it as "probably the most comprehensive and strict verification process there is." SDA, however, has been noted by members of the speedrunning community to have a very slow verification process. Most runs within the speedrunning community are now submitted to speedrun.com. When a run is submitted to a leaderboard, it can be accepted or rejected. If the run is accepted, then the record gets posted to the leaderboard with a timestamp and by the moderator who verified the run. If a run is rejected, the verifier will let the user know what was wrong with their submission.

If the run is rejected based on the grounds that the user cheated (e.g. splicing), then a number of consequences can be taken. Even though cheating does happen, it is a rare occurrence within the speedrunning community. As interviewee Eric states, people speedrun because they are "really there for a good time, both in the sense of the game and also for enjoyment." Also, according to two interviewees, speedrunners rarely get banned for anything other than cheating. In any case, hard evidence is required before any further action can be taken, and they can range from minor to severe punishments. Not only can members who are caught cheating be suspended from their community for a certain amount of time, but they can also be banned from their community. Regardless of suspension or expulsion, members who are caught cheating will almost certainly have

their runs removed from the leaderboards. In some cases, moderators will refuse to accept further runs as well.

The Essence of Speedrunning

While the current video game literature provides a fairly comprehensive look at the general video game community and cheating, none have investigated the unique subculture that is speedrunning. Given that the speedrunning community has a somewhat unique take on video game cheating, there remained an additional inquiry of this community: the eidos of speedrunning. In other words, when speedrunners would establish a rationale for decisions made within the community, many of them would mention that the issue was or was not within the "spirit" of speedrunning. After a careful review of interviews and content analysis, three major components that defined the essence, or "spirit," of speedrunning were found: the credibility of the speedrunner, the entertainment value of the practice, and the skill sought after to accomplish these feats.

Trust

The speedrunning community is unique in its ability to be a self-governing body that uses a system of informal social controls to combat illicit behaviors. Whenever the subject of cheating was addressed in interviews with speedrunners and moderators, the overall tone changed slightly. To many speedrunners, cheating is almost a foreign concept as these occurrences are a rarity. Although varying degrees of cheating do occur, the interviewees had only a couple of examples of cheating behavior. Again, even though the online environment is naturally prone to instances of dishonesty based on factors such

as anonymity (Chen & Wu, 2015), there still is a certain level of trust speedrunners have for each other and for the community.

Before speedrunners had the platforms that they do now, such as YouTube and Twitch to showcase their runs, trust was, and still is, an important element to community cohesiveness. When speedrunners posted their records online with no video evidence, other speedrunners within that community took their word for it. Some of the speedrunners did not have the resources to play, record, and upload their content online even though today's recording technology is more ubiquitous and more affordable. Interviewee Charles described a time when an online Google document was used to keep track of certain Playstation 2 titles. Trust, however, is a double-edged sword. Interviewee Berry joined the Super Mario 64 speedrunning community in 2013 and, the community found several world records that were spliced. Berry states: "The fact that when I first joined, uh Super Mario 64 community as well in 2013, um the 16 star world record was spliced… we didn't notice-we didn't notice at first, it was 15:31 [minutes:seconds] and then, then about August 2013, someone beat his time with 15:22, and then about a year or two down the line, we found out both of these runs were also spliced… Hah! And more incredibly, the one that's on SpeedDemosArchive of eighteen minutes from about seven years ago, maybe a bit longer, that was also spliced too…"

Even though it is unknown how the verification process worked decades ago, the tricky nature of trust shows that cheating can still occur. The speedrunning community, however, has made improvements in their verification process, both with official submission procedures and moderators. The community usually elects speedrunners

whom they trust to effectively monitor their community. These moderators also hold a certain degree of trust and respect from their own community members. Berry actually mentioned the fact that another speedrunner addressed the respect he has gained from his long-standing membership and service as a moderator to the speedrunning community. Regardless of a speedrunner's status as a moderator, trust is essential to the cohesiveness of the speedrunning community.

Entertainment

The punishment for cheating in the speedrunning community is relatively minor compared to cheating in other areas, like sports or education. Even speedrunners themselves often noted the difference in stakes between other arenas where cheating occurs and games – in other words, they emphasized the fact that it's "just video games." To many of these speedrunners, the fun simply stems from enjoying the game in a different way as well as interacting with other gamers in the community who share the same interests. The enjoyment of the game does not come from completion, but rather from exploring and discovering glitches in the game's mechanics. This is why there are other categories besides "any%" in many games that are speedrun. It's not about *just* finishing the game as fast as possible, but about the creative ways speedrunners complete a game quickly using different methods, techniques, and goals. This could also be why using cheat codes are banned: it's simply not enjoyable to watch. What *is* fun to watch, however, is a player who has the skill and frame-perfect timing to pull off these feats. This is very close to the same entertainment value individuals who, say, watch football, receive by watching an amazing touchdown play in the final seconds of a game. Each

new category developed by speedrunners adds another layer of grandeur to that game, if, of course, that particular goal provides viewers with impressive moves from the speedrunner. As interviewee Daniel described: "I think watching runs that actually complete the game while still using glitches… complete about the majority of the game: you see most of the content. I think they're the most fun ones to watch. Ones where you skip like 80% of the content, they're kind of boring, but like, that just depends on the run… I think it's interesting to… watch different types of runs to see the type of glitches people actually come up with." As Daniel addressed, the entertainment value not only depends on the amount of content within the run itself, but also the preference of the speedrunner in what they want to see.

Skill

Skill of the speedrunner is one of the key elements within the spirit of speedrunning. This relates back to an earlier discussion of cheating within sports by Schermer (2008) who mentioned the idea of human excellence and fair play. A substantial part of why speedrunners go to great lengths in defining categories and rulesets is to be sure that there is a level playing field. This provides a healthy, competitive environment where speedrunners can effectively showcase their skill and compare themselves to other players without having an unfair advantage. The overall atmosphere of the competitive nature within speedrunning is actually very positive. What was revealed from the interviews and the content analysis is where that particular mentality of competition and skill is focused. Sure, players are competing with each other in attempting to acquire the best time in completing a category, but the object becomes

more about the game itself. As interviewee Eric stated: “No it’s great man. Uh one thing about the speedrunning community uh – no hate there – because it’s… I like to say friendly competition. Like yea you took my world record away, but it’s like, damn cool, you know he, he pushed the game even further, so.” Eric was speaking about a world record he “grinded” (worked hard) for in a game he was speedrunning. His world record was short lived when another speedrunner trumped his time and became the world record holder. There was, however, no ill intentions toward the speedrunner who beat his record. Rather, Eric’s attitude was very positive, which was very similar to other speedrunners’ reactions in having their time beat. In the end, the focus is less towards beating other players, but more towards pushing the game to its absolute limit. Many speedrunners completely bypass the “original” goals of the game. As Reddit user bjholmes3 states: “For me, speedrunning stopped being just about speed long ago, [being] more about total mastery and understanding of a game.” The sight of maxing out the limits of a game by executing impressive maneuvers with a certain degree of flair is the source of entertainment for speedrunners and non-speedrunners alike.

An Explanation of Cheating in Speedrunning

As earlier research studied specific rules and norms of gaming communities (Johansson, 2013; Wang et al., 2011; Whitson & Doyle, 2008), the current research analyzed the speedrunning community, a specific gaming niche, in attempts to explain how and why they designated certain behaviors as cheating. After a careful review of the analysis, how and why the community defines certain cheating behaviors can be explained through certain applications of power dynamics (Brainbridge & Brainbridge,

2007; Wang et al., 2011). Specifically, the accumulation of "gaming capital" and the neutralization of certain behaviors elevate these gamers to certain levels of power over their community and over their game, respectively.

Trust, entertainment, and skill are all traits that influence the speedrunning subculture and help shape its organization. How and why these traits work can be explained by a phenomenon coined by Consalvo (2007) known as "gaming capital." In her book, Consalvo (2007) explains that the concept of gaming capital is crucial in understanding how members of the gaming community interact with each other and with the game itself. In the creation of the term, Consalvo was inspired by Pierre Bourdieu's "cultural capital" (1984). The overall concept, as Bourdieu (1984) explains, is that those who possess large amounts of cultural capital – social assets, not financial – are the ones to regulate "taste" within society (Bourdieu, 1984). He studied these "tastes," or particular groups' interests and established ideas, in order to investigate how they were conveyed across social groups as a form of control. Gaming capital, in a similar fashion, suggests a form of currency that gamers use to attain a certain degree of status within their community. For instance, there are certain gamers who are very knowledgeable about gaming software and hardware. These gamers are also familiar with the options available within the game and can bestow advice to other gamers not on their level of expertise. Naturally, this knowledge elevates them to a position of power as they have a high volume of gaming capital within their community.

This exact framework of gaming capital can be applied to the speedrunning community. Speedrunners with a large amount of gaming capital are those who are active

within their community and who are very knowledgeable about the game. Not only do these speedrunners with large gaming capital give advice to other speedrunners, but they are also a core group of players who hold a certain degree of power within their individual speedrunning cohort when making decisions that affect their community. The three traits are demonstrative of this power. Speedrunners who are the best at the game and are very entertaining to watch usually gather the most following on streaming websites such as Twitch, thus enlarging their gaming capital. This is not to say some communities do not elect for a more democratic process for making decisions, but the amount of trust those speedrunners have is essential in maintaining a healthy environment for speedrunning.

The influence of gaming capital is present within the speedrunning community. This can be best exemplified by revisiting the Pokémon thread that discussed the "bike shop instant text" trick. Users "werster" and "Keizaron" are site administrators within the Pokémon speedrunning community and were the initiators of the discussion regarding whether or not the "instant text" trick should be allowed in a specific category. Through observations made within the Pokémon speedrunning community, werster and Keizaron both have a large amount of gaming capital. A good example of a large amount of gaming capital is the number of Twitch followers and Twitch views speedrunners have. These two site administrators both have an extensive following on Twitch: werster with over 14.4 million total views and over 100,000 followers on his Twitch channel, and Keizaron with over 363,000 total views and over 10,000 followers. As facilitators of the discussion, werster, Keizaron, and their "staff," or other speedrunners who have been

elected into an authoritative position, decided upon a system of voting that assessed the community's opinion on this divisive technique. The power (gaming capital) these individuals hold in facilitating discussions can be seen by the thread itself. Over 90 posts were made toward this discussion that involved several active members within the community. These members operated under the voting system established by werster, Keizaron, and other administrators of the community, further adding to the site administrators' power in their ability to govern. The trust members have in their administrators regarding their knowledge and skill of the Pokémon genre allow for the community to have organized and systematic discussions of the types of cheating allowed.

As Consalvo (2007) states: "Games aren't designed, marketed, or played in a cultural vacuum" (p. 4). The phenomenon of speedrunning is transcendental. Certain gamers have developed their own playstyle beyond the original code and goal limitations of the game, otherwise known as metagaming from the literature (Brainbridge & Brainbridge, 2007). The speedrunning community is, again, unique in the way they define and enforce cheating behaviors within their community. An interpretive framework with which to view how all of these processes work – the types of cheating and how cheating comes to be defined – is through Sykes' and Matza's technique of neutralization (Cullen, Agnew, & Wilcox, 2013). This criminological theory covers specific definitions criminals assign to certain actions that encourage and allow offending (Cullen et al., 2013). In other words, the actual "techniques of neutralization" are a set of core beliefs that are learned by the criminal permitting certain law-breaking behavior

(Cullen et al., 2013). For example, authoritative figures provide oversight for a society or community based on certain rules, and these rules are followed. If an individual were to not follow these rules, feelings of guilt and shame would be invoked upon the law-breaker. So, in a sense, they are controlled by their beliefs. If someone were to then ask how crime occurs, Sykes and Matza would say those controls are neutralized by the criminal (Cullen et al., 2013). In other words, no matter the sanctions imposed upon them, the criminal would say, based upon their core beliefs, that they are allowed to commit a crime in certain circumstances (Cullen et al., 2013). The criminals attempt to "neutralize" control systems to, in their mind, justify their behavior.

This theory is applied within the speedrunning community. There are certain hardware and software categories not allowed in speedrunning while others are allowed. For example, in terms of cheating, hacks and scripts are not allowed in an overwhelming majority of speedruns while the exploitation of glitches are allowed. When asked about why they were not allowed, the interviewees stated that it gave individuals an unfair advantage where speedrunning was more of a test of skill. This is consistent with the current literature which states that cheating ruins the gaming experience for others where one party has an unfair advantage over another (Johansson, 2013; Vázquez & Consalvo, 2013; Yahyavi & Kemme, 2013). Likewise, certain glitches, even though they are accepted in the community, can be disallowed from certain speedruns. In a similar fashion, glitches that are not allowed in the main category of a speedrun (e.g. any%) will usually be welcomed as a new category under that particular game. The speedrunning community is filled with this type of behavior, constantly justifying certain glitches "in

certain circumstances" of a speedrun that fit within particular definitions of that speedrunner or that individual game community. The whole idea of traditional cheating behavior as deviant has been defined away by the speedrunning community.

Finally, gaming capital and techniques of neutralization are linked when discussing power dynamics of the speedrunning community. As stated, gaming capital serves as a currency for power for individual speedrunners. The more trustworthy, entertaining, and skillful the speedrunner, the more gaming capital that speedrunner gains. As exemplified in the data, these speedrunners can then influence the rules and categories (to a certain extent) that are set for their specific gaming community. Simply, there is a positive correlation between gaming capital and techniques of neutralization: as gaming capital increases, so does the influential power of the speedrunner.

CHAPTER V – CONCLUSION

As many speedrunners have stated, some members of the general gaming culture are slow to accept the definitions of cheating devised by the speedrunning community. The information gathered and analyzed from the speedrunning community itself revealed that their ideologies are similar to other digital milieus within the general gaming community. For example, the speedrunning community's use of social control is similar to that of the Second Life community in its ability to provide social regulation of cheating within its own community. Again, the Second Life community is a representation of informal social control where strong social bonds between members act as law and order in enforcing the rules that have been established by the community (Wang et al., 2011). The main difference between the Second Life community and the speedrunning community is the presence of formal social controls. In terms of conflict resolution, the Second Life community still revolves around its developer, Linden Labs. If a "resident" suspects any illicit behavior from other members within the community, the user is able to file an official abuse report that is sent directly to the developer. The speedrunning community, however, completely operates independently from the developers and companies who published the games. If a speedrunner suspects another player of cheating, the issue is resolved either by moderators of that particular game or addressed by the community itself. There is no "official" governing body of speedrunning, only moderators who are charged with monitoring the content within their own specific gaming community.

The idea of metagaming is also reinforced by the current study. Brainbridge and Brainbridge (2007) discuss this concept heavily within their research. According to them, a society that encourages individualism and creativity is what allows metagaming to flourish in online environments. This can explain why the speedrunning community has established such a major online presence. Furthermore, while metagaming is not only about rule definition outside of the game, it is also about redefining what constitutes a "victory" in a game (Brainbridge & Brainbridge, 2007). As these researchers state, metagaming "involves gaining the power to define the nature and rules of the game, thus maximizing autonomy rather than subservience" (p. 75). The speedrunning community is an embodiment of this phenomenon: the community operates outside the limitations of the game by defining what is permissible in a "legitimate" speedrun and what is not. Brainbridge and Brainbridge (2007) conclude by stating that the phenomenon of metagaming, in the context of video games, can only thrive if several other individuals buy into the game that it transcends. Speedrunning, without a doubt, has this investment from not only gamers, but also corporations and news outlets who seek to expand the awareness and interest in this metagame even further.

The ideas of control and power that the speedrunning community demonstrates is exemplary to the conclusion reached by Consalvo (2007) regarding the anti-cheating industry's response to general video game cheaters. She introduces Foucault's theory about the discourses of power (Frank, 1982). In her comparison, Consalvo (2007) equated the expression of power to the code of a video game. The coding of the game is twofold: it allows players to express certain actions in the game while also being

technically limited by that same code (Consalvo, 2007). She then states that some users refuse to be bound by such limitations and attempt to express their own power over the game's code. Players who cheat aim to bypass these games' limitations. For these players, their expression of power is not only pushing the game's code to its limits, but also reconfiguring the game to the conditions of the user (Consalvo, 2007). Although Consalvo's (2007) point was geared mainly towards describing general video game cheating, the same comparison regarding the discourses of power can be made about the phenomenon of speedrunning. In principle, speedrunners purposefully push the game in order to execute maneuvers that would not be possible playing the game within its limits. Foucault's theory of the discourses of power helps in explaining the essence of speedrunning. In analyzing the interviews and the online content, part of the appeal of speedrunning is the feeling of "total mastery" of the game. The complete dominance over a game instills a sense of power in the speedrunner. This is seen whenever a speedrunner executes a difficult trick or whenever a personal best or world record is obtained. This idea of power is what makes speedrunning so appealing to many gamers looking to enjoy their game even more.

The practice of speedrunning is embodied by another quality which makes it unique: its transgressive nature. This is similar to the conclusion reached Steinmetz's (2014) study that uncovered the nature and essence of a "hacker." In his study, he found that hacking was a "transgressive craft" as both a skill-based practice and a type of subversive behavior (p. 141). The nature of speedrunning is very similar to this definition, but doubly so. First, speedrunning redefines the goal of a game. For example,

the goals of Super Mario 64 include gathering stars to advance to the next area, beating the evil villain Bowser, and saving the princess. Even though collecting stars remains a *requirement* in some categories of speedrunning, the goal is no longer bound to the story of the game. The goal is to complete the game as fast as possible by following the rules established in the category of the speedrun, completely bypassing the original goals and missions of the game. Not only does the practice of speedrunning transcend the goals of the game, but it also transcends the actual code limitations of the game. Speedrunners are no longer bound to the limitations of the game's mechanics and environment. The community encourages the concept of "breaking the game," which is testing the game's code to achieve a certain effect. In the context of speedrunning, this act involves finding and exploiting holes within the game's code that helps speedrunners complete the game faster. Ultimately, the essence of speedrunning can be boiled down to one sentence: speedrunning is an established and expanding metagame, an engaging and fun hobby, and a transgressive practice that embodies the ideals of human excellence shared between members of the speedrunning community seeking to achieve the same goal.

Cheating within the cyber realm is important for two main reasons. First, as technology becomes more pervasive within our society, there is a possibility that digital cheating can carry over to other areas of an individual's life as well. Hamlen (2012) already addressed that students who seem to work around difficult tasks with their academic work are the same students who seem to bypass difficult obstacles in video games. This type of "work-around" behavior is seen in the speedrunning community. The whole foundation of speedrunning is built upon the idea of completing the game as fast as

possible, using nontraditional means to completely bypass "normal" sections of the game that may have difficult enemies and puzzles to overcome. It is possible that a replication of Hamlen's (2012) study involving surveying the speedrunning community could reveal similar results regarding the cheating behavior of speedrunners. This behavior that accepts the completion of a game through nontraditional means also encourages game cheating as a normative behavior (Brainbridge & Brainbridge, 2007; Chen & Wu, 2015). In the case of speedrunning, glitch use has not only become common practice, but also necessary for the majority of speedruns. Secondly, the speedrunning community openly admits using emulators for either practice or for official speedrun submissions, in some cases. Emulators, again, can be imitations of games and gaming consoles (e.g. playing Nintendo 64 on PC). At first glance, emulators seem to be in violation of the Digital Millennium Copyright Act of 1998 (DMCA) (2013). The DMCA (2013) sought to protect the intellectual properties (IPs) of organizations by criminalizing methods used to gain unauthorized access to copyrighted works. It seems as though imitating both the console and the ROM (e.g. the actual game) would carry with it legal ramifications if those were to be distributed online – which they are. Even though these types of violations are beyond the scope of this study, this line of questioning does show that violations against the IP of a company could have real world effects.

Limitations

As with any grounded theory study, there are certain limitations of this research. This study investigated the nature of only one subculture, a specific niche within the general gaming community. The data observed from interviews and content analysis may

not be generalizable to the gaming community at large. The researcher, however, attempted to draw connections between this digital milieu and others like it (e.g. Second Life) to confirm the validity of the findings. The researcher was also limited by the data that was gathered. The response rate from interviewees were low to where only six members of the speedrunning community were able to be interviewed within the given timeframe. Furthermore, the majority of the content analysis came from the speedrunning subreddit, and not all discussions were made on these forums. Speedrun.com also has their own individual game forums where rules and categories are discussed. It is completely possible that more specific discussions pertaining to specific game rules and categories were missed. Final limitations concern the researcher. This research was conducted by a "non-speedrunner," or an individual who does not engage in the speedrunning phenomenon. Karppi and Sotamaa (2012) encourage gaming researchers to actually play the games themselves in order to better understand certain phenomenon. If not, they state that researchers may be in danger of misinterpreting certain mechanisms of the game. While speedrunning involves more than one game, the same advice can still be given to those researchers who study both game and online cultures. This risk was minimized through the use of grounded theory where personal interviews offered a more rich, in-depth look at speedrunning (Charmaz, 2014). In addition, this research was conducted by only one graduate student where bias may be present.

Future Research

As technological advancements push gaming hardware and software forward, the gaming literature should also advance with it. Soon, cheating within video games will no

longer be bound to just a controller, or a mouse and keyboard. More games are being developed for not only console and PC, but virtual reality as well. Experts within the gaming literature should be aware of this expansive technology in terms of what that will mean for cheating in games when the hardware for VR is somewhat different than conventional controllers. Also, the current gaming literature has somewhat delved into different gaming subcultures, such as the community surrounding Second Life (Wang et al., 2011; Whitson & Doyle, 2008) and in-game guilds and clans (Johansson, 2013). More research into these digital milieus should be conducted to better understand the nature of informal social controls and rule creation.

In conclusion, the nature of cheating, and how those behaviors could possibly become the norm, should continue to be studied. As Karppi and Sotamaa (2012) state, "neither are the games entirely reducible to their rules, nor is playing simply following categories of predesigned systems." In other words, games in a constant process of change, behaviors that are not bound to the rules of the game. Rather, games are gateways to new meanings and configurations defined by the player. In the context of speedrunning, the community of players give meaning to the games themselves while setting new rules, categories, and goals for the game. The game industry, in particular, should pay attention to what is going on in the speedrunning community. Speedrunners offer companies an entire player base and following, which means more time and money invested in their game. Since games and online communities are always in the process of "becoming," it is vital for the cheating literature to keep the same pace.

APPENDIX A – IRB Approval Letter

THE UNIVERSITY OF
SOUTHERN MISSISSIPPI

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

NOTICE OF COMMITTEE ACTION

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

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

PROTOCOL NUMBER: 17033007
PROJECT TITLE: Born to Run: A Grounded Theory Study of the Social Construct of Cheating in the Online Speedrunning Community
PROJECT TYPE: New Project
RESEARCHER(S): Christopher Brewer
COLLEGE/DIVISION: College of Science and Technology
DEPARTMENT: Criminal Justice
FUNDING AGENCY/SPONSOR: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 04/19/2017 to 04/18/2018
Lawrence A. Hosman, Ph.D.
Institutional Review Board

APPENDIX B – Information Letter

THE UNIVERSITY OF
SOUTHERN MISSISSIPPI

Participant,

My name is Christopher Brewer, and I am a graduate researcher within the School of Criminal Justice at The University of Southern Mississippi. To better understand the idea of "cheating" in a particular video game niche, I am interested in the ideas and beliefs members of the speedrunning community have regarding the use of cheats, glitches, and exploits. The purpose of this study is to better understand the notion of cheating in a non-traditional gaming environment.

You will be asked to participate in an interview given by the primary researcher (Christopher). The preferred method for the primary researcher will be via Skype. The interview will be done either using Skype's face-cam and audio, or strictly audio if you prefer. The interview itself should take anywhere from twenty (20) minutes to no more than three (3) hours. You will be asked questions regarding your knowledge, opinions, attitudes, and beliefs about the use of cheats within the speedrunning community, as well as some demographic information (e.g. age, ethnicity, gender, marital status, children, and education).

This interview is completely voluntary and confidential. Before the interview begins, verbal consent must be obtained by the researcher. The interview will also be audio recorded in order ensure the accuracy of data collected. If at any time while participating in the survey you feel that you do not wish to continue, you can stop answering questions immediately without any penalty, prejudice, or loss of benefits.

The e-mail that was sent along with this attachment asks for a convenient time for the interview. The primary researcher is in the Central Time Zone (UTC-06:00). If you would like to participate in this study, please respond via e-mail along with your Skype e-mail/username. If you have any questions regarding this research project, please feel free to contact me at Christopher.Brewer@usm.edu at (601) 266-4509, or the advisor of this project, Dr. Joshua Hill at (601) 266-4176.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5116, Hattiesburg, MS 39406-0001, (601) 266-5997.

Thank you for your time and consideration of this request.

Sincerely,

Christopher Brewer
Graduate Researcher
School of Criminal Justice
The University of Southern Mississippi

APPENDIX C – Interview Guide

Oral Consent

"As you know, I am a graduate researcher from The University of Southern Mississippi. I am conducting a study on the social construct of cheating in the online speedrunning community, and I would like to ask you some questions about that. I would like to tape record our conversation, so that I can transcribe your words accurately. If at any time during our talk you feel uncomfortable answering a question please let me know, and you don't have to answer it. If at any time you want to withdraw from the interview, please let me know. You can end the interview at any time without penalty, prejudice, or loss of benefits. Confidentiality will also be ensured. Now I would like to ask you if you agree to participate, and to allow me to tape record our conversation?"

Speedrunning Questions

BASIC

- Do you speedrun?
    - If so, how long have you been engaged in speedrunning?
    - Do you have any PRs? (personal records of speedruns)
    - Have you set an WRs? (world records)
- What is your definition of speedrunning?
- What is your view of a "successful" speedrun?
- Most of the time, do successful speedruns contain the use of cheats, glitches, hacks, or exploits?
- What is a tool-assisted speedrun (TAS)?
    - How are these runs viewed in the community?
- In your opinion, which games are great for speedrunning?

CHEATS

- How do you define cheating?
- How do you define cheating within the context of speedrunning?
- Are certain cheats, glitches, hacks, or exploits not allowed in certain games?
    - If so, who decides if they are not allowed?

COMMUNITY

- In your opinion, what are the major websites for speedrunners?
    - Is there one website that is relied upon the most for the speedrunning community?
    - What do speedrunners use as their main form of communication? For example, Teamspeak, Ventrilo, Discord, Skype, etc.?
- Does the community usually define what is and what is not allowed in speedrunning?
- Is there an official governing body over the speedrunning community?

- Can you walk me through the process of submitting a speedrunning video. Is there a verification process? If so, what is that like? Who verifies the run? What if an inconsistency is found (e.g. cheating)?
- What happens when a new cheat or glitch is discovered in the game? How is it introduced into the community?
    - If there is dispute over the use of a certain cheat or glitch, how is it resolved?
- How do you define the "spirit" of speedrunning?
- Which programs are used in conjunction with speedrunning?
- On SRL, what is "racing?"
- What is a "glitch hunter?"
    - What relation are they to the speedrunning community?
    - Do these "hunters" have a say in the community?

Demographic questions

- Age?
- Ethnicity?
- Gender?
- Marital status?
- Children?
- Education?

Closing Statement

"Well thank you so much again for contributing toward this study. As a reminder, your confidentiality will be ensured. I would also be glad to send you a summary of my findings if that interests you? Thanks again!"

APPENDIX D – Speedrun Websites

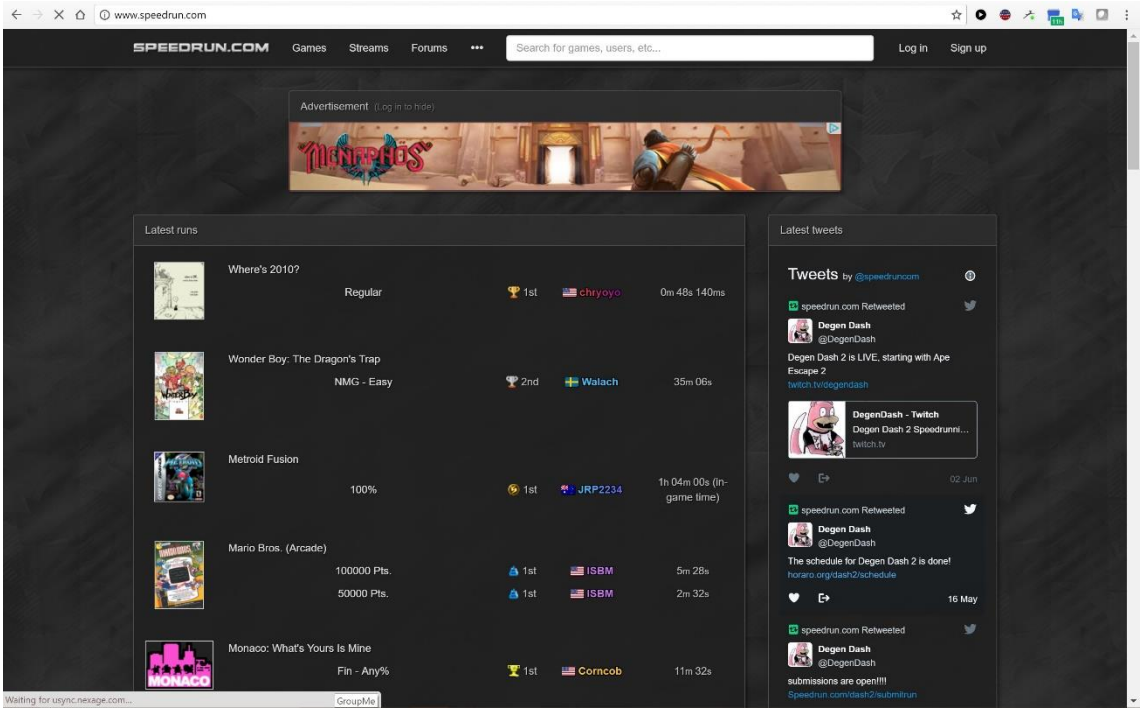

Figure A1. Front page of the speedrun.com website.

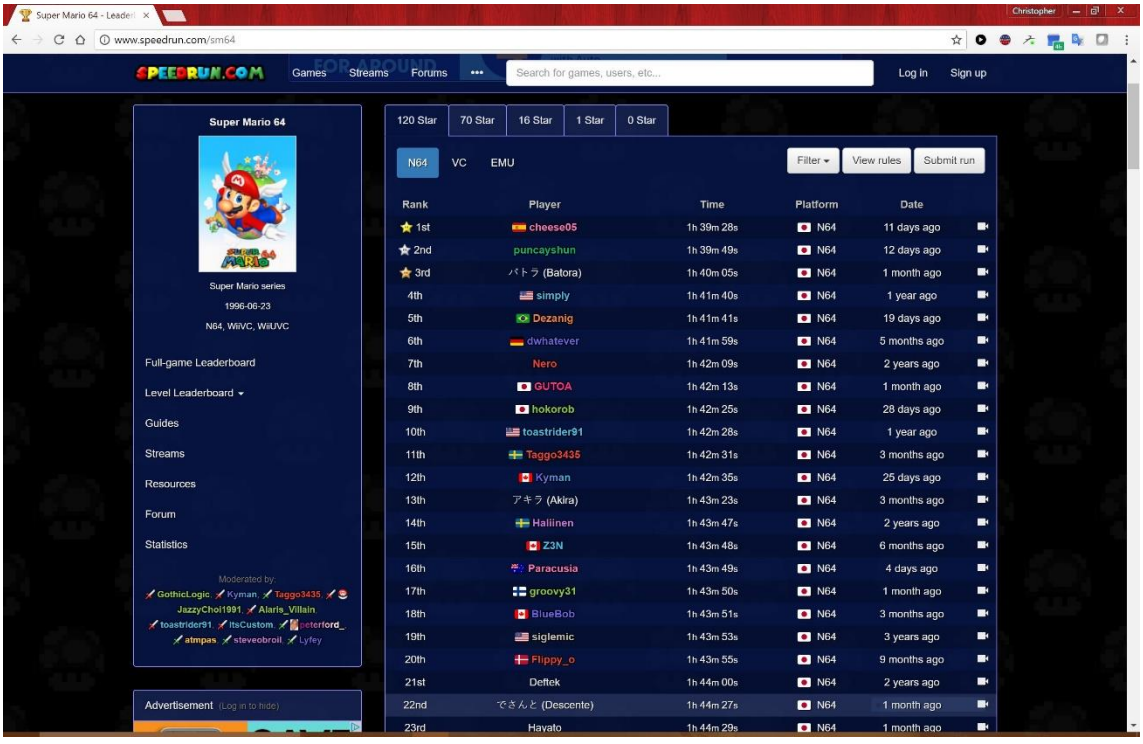

Figure A2. Super Mario 64 page on the speedrun.com website.

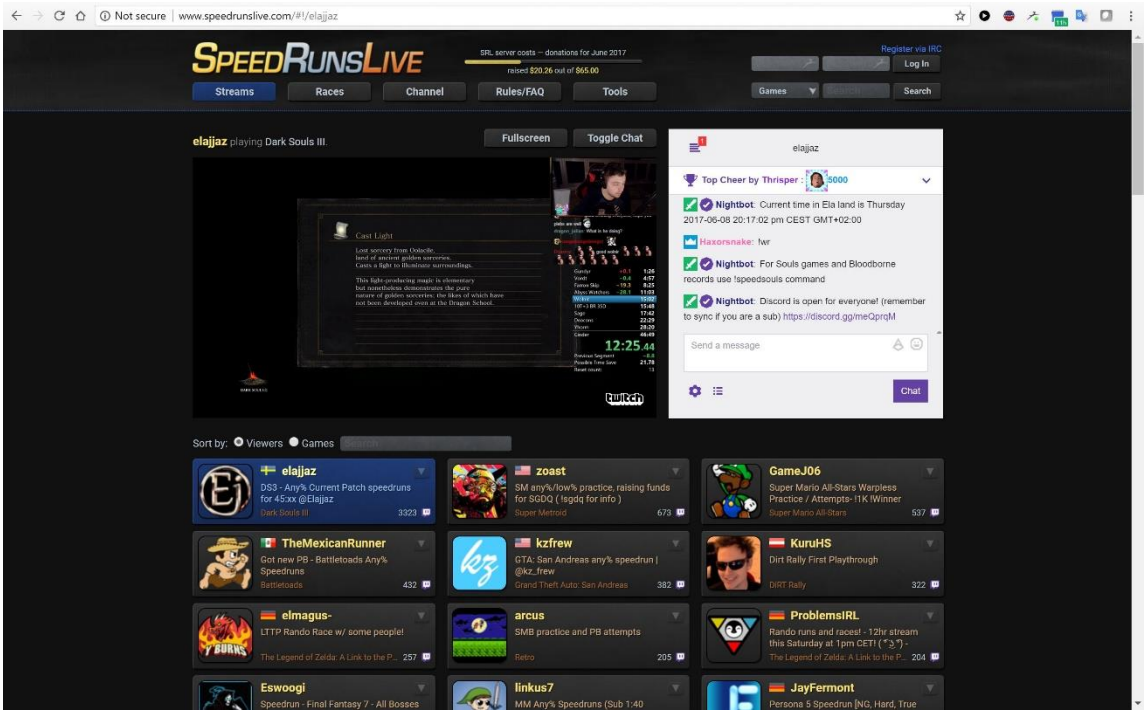

Figure A3. Front page of the SpeedRunsLive.com website.

Figure A4. Front page of the SpeedDemosArchive.com website.

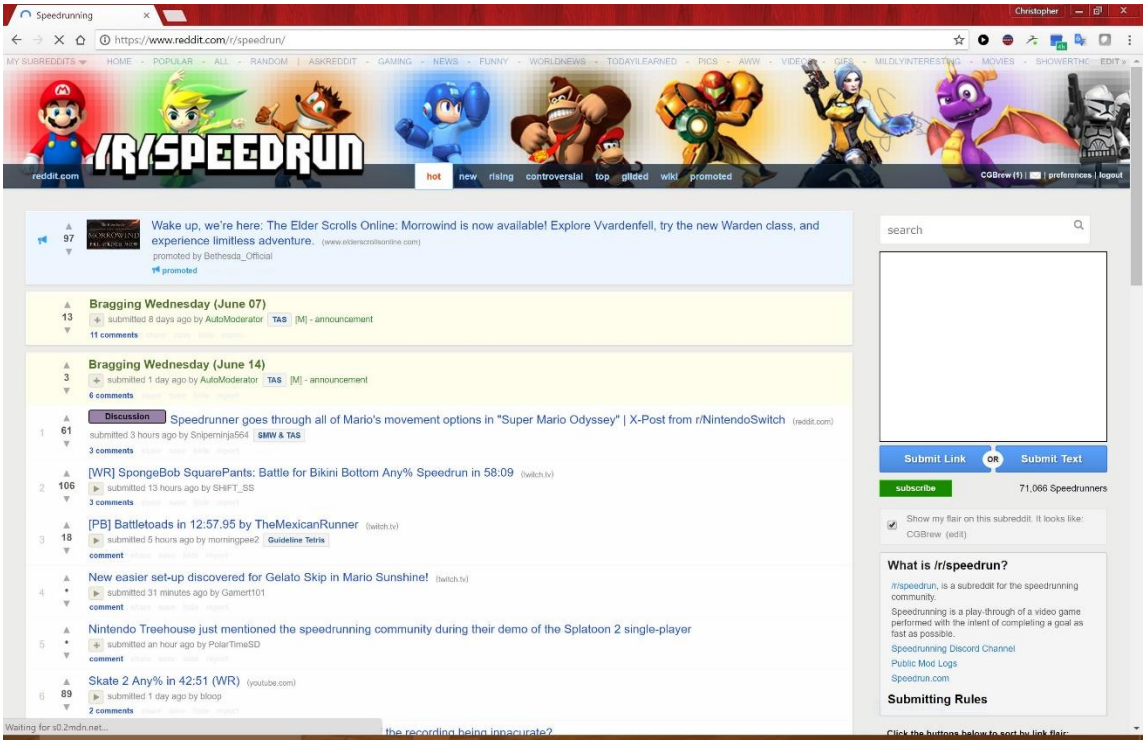

Figure A5. Front page of the speedrun subreddit.

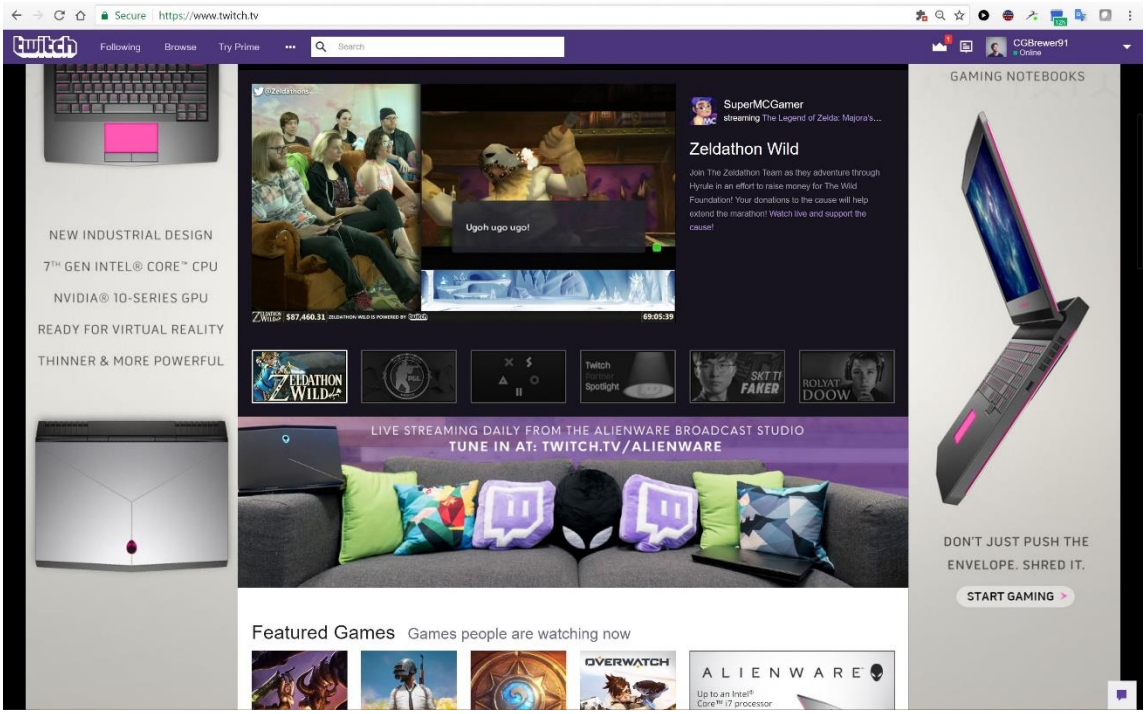

Figure A6. Front page of the Twitch.tv website.

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