ABSTRACT

NEW RETRO: AN EXPLORATION OF MODERN VIDEO GAMES WITH A RETRO AESTHETIC

by Bryant David Thomas

This research paper is about the differences in experiences video game players have when playing retro games, modern games, and recent games created using a retro aesthetic. The definition of modern games using a retro aesthetic is any game made for modern video game hardware (consoles, handhelds, and computers) that uses game design choices or visual stylings of older video games. The paper focuses on the types of games video game players enjoy, and the different emotions they associate with the games from different generations. A total of 17 participants took the survey, and a total of 6 study participants were interviewed. Both of these research methods were utilized to gain a better understanding of how video game players experienced games from different generations. The outcome of the study is a proof of concept experience that takes elements from across gaming generations and combines them into one cohesive. The prototype is usability tested to see if video game players connect well with the multiple experiences converging together.

NEW RETRO: AN EXPLORATION OF MODERN VIDEO GAMES WITH A RETRO AESTHETIC

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Dedication

Dedicated to my family for believing in me at every step of my journey.

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I wouldn't have been able to make it through this program without the support of all the wonderful people I have met in my time here. Dennis Cheatham has been wonderfully patient and supportive during this thesis process. It has been fantastic working with him. Shout out to my fellow XD grads who have traveled this thesis road before me: Kansu Özden and Paulina Zeng. I've learned so much from you both, and I'm glad we became such great friends during our time together. Additional shout outs to the XD grads who have yet to do their thesis. Andrea, Jerry, Yash, Jeremy, Yi-fan, Ali, Ringo, Mark, I know you all will go far, and I'm so excited for you to experience what I have. I'd also like to acknowledge all the other excellent professors I've had during my time here. I've truly transformed since coming here to Miami University.

Chapter 1: Introduction

1.1 Overview

Video games have been around for almost 60 years and are currently one of the fastest-growing forms of entertainment. The global video game industry is expected to grow 4.8% annually through the year 2020 with an expected revenue of \$90.1 Billion USD. Compare this growth rate to other industries such as TV and video which is expected to grow .5%. During the same span of time the music industry is expected to grow at 3.2%.³⁷ Currently, video games are played by more than 1.2 Billion people, and that number is expected to rise.³⁶ With such a large base of users, and such large revenue streams, it is important to understand what game design aesthetics create lasting experiences for players. It is important for game designers to understand if an individual aesthetic choice is apt for connecting to players' memories of past games.

1.2 New Retro

New Retro is the term I am using for a type of video game that has been making an appearance in recent years. New Retro is any video game, created for modern gaming devices, which uses an older or "retro" styling. This styling can occur either in its aesthetics (i.e., pixelated graphics, chiptune sound, etc.) or in its gameplay (i.e., limited control options, etc.). These games seem to be growing in popularity, and an increase in titles that utilize this New Retro styling is also apparent.8 Independent (Indie), video game developers, are leading the charge in this sector because of their efforts to capture a distinct style in the games they make. Developers who use simplified graphics gain the ability to activate the player's imagination, draw the player's eye, and create clarity.⁸

One game in particular that exemplifies this New Retro approach to game design is Shovel Knight.²⁸ This game replicates the look and sound of a game that could exist approximately 30 years ago. The mechanics and button inputs are simplified. While at the same time the graphics and sounds are those of older generation games. Below is a screenshot of the game.



The game is at the same time a nostalgic trip to the past and a wholely new experience for video game players. There have been other titles that have used a similar retro aesthetic, but none to the degree that Shovel Knight has.

1.3 Purpose

This research's purpose is to determine what makes retro games so alluring to some, compared to modern games. The study seeks to understand what game design choices from different generations of video games resonate with video game players of today. Currently, little research into video games exists outside of papers focusing on violence and the psychology of video game players. It is important to study the play and enjoyment of games to help future generations of users understand the systems behind their entertainment source, as well as helping game creators better understand the emotions that go into the enjoyment of games. Data gathered from this research will provide evidence of what parts of the Final Fantasy game series users enjoy and dislike. By finding the pain and pleasure points from across a generation of video game titles, a fusion of the modern and retro can occur, creating New Retro games that connect with the users playing them in a way that neither entirely retro or fully modern games can.

1.4 Hypothesis

The central question that needs answering to move video games forward as a genre is: in what ways do video game players resonate with New Retro games. The issue focuses on determining whether or not these New Retro style games create emotional connections to users' past gaming experience, as well as what meaning these games have to the video game players. This question will establish whether or not New Retro style games have greater value to the user than a modern game would. If that can be determined, then the connections those games make can be further utilized by game creators as a way to improve the relationship they have with their consumers.

1.5 Methodology

Two methods of research are being used to gather data. The first method is a survey that asks participants a few questions about their experience with games. It also inquires about the emotional connections they have with current and past games they've played. Recruitment flyers for the survey were posted around the campus of Miami University as well as online. The flyers included a tagline calling passersby to come and see how video games have changed over the years. The second method is an in-depth interview that occurs while a participant plays some game passages. The interview is designed to determine which parts of the games resonate with the participant as well as their overall feelings of the design choices of the games they are playing. The interviews were held in a secure room on the campus of Miami University. Each participant was asked to play four small sections of four Final Fantasy game titles. While playing each participant was asked the same set of questions. The questions were designed to determine what the participant was noticing, as well what parts of the game the participant was enjoying and not enjoying.

1.6 Limitations

The study is limited in scope. The participants for this study reside in the Southwest Ohio region. In a larger version of this research, it will be useful to gather a larger sample size that is more diverse in nature to get a better demographic representation of video game players in general.

Chapter 2: Literature Review

2.1 Introduction

"We are homesick most for the places we have never known."

— Carson McCullers

Video games are a nearly \$24 Billion dollar industry with no plans on stopping. 28 Video games have many different play styles or genres, a simple way to categorize them is into three different types: Action, Strategy, or Cognitive. Some game series that fall into each of these categories are Call of Duty, a first person shooter action game, Civilization a real-time strategy game, and Tetris a block stacking game in the Cognitive group. Video games and their users seek out different outcomes when playing these games. I'm researching the motivations behind why many game developers are creating games with a retro aesthetic and the reasoning behind why many game players seek out those aesthetics. For this literature review, it's important to understand a few key terms. A video game is an electronic game played using images on a video screen and often emphasizing fast action. A broader way of conceptualizing video games is as if they were navigable spatial texts, novels that the player navigates through taking on a role of a character within that text. ¹⁴ Some typical examples of video games are: Tetris, Minecraft, and Wii Sports. A console is an electronic system that connects to a display and is used primarily to play video games.⁵ A few popular video game consoles from several different generations are: Atari 2600, Playstation 2, Xbox 360, and Nintendo Wii. As of 2016, video game players inhabit over 60 percent of American households. 10 Gamers can be anyone who plays and enjoys video games.

The retro aesthetic I'm discussing is any video game created in the current console generation, that uses an aesthetic commonly seen in video games from previous console generations. I'm especially interested in the video game if the aesthetic it mimics is compiled from video games from the original Nintendo Entertainment System (NES) or Super Nintendo Entertainment System (SNES), during the years 1985 to 1995. This retro aesthetic has been a theme that has quickly become popular in video games of this generation. Games such as Shovel Knight,

created in 2014 by independent video game developers Yacht Club Games, try to recreate the style of video games from the NES era, while games such as Thomas Was Alone, take cues from retro games (simplified palettes, and gameplay) without actually mimicking the style of those retro games.^{21,26} Either way, both games are influenced by the video games that preceded them.

The sound design in many of these games is inspired by the sounds from games from the NES era of video game consoles. This type of sound direction is called chiptune. Having a chiptune soundtrack is a common theme among many games trying to evoke a retro aesthetic. Chiptune is a music style that is rarely used today, outside of video games, due to the ability to have a wider range of musical notes in a composition. Any work that would intentionally limit that range of sound is a type of work that is trying to place itself in the past. When used outside of video games, the artists that use chiptune generally try to align themselves with a video game aesthetic. They often use pixelated artwork to combine with the chiptune sounds, while not being specifically video game related, it exists in parallel to the game culture the sounds are pulled from.

2.2 Methods

The Articles for this literature review come from Google Scholar and Miami University's resource locator. Terms used for the searches included: Retro Video Games, Nostalgia Video Games, Nostalgia, Motivations Behind Video Game Purchases, and Independent Video Game Development Choices.

Articles sought needed to be in English, and pertain in some way to video games, nostalgia, design choices, and motivations behind purchases. I searched through the Google Scholar database as well as the databases available to Miami University students. The initial searches revolved around video games by themselves. The searches did not produce as many details as hoped because the majority of research on video games so far has been about violent behavior associated with playing video games. The bulk of research and literature on video games to date has been focused on violence. When the search criteria were expanded, the amount of valuable

information within those articles increased. Focusing on documents that related to just video games could only show topics with a very narrow scope, whereas researching the phenomenon of nostalgia itself was much more helpful. Nostalgia plays a big part in the creation and use of video games with a retro aesthetic. The reasoning behind this is discussed in depth further in the paper.

Since the articles were from a wide range of fields coming up with a system to read through them was challenging. I tried to focus on peer-reviewed articles and theses more so than non-reviewed literature. I didn't completely ignore non-reviewed research, though. If a paper was especially relevant, I made sure to include it. I focused on finding common themes between all the articles and papers that would be of help when citing the articles in the future. Any information that was used in my thesis was useful information. The report's wide range of topics becomes helpful to cover nuances that I would not have gotten if I hadn't searched so widely.

2.3 Results

Video game players are a growing demographic in the United States. ¹² Almost half of all adults play video games, while only ten percent would consider themselves gamers. ¹⁰ The demographics of gaming are changing. In 2010 women made up 40% of the game playing public. In 2014 that percentage had increased to 48%. ¹⁷ The more people playing games allows there to be more games purchased. These changing demographics partially explain why video games are a multi-billion dollar a year industry that keeps growing. The ten best selling video games of 2015 include nine titles that all feature modern graphics, with one title Minecraft, that uses retro-inspired imagery. ¹⁶ It's interesting to note that while Minecraft is the only title with retro inspired graphics, every other title on the list is a sequel or reimagining of a previous video game franchise. The games on the list also exist across a broad range of consoles from the current generation (PlayStation 4 and Xbox One) and the previous (Playstation 3 and Xbox 360) as well as PC. The makeup of this list reveals a few things. First, gamers tend to purchase things with which they have a history. This is made evident by the composition of the list. The best selling games are based on existing franchises. Many other games are mostly original

experiences, but they rarely ever crack the top spots on these lists. Their sequels will usually outperform the original because gamers have become familiar with an established franchise. Second, video game publishers know what kinds of games sell the most, and will tend to put their funding behind these types of games. The motivations of the publishers explain why this list is mostly made out of sequels. Some of the games on this list have histories of several decades. So when video game players purchase a game from one of these franchises, it may have the most modern graphics and updated gameplay, but they are buying it to sate the nostalgia they have from when they played these games in their youth.

PC tends to be the platform with the most retro inspired games. The popularity of PC is likely due to the low barrier of entry for development on this platform. All a developer needs to create a video game on PC is the software to create that video game. There are few fees to go through when developing for PC such as licensing for the rights to console development kits and ratings board fees. Most independent developers can find download services that are within their budget which will allow them to share their game with as many people that want to play it. Sharing helps to shape their games and the games of those they encounter.³² The consoles of this generation are much more accessible for independent developers to access but less accessible than the PC. From the three primary consoles companies of this generation, Sony has positioned the PlayStation 4 as the platform for independent developers, and by extension, this makes it a platform with many games with a retro aesthetic.

To discuss the topic of retro aesthetic, which is primarily driven by nostalgia, it is important to understand what nostalgia is. Nostalgia is defined as a wistful or excessively sentimental yearning for a return to or of some past period or irrecoverable condition. Its roots are from the Greek words nostos which mean a returning, and algos meaning suffering. When breaking it down into its base parts, it becomes apparent that the reason nostalgia exists is that there is a yearning that people have to return to their home in the past. This yearning is why the retro aesthetic has taken such a hold of some video game players. They are eager to relive the pleasant times of their past to escape the pain they experience with the video games of the modern era.

While nostalgia plays a big part in the creation and consumption of video games with a retro aesthetic, nostalgia is also frequently used in other media for advertising as a way to better connect with their audiences as well as other ways. For example in music, and especially hiphop or rap music, the artist will take a portion or sample from an older song, and use that part of the song in the creation of a new melody. The sample connects the listener to the song of the past while they enjoy the new song that is created. In film and tv directors will purposefully place their story within a timeline of the past to evoke nostalgic feelings for that time from the viewer. An example of this is the recent tv show Stranger Things on the video service platform Netflix. The show is set in the 1980s in a typical American suburban town. The directors grew up in this environment, so they wanted to replicate not only the look of the 1980s but the styles of the shots and the way the story is written, to entrench it in the era they are trying to replicate. Another example is from mtv3 a television station evoking imagery of Pacman, a 1980s arcade video game character, in their advertisements as a way of combining the past and the present. It's a synthesis of inputs that is often seen replicated in the way video games with a retro aesthetic try to capture the era they are homaging.

Over the course of sifting through the research, there were a few standout themes unearthed. The first major theme that I discovered is the topic of how nostalgia for video games often clouds the initial perception of the video game. When in a mostly positive experience the gamer may be more willing to forgo remembering the many negative aspects of that experience. "Usually when you're in the middle of a mostly positive experience, all of the annoying little quirks and frustrating things about that experience are noticeable. But as that experience fades into memory, we forget about the minor annoyances and more vividly remember the positive aspects." This quote from Dr. Fillipo Cordaro, a researcher of nostalgia and video games, states it very clearly. The time it takes for gamers to commit something to memory virtually erases the minor annoyances of that video game from their memories. The removal of these annoyances could explain why many video game players tend to seek out older games from their memories such as Super Mario or Metroid. To them, the games were all mostly flawless with no annoyances that

they can see clearly in the modern games they play today. With nostalgia, we are more than willing to create a memory of a world without any issues in it for our sake.²⁹ The rose-tinted memory could help explain why independent developers are seeking the retro aesthetic of games from these long gone eras. If developers can align themselves with the games that modern gamers have a flawless memory of, it may be possible for the players to see these games as flawless too.

Another theme that I found in some of the literature was the concept of retro aesthetic use in video games being a wholly different experience than retro aesthetic use for any other type of media. When a piece of music takes notes and melodies from older pieces of music, it remains a modern piece of sound with a twist upon the old. It's rarely ever considered a solely retro piece and this song will be able to be enjoyed alongside its more contemporary rivals. On the other hand, when a video game takes cues from video games of the past, that modern game is no longer positioned with its more modern contemporaries. The game is thrust into the retro game category of video games.³⁰ It is removed from its proper chronological placement and positioned alongside video games from the era it is trying to replicate. Video games both retro and modern exist in a sort of flux state. Many gamers seek to bring touches of the modern to their older video games by bringing them into the modern era with packaging and design from this time.⁵ It is also used as a way to further preserve these older video games that may start falling apart due to overuse. Developers at the same time try to give older games a new coat of paint by remaking them for current generation hardware.³¹ Some gaming companies will even repackage their old hardware in a new format to be able to sell it to gamers who have no talgic feelings for the original product. While retro games come to the present, modern games have the same journey in reverse. Modern video games are "demade" (the reverse of a remake) to make them appear as if they came from an earlier generation of video games. These generations all have unique themes, iconography, design, and packaging that can be understood and replicated.²³ Another option is to give new video games packaging that evokes memories of the older versions of these games. 13 Some developers go so far as to allow these games to be played on the consoles they are targeting. 1 This full on embrace of the past is perfect for the devoted retro gamer, someone

who get's more enjoyment from old outdated games than the new ones of today.²⁴ It allows video games to exist in a space that is not seen in other media, where old is new and new is old.

A third theme I found was that the way people consume media of the era affects how they perceive that media. Video games today are much easier to gain access to than those of the past.3 Sony, Nintendo, and Microsoft all have online stores where you can instantly buy most, if not all the games, available on their platforms. This model of purchasing follows the PC gaming market of instant gratification. This strategy has been replicated in other media such as television and music with services such as iTunes and Netflix. 15 There are no lines, and there is no need to preorder or pre-purchase a game to ensure a copy is reserved for you on its release date. This way of purchasing is vastly different from the procurement process from older generations of video games. When video games were new, it was often difficult to secure a physical copy of the game if the quantities shipped to the local store were low. The original process was slow, whereas the current process is quick. This process is mimicked in a similar way with photography. Originally cameras were slow, and you had to wait to receive your photos after you had taken a complete roll of them all. Now with modern digital cameras, your photos are finished the moment you've pressed your screen to make them. A solution that was created for replicating the old aesthetic of analog cameras were the filters from the photo sharing app Instagram.²⁵ These filters alter the usually perfect-looking pictures in a way that gives them some artifacts that look as if they were from an analog image. This process merges the old aesthetic of analog photography with the fast sharing process of digital photography.²⁷

Video games are trying to replicate this as well. The games use the retro aesthetic of the older generations, but most still rely on the rapid transference of data through digital downloads. It is a way of staying in the present but evoking the memories of the past. Allowing people to engage with their digital items regularly, but perceive them as if they were the more traditional elements of the past.

2.4 Conclusions

The themes found in the research lead to multiple routes of exploration. Nostalgia is possibly a factor in video game development as much as it is a factor in video game purchases.6 This research places the onus on the video game developer to decide on whether or not to use the retro aesthetic in the creation of their games.34 The process of video game development is long, but this decision is part of what drives the creativity of the game. 19 Independent developers have the most power in this creative decision. The majority of their games are self-funded or crowdfunded, so they can focus on making games in the style they want, or the style that fits their target group of gamers. 18 Unlike larger developers who are usually making games with a focus on making significant financial returns for their publishers. The culture that exists around wherever the developer is located can also influence this decision-making process.20 Nostalgia is a motivator behind many actions taken by millennials as well as other generations according to most of the articles. This motivation exists for many possible reasons. Millennials are a generation that has seen less success generally than previous generations.35 It's possible that millennials seek to regress to a time when they felt more in control. They can find this connection by consuming media that originates in eras that came before them. Purchasing vinyl records instead of digital albums is one key example of this. According to Mannheim's Theory of Generations, a generation is directly influenced by the generation that precedes it. 7 It appears as if millennials are seeking out the media from the generation that influenced it the most. Another route of exploration is the concept of retro games themselves. Focus on the motivation behind the purchase of old games as well as the idea behind games that are new, but use a specific retro aesthetic to tap into the nostalgia of the gamer making the purchase.

Chapter 3: Methodology

3.1 Methodology

Two methods were used for gathering data. The first method was a survey. This survey was designed to collect general information about the demographic of video game players surveyed. Questions included ones about their preference towards modern or retro games and emotional context behind that preference. The second method was in-depth interviews. The interviews occurred during gameplay sessions from the game series Final Fantasy. Final Fantasy is a long-running series of video games that are all Role-Playing Games (RPGs). The goals of each game are different, but the core of aspect of the RPG is the same. I used a small section from 4 games: Final Fantasy I, Final Fantasy VII, Final Fantasy X, and Final Fantasy XV for the interview. Each section showcased a sample battle. Each participant played through a section of the game and commented on parts of the gameplay and design aspects of the game.

3.2 Exploratory Questions

Goals of the research were to determine what makes retro games so alluring to some, compared to modern games. The research methods were selected to facilitate the gathering of qualitative information about video games from different eras of play. All of these are then used to form a path to the central thesis question of what connections are gained from playing these games.

3.3 Research Procedures

First in the research process steps was to gather participants. The participants were recruited primarily through flyers posted around the Miami University campus. These flyers included a Quick Response Code (QR Code) and a link to my survey. The survey consisted of 14 questions that asked the participant for information about several things. Questions included queries about gaming habits as well as what game consoles they played on. Survey questions can be found in Appendix B. There are two goals for the survey. The first goal was to gather generalized information about video game players. This information would go towards creating graphs and

charts that could lend helpful information about video game players habits towards retro and modern games. The second goal of the survey was to gather participants for the second half of the methodology. The second half of the methodology were the interviews. This interview was designed to gather more qualitative data about gamers habits. The interviews consisted of seven questions asked during each of four video game play sessions. After all of the sessions were complete, four more questions would be asked to determine the participants overall emotional feeling when playing the games in succession. All interview questions asked can be found in Appendix C

3.4 Human Participants and Ethics Precautions

Methods used for this study involved minimal risks. No participant was asked to do anything that would be outside of the ordinary for their lives. All identity information was protected, and steps were taken to ensure the file security. Participants identities were anonymized. All data collected that could be used to identify a subject was kept securely locked away with only the primary investigator having access to them.

Chapter 4: Results and Findings

4.1 Survey

Seventeen total video game players participated in the survey. From that seventeen, six participants were interviewed to better understand how they experienced video games from different generations.

Participants were asked to share their ages in order to better understand the demographic that is being pulled for the survey and interviews. Ten out of seventeen participants were from the 25-30-year-old age range.



Table 1. How Often Do You Play Video Games?

Table 1 demonstrates the frequency of video game use by the participants of the survey. Twelve out of sixteen participants play video games at least once every week.

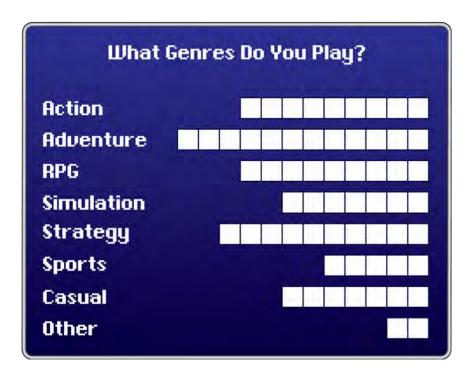


Table 2. What Genres Do You Play?

Table 2 determines the genres that the participants play the most. Participants were allowed to select as many as applied to their particular style of play. Adventure games stood out with the most selections with Strategy games coming second place.

Two questions were asked to determine which consoles participants currently owned, as well as which consoles participants owned at one point but do not own anymore. These questions were used to determine which platforms would make the most sense to target when creating games that may utilize retro design choices. It was also used to determine which retro console generations aesthetics may be best to harness. Responses revealed that the currently most owned platform is the Sony Playstation 4 with nine participants currently owning one. Of the responses to the question about previously owned consoles, Nintendo Gameboy was the primary answer with eight participants having owned one.



Table 3. What Is Most Important In Video Games?

Table 3 shows what the participant believes is the most important aspect of the video games that they play. Gameplay is the clear standout response with ten out of the sixteen responses. Graphics and Story being fairly even with two and three responses respectively. The other selection was a write in answer stating that all elements were equally important.



Table 4. Which Would You Rather Play?

Table 4 visualizes the participants' responses to what they would rather play, given the option of a completely unplayed experience. The choice of either was the most selected response with nine of sixteen responses. This question was asked to determine if the participants had intial preferences towards modern or retro games.



Table 5. Attachment To First Games?

Table 5 visualizes the question that asks the participants if they feel any attachment to the games from the first years they began playing video games. This question was firmly answered "Yes" with twelve out of fifteen responses. It was used to determine if a connection existed for video game players back to the games of their youth. If "yes" was answered to this question, survey participants were asked to fill in a text box with a sentence on how those games made them feel. Here is a sampling of some of the responses:

- "I feel like I'm Back in those days with my sister playing, which feels safe."
- "Very Nostalgic"
- "Giddy, reflective"
- "I like playing games from when I was a kid still today, because it invokes a sense of nostalgia"



Table 6. Similar Emotions With Current Generation Games?

Table 6 shows the question that asked a counter question to the question of Table 5. This question is more focused on the connections and emotions video game players have with current generation video games. If the participant answered "No" to this question, They were asked to fill in a text box with a sentence on why they didn't share similar emotions as they had when playing games from when they first started playing games. Here is a sampling of some of the responses:

"Probably that I have become older and matured and probably they don't fascinate me as much as they used to when I was young."

"I think it's much harder for me to access those emotions now. Like I can still feel like an adventurer, but I play games differently now than when I was younger."

"I haven't had the opportunity to play games that make me feel the same."



Table 7. Selection: Retro or Modern Game

Table 7 was a question that asked participants what they would choose given the options of a brand new modern game or a retro game that they've played before. Surprisingly the majority of participants chose the retro game that they had previously played.

4.2 In-depth Interviews

A total of six in-depth interviews were conducted to gain a better understanding of how video game players interact with video games from across different generations. The interviews tasked each participant with completing or attempting to complete one section from four different Final Fantasy games. Final Fantasy, created by Square-Enix², is a game series that is almost 30 years old at the time of writing. It was chosen as an interview tool due to its long history and the ease of which it introduces concepts to players. The four selected game titles were: Final Fantasy I, Final Fantasy VII, Final Fantasy X, and Final Fantasy XV. These four were chosen specifically because of their relatively equal spacing in the series, and they each represent a landmark for the franchise. Final Fantasy I: The first game in the series and a video game that influenced RPGs for decades to come. Final Fantasy VII: The first game to use 3D as well as on of the highest rated entries in the series. Final Fantasy X: The first use of voice acting in the series as well as the first title to have a direct sequel. Final Fantasy XV: The first open-world Final Fantasy game and the first main entry title that has a real-time action battle system.

I began each interview by thanking the participant for their time, and explain their tasks. After the short introduction, the gameplay sessions began. During each of the four sessions I asked the participants two questions while they played: what was the first thing they noticed about the game and their opinion on the controls and gameplay of the game. After the game session was complete, I then asked the participants what their least and most favorite things were about the game. The first question was designed to find out what draws the video game player's eye when playing each game. The second issue was used to determine what game design choices worked well for the participant as well as the ones that didn't work as well. During these questions, I would also study the participant to see what they were paying attention to during the gameplay session. The final two questions were only asked to find out what areas of the game the participant liked and did not like. All of these questions combine to give data that will guide game designers in the creation of New Retro style games.

4.3 Results

Interview results were very enlightening. All participants shared many of the same views and encountered the games in many of the same ways. In Final Fantasy VII for example, all but one of the participants missed a critically important text prompt in the middle of a battle that results in a game over. Several factors were determined from coding all the interviews. These factors align with the elements from the "What is the most important part of a video game" question from the survey: Gameplay, Story, and Graphics. A fourth category, sound and music, was often brought up during the interviews.

4.3.1 Individual Game Results

Results from coding each of the participants' gameplay responses have been collected into individual tables. Each table visualizes the frequency a positive, neutral, or negative aspect of a category were mentioned. Blank spaces indicate that the topic was never mentioned during the interviews.

Final Fantasy I

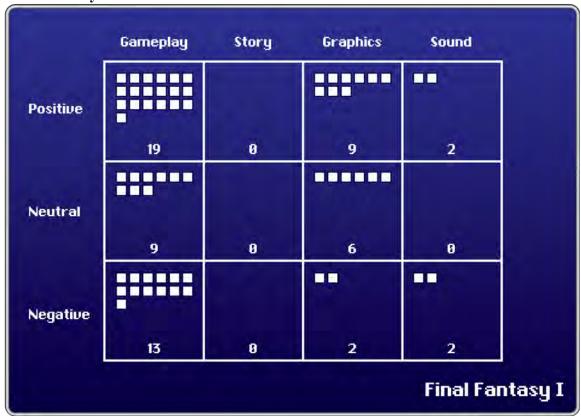


Table 8. Final Fantasy I Coded Responses

Table 8 visualizes the sentiments of the participants towards Final Fantasy I. The table shows an overall postive feeling towards gameplay. Adverse responses from gameplay centered on the overworld map. The overworld map is how players navigate the game world when not in a battle. Players noted that this method of navigation lacked explorative elements. Users could only travel towards things that were directly on screen at the moment. The positive responses from gameplay stem from the ease of use of the battle system. Users are given a set of actions that are available and visible to them at all times during combat, allowing players a constant reminder of their abilities when needed. The sentiment towards graphics was mostly positive. Players found the distinctness of each character useful. This allowing for at-a-glance views of information and character placement.

Pictured above is the battle layout for Final Fantasy I. The menu takes up about 1/4th of the screen real estate. The menu is minimalistic and only uses a small selection of colors compared to the battle screen with the characters and enemies. The different color palette highlights the



importance of the menu and allows the player to view important aspects quickly and easily. One participant stated, "The menu shows you exactly what you need to see." The menu clarity allows for actions to take place on a muscle memory level where players know what they need to input without having to check the menu for reference.

Final Fantasy VII

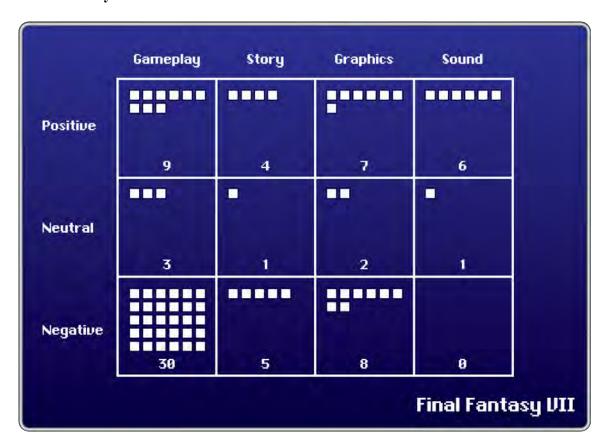


Table 9. Final Fantasy VII Coded Responses

Table 9 visualizes the sentiments of the participants towards Final Fantasy VII. Final Fantasy VII was the first of the games played by the participants to introduce story during battle, so many positive mentions of that were noted. On the other hand, the story was purely text based, which was disliked by several participants. Gameplay from this version of Final Fantasy was disliked. The battle system is an active battle system which allows for players to attack the enemy characters after a timer ends. This system is designed to be more engaging, but to participants, it felt hectic and not pleasant. One participant stated "Too much going on at once." Additionally, the game prompts the user with critical battle information during the hectic battle causing five out of six of the players to miss the prompt. Missing the prompt results in a game over situation. Responses on graphics were mixed. Many participants liked the jump from 2D to 3D. At the same time, the mix of low-polygonal 3D models and pre-rendered backgrounds was not well received. The increase in music quality was noted by several participants as well.



Pictured above is the battle system layout of Final Fantasy VII. The layout is very similar to that of Final Fantasy I. The palette of the menus contrasts against the color palettes of the characters and the background they are on. The menu itself occupies about 1/4th of the screen real-estate. The differences between this layout and the layout of Final Fantasy I are additional gauges that inform the user of the time before they are allowed to make an action as well as a gauge that informs the user of the build of their Limit Break. Limit Break is a mechanic in this version of Final Fantasy that allows players to unleash a powerful attack.

Final Fantasy X

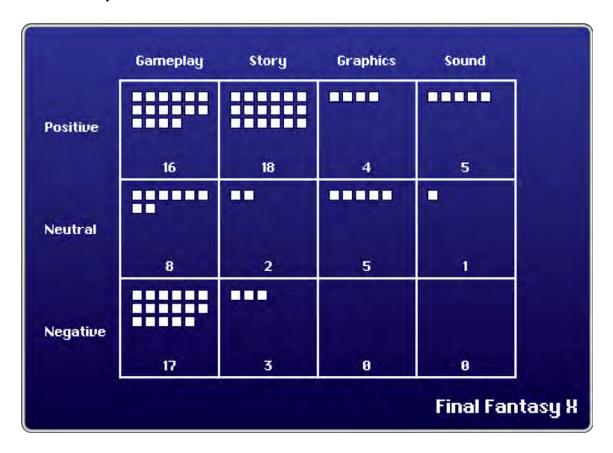


Table 10. Final Fantasy X Coded Responses

Table 10 visualizes the sentiments of participants towards Final Fantasy X. Participants felt that Final Fantasy X's greatest strength was its story. Cinematic story elements are interspersed inbetween battle sequences. In addition to a more fleshed out story, lines spoken by characters are voice acted, adding another layer to the cinematic feel of the game. One participant stated "The story and cinematics made me want to play more." Graphics were hardly mentioned in this iteration of the game, but when brought up the responses were positive. One participant noted their like of the "anime" style of the game. Sound for Final Fantasy X was on a similar level to Final Fantasy VII, which was well received by participants. On the other hand, participants were mixed about their feelings for the gameplay of Final Fantasy X. The participants enjoyed the simplistic gameplay of the battle system which is turn-based, similar to Final Fantasy I. However, the participants felt that the interface was cluttered, and too many elements occurred at once on the screen.



Pictured above is Final Fantasy X's battle system. The layout is a stark contrast to the previous two entries in the series. This system exists in a way where the 3D characters and backgrounds are the focus of the screen at any one time. The menus allow for information such as health point and magic points to see at-a-glance, but the majority of information is tucked away in submenus that the player must search through to find. Five out of six participants mentioned this critique with One participant in particular mentioning, "Attacks take too much to communicate with the game." This quote signaled their frustration at having to dive so deeply into the menus, just to do a simple action.

Final Fantasy XV

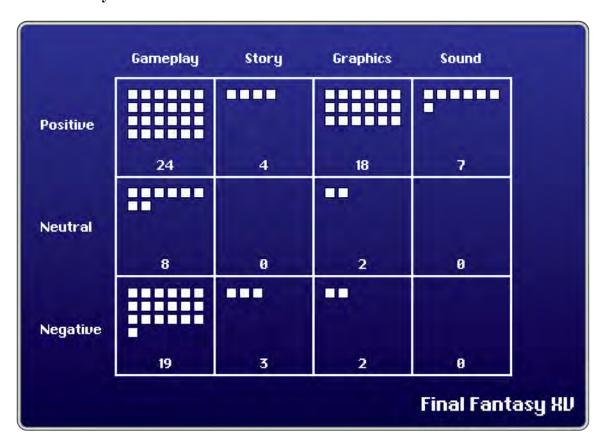


Table 11. Final Fantasy XV Coded Responses

Table 11 visualizes the sentiments of participants towards Final Fantasy XV. Participants were split on the gameplay of Final Fantasy XV. Most of the positive responses were based on the navigation of the game world. Three out of the six players mentioned the full 360° range of motion as a positive. The biggest downside to the gameplay for participants was the combat system. Five of the six participants felt it was too hectic and there was a lack of connection between button presses and actions on screen. The story was briefly featured in these gameplay sections, but participants felt that it was well implemented. Graphics were one of the biggest things participants noticed when playing. The game is a technical marvel, and the attention to detail in the games was seen by all participants. One participant went so far as to call the graphics phenomenal. Sound quality was well received by participants. The sounds technical quality was only slightly higher than the previous gameplay sessions, but the music was

dynamic. Calm music when minimal action is occurring and fast paced music when a battle is happening.



4.3.2 Overall Game Results

Gameplay

Gameplay was the most brought up category with 165 total mentions, many of which brought up interesting insights. Users greatly favored the overworld gameplay and controls of Final Fantasy XV the most recent entry in the series. Each of the six participants appreciated the use of prompts that pause the game to explain a game mechanic to the player. These prompts allow the player to gain information when it is contextually significant. For example, the game shows a prompt on how to attack the first time the player encounters an enemy. This type of prompt system is in stark contrast to the prompt system of Final Fantasy VII which was universally disliked. In Final Fantasy VII, players are given critical battle information in a system that requires hectic button inputs. In Final Fantasy VII, the actions occur in a timed setting. Each character and enemy have an action timer that determines when they can begin an action such as attack or magic. The players were so focused on inputting actions the second they were available that they missed an important note on the battle at hand.

Graphics

Graphical fidelity was the second most brought up topic of discussion with 65 mentions. The users were drawn to the clean interface and the stylized graphics of the first game in the series as well as being attracted to the impressive graphical qualities of the final game in the series. Final Fantasy VII's graphics are where many of the criticisms arose. The users felt that the quality of the renderings was subpar, and they would have preferred a more stylized approach. The combination of pre-rendered backgrounds and low-polygonal count live rendered characters was a jarring look for many of the participants.

Story

Story quality was the third most brought up topic of discussion with 42 mentions. Those interviewed noticed a stark increase in cinematic storytelling as the games progressed. In Final Fantasy I, none of the participants mentioned the story. In Final Fantasy VII participants saw the interjection of story elements in the game, but since it was all text based, most of the participants were uninterested. One participant mentioned when it comes to games: "If it's text, it get's skipped." In Final Fantasy X, all of the participants noticed the addition of voice acting, as well as the addition of multiple cutscenes in a short stretch of game time. The additional cinematic elements were greatly appreciated. In Final Fantasy X players noticed the realism of the dialogue. Characters react in real time to the actions around them as well as react during cutscenes where the player has an opportunity to select their choice when responding to non-player characters. This style of story immersion was noticed, but players seemed to be drawn more towards the cinematic style of Final Fantasy X where the story would interrupt turn based action compared to Final Fantasy XV where the story occurs during real-time action.

Sound

The least mentioned category was sound with 24 mentions. This category had the most varied opinions of all the discussed topics. Several of the participants despised the low-quality chiptune soundtracks of the first Final Fantasy. At the same time, one participant noted that they appreciated the "gamey" quality of the sound. Others enjoyed the full orchestral quality of the soundtrack from Final Fantasy XV, while others yearned for simpler sounds such as the soundtrack of Final Fantasy VII. Overall participants were satisfied with whatever types of music were included in the game, as long as it matched the theme of the game.

4.4 Recommendations

For those who would wish to expand upon my research, I would suggest using a larger set of gameplay sessions. One comment I received from multiple players was they felt like some of their critiques of gameplay mechanics would be solved with more gameplay. More gameplay is a possibility, and it would be interesting to see what the results of an hour long play session would be, as well as the results of an even longer multi-hour game play session. Another recommendation would be to get as close to the original versions of the games as possible. For these interviews, I used two remastered versions of the games for ease of access. Results of this research might be different if each game is played on the system it was originally designed for as well as with the controller it was originally designed to be played.

4.5 Limitations

Research was limited in its scope because the sample set is fairly small, and the participants reside in the same area. In a further study, both of these limitations could be removed. The results would possibly change, but seeing the consistency of results I have from this study, I think the expanded results would be very similar.

4.6 Next Steps

For the next steps in this research, I would ideally create a prototype game or a pitch of a prototype game using all of the data that was gathered here. I believe that the information gained is enough that it can be used to create something that connects with video game players and their desire to experience the games they grew up with in a whole new light. This connection was the goal of the research. Current New Retro games seem to focus on creating a perfect facsimile of a game from the past. Instead of this, my research shows that the answer to tapping into video game player's nostalgia lies somewhere in the middle. A combination of new techniques and old design choices to create a hybrid that players young and old can enjoy.

Chapter 5: Conclusion

5.1 Conclusion

Qualitative research was needed to inform game designers about the rise in video games that use a retro aesthetic, and how they can be used to connect with player's nostalgia. These games utilized the looks and sounds of older games to create an experience that transports players back to their youth. These games inspired me to research these experiences and determine what works and what doesn't.

This document contains all the gathered information that will help inform the video game industry. Details of all the steps and what was learned are included. The research can be continued or expanded upon from here. This project is a stepping off point for future research into understanding how players view the video game worlds they dive into as well as how the design choices of yesterday and the technology of today can combine in a way that creates a truly magical experience for the user. An experience that connects the past and the present together.

Research shows that video game players are a growing demographic in the United States37 and around the world. Players who have been playing games for many years are starting to encounter a new type of game, one that incorporates retro design choices with the modern ones they already know. This use of old in combination with new is primarily focused on utilizing the nostalgia of video game players to create experiences that connect with them on a new emotional level that solely modern games do not. These New Retro games are important because of their emotional connection to the players who enjoy them. The shift from strictly modern to a retro modern mix has been mirrored in other industries as well. The vinyl record industry has seen a resurgence as many consumers want to gain a deeper connection to the media purchase, and they feel they gain that connection by engaging with an older form of media. Mannheim's theory of generations stats that a generation is directly influenced by the generation that precedes it.7 In the same way, Millennials are influenced by Generation X to purchase vinyl records, they find

that they are drawn to the New Retro style of video games. Video game players of today are still drawn to games played by previous generations and the games they played from their youth. "I'm partial to games from that time frame" "The themes were simpler" "The games keep the user engaged" These were direct quotes from several of the participants that echo the general sentiment of all the participants. These elements do not have to stay in the past of video game history. It is important to pay attention to these details of the past so as to include them in the game design choices of all modern games instead of just those that utilize the New Retro aesthetic.

This research is significant because it is an investigation into video games that does not focus on the violence of video games. This paper takes video games at face value as experiences meant to be enjoyed. These experiences have a long history with the users who engage with them, and this document can be utilized to continue to shape how modern games are crafted.

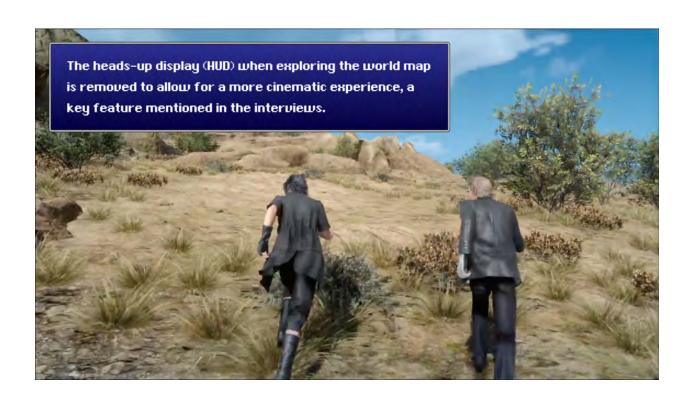
Design Intervention

Based on the information gained form interviewing the six participants, a video was created that intends to invoke nostalgia in video game players by connecting the past and the present into a concurrent experience. This experience is designed to meet the needs of the participants. Fusing all of their favorite elements from the four video game titles, while attempting to eliminate the pain points from those same four games. The video is based around a hypothetical idea for a version of the most current Final Fantasy game Final Fantasy XV. This modifying version of the game is called Final Fantasy XV ∞ (Infinity) MODE. The objective of this modification is to simplify the combat system of Final Fantasy XV. The combat system for Final Fantasy XV was heavily critiqued by five of the six interview participants during the in-depth interviews. Participants felt they had a stronger connection to inputs when playing the earlier Final Fantasy games, particularly Final Fantasy I. On the other hand when playing Final Fantasy I, players had little to no connection to the story as it was occurring. One participant even goes as far as to say "If the story is text I just skip it." Final Fantasy XV ∞ MODE aims to solve the weak points of

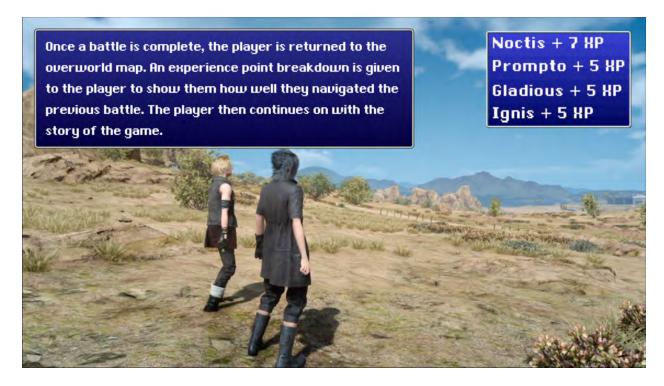
Final Fantasy XV by modifying in elements from Final Fantasy I. The game keeps the cinematic and explorative qualities of Final Fantasy XV and replaces its overly complicated combat system with a simplified system inspired by the combat system of the very first Final Fantasy. The outcome is a game that will have an encompassing story and a fully realized world, which is something four out the six participants think is critical in a video game, and while also having a combat system that is easy to learn and allows for strategic action instead of hectic button mashing.

The following images are annotated screenshots of the Final Fantasy XV ∞ MODE video.









Design Details

All of the features of Final Fantasy $XV \infty$ MODE were implemented due to the feedback of the participants. Final Fantasy XV was chosen as a basis for this design intervention due to its

reception during the interview process. It was a game that was well received but had flaws in its design. Using the interview data, a modification was crafted that could improve on those shortcomings.

Gameplay was an aspect of the game that received several positive mentions from the interview participants. The 360° range of motion was the most preferred method of navigation during all the gameplay sessions among participants, so that element of the game will remain intact. However, the combat system was the biggest criticism of Final Fantasy XV. Five of six participants found it less than ideal compared to others, so it is being transformed into a battle system reminiscent of Final Fantasy I. Participants well received the turn-based strategy of Final Fantasy I and X, but the visual layout of the characters and enemies of Final Fantasy X were slightly confusing to participants, so the system of Final Fantasy I was the better choice. The primary goal of this change is to introduce a higher level of strategy into the game which is what five of the six participants mentioned during the interview with one stating it should always be "strategy over action."

Graphics play an important part in the reception of Final Fantasy XV, so to highlight their importance, the already minimal Heads Up Display was removed for a more realistic HUDless experience. Graphics fidelity is flexible, but the graphics should be clear according to four of the participants. For this reason, the battle system and the exploration system contain two separate but consistent styles. The high graphical fidelity and style of the exploration side allow for information to be gathered all around the player with no interruptions. The low graphical fidelity and style of the battle side allow for information to be gained at a glance.

Story is a strong draw for video game players, that is why the story elements of Final Fantasy XV remain the same as they are in the unmodified game. The player navigates the world as they would in the normal, and they encounter and interact with non-player characters in a way that is engaging without distracting players from battle. "Storytelling matters" stated one participant, and the storytelling of Final Fantasy XV is successful in its unmodified form.

"The game is disjointed when the music doesn't fit," one participant said. Sound is an essential component of this video game. This importance is why with the addition of the new battle system, the music has been altered to fit the stylized graphical quality of the combat system. The chiptune battle music meshes perfectly with the pixel graphics of the new battle system. Outside of battle, the music will match the pacing of the narrative of the game, accompanying the highs and the lows of the story and creating a more engaging gameplay experience.

Creating this design intervention in a way that combines elements of modern and retro game design allows for a hybrid design style that makes a stronger emotional connection with nostalgic video game players than a game that only uses one of these unique styles.

Future Expansion

For the future of this research, an expansion of game titles tested would be a valuable first step. These four games all belong to the Role-Playing Game genre. Branching out into an Adventure game such as The Legend of Zelda series, a First Person Shooter game such as DOOM, or any other long-running series with multiple entries could be very insightful. What works for RPGs may not work for Adventure games and First Person Shooters and vice-versa. Taking the longest running game from each series and running the same type of interviews with the same questions would result in a primer of sorts that contains what works best from the recent entries of each series and what works best for the retro entries of each series. With this knowledge in hand, game designers would have a guide to creating a hybrid that contains the best of both worlds. Developers would go on to create engaging experiences that connect players to their youths and leave impressions that last a lifetime.

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Appendices

Appendix A: IRB Permission Letter



OFFICE FOR THE ADVANCEMENT OF RESEARCH AND SCHOLARSHIP (OARS) Institutional Review Board for Human Subjects Research 102 Roudebush Hall Oxford, OH 45086 513-529-3600

Date: March 29th, 2017

To: Dr. Cheatham and Bryant Thomas

From: Alana Van Gundy, Chair

Institutional Review Board for Human Subjects Research

RE: New Retro: An exploration of modern video games with a retro aesthetic

Thank you for submitting the application referenced above to the Institutional Review Board (IRB). The board has reviewed and approved your proposal through the regulatory Expedited Review procedure.

Your protocol approval number is: 01407r

Approval of this project is in effect until: March 28th, 2018

If you complete your project before the date listed above, please send an email message indicating so to humansubjects@miamioh.edu and we will close your file.

Regulations require periodic review of all ongoing human subjects research projects. If your project will continue beyond the approval date shown above, you will need to submit an Application for Continuing Review and status update for review before the expiration date.

Please submit your next application for continuing review by: February 28th, 2018

Should you wish to change your procedures relating to the use of human subjects or personnel having access to the data, you must obtain approval from the IRB prior to instituting any changes.

On behalf of the committee and the University. I thank you for your efforts to conduct your research in compliance with the federal regulations that have been established for the protection of human subjects. Thank you for your attention to this matter, and best wishes for the success of your project.

Appendix B: Survey Questions

-- A recruitment message is shown before the user can answer any questions

Greetings,

thank you for your interest in the *New Retro* Study. Before we get started, there are a few things you should be aware of before you complete the survey. This survey is a component of a thesis research project for the Miami University Experience Design Graduate program. The project consists of two parts. The first part is this survey which will take approximately 5 minutes. The second section is an opportunity to participate in an in-depth interview/ game test which will take roughly 1 hour to complete. All participants must be 18 years old or older to participate in the following survey.

I am 18 years of age or older.

-- This selection takes the user to the survey

I am under the age of 18.

-- This selection takes the user to this passage and ends the process

Thank you for your interest!

Unfortunately you do not meet the age requirements for this research. Have an excellent day. *New Retro*: an exploration of modern video games with a retro aesthetic Please answer a few questions about your experience with video games.

* Required

What is your age? *

18 -25 25-30 35- 40 >40

How often do you play video games

45

Everyday Most days Once a week A few times a month Once a month Less than once a month What genres of video games do you play? Please check all that apply. Action (Halo, Street Fighter) Adventure (The Legend of Zelda, Telltales Walking Dead, etc) Role-playing (Final Fantasy, Dragon Quest) Simulation (The Sims, Farming Simulator) Strategy (Civilization, Company of Heroes) Sports (Madden, NBA2k) Casual games (Candy Crush, Clash of Clans) Other: What is most important to you in video games Graphics Gameplay Story Other: Given the choice would you rather play a modern game (2000s - Today) or a retro game (1980s -90s) Modern Retro Either What dedicated gaming devices do you currently own? Please check all that apply. Playstation 1 Playstation 2 Playstation 3 Playstation 4/ PS4 Pro Xbox Xbox 360 Xbox One / Xbox One s

Nintendo Entertainment System

Super Nintendo Entertainment System

Nintendo 64

Nintendo Gamecube

Nintendo Wii

Nintendo Wii U

Gameboy/ Gameboy Pocket / Gameboy Color

Gameboy Advance/ Gameboy Advance SP

Nintendo DS / Nintendo DSi

Nintendo 3DS / New Nintendo 3DS / Nintendo 3DS XL / New Nintendo 3DS XL Playstation

Portable / PSP go

Playstation Vita / Playstation TV

Other:

What dedicated gaming devices have you previously owned, but no longer own? Please check all

that apply.

Playstation 1

Playstation 2

Playstation 3

Playstation 4/ PS4 Pro

Xbox

Xbox 360

Xbox One / Xbox One s

Nintendo Entertainment System Super Nintendo Entertainment System

Nintendo 64

Nintendo Gamecube

Nintendo Wii

Nintendo Wii U

Gameboy/ Gameboy Pocket / Gameboy Color

Gameboy Advance/ Gameboy Advance SP

Nintendo DS / Nintendo DSi

Nintendo 3DS / New Nintendo 3DS / Nintendo 3DS XL / New Nintendo 3DS XL Playstation Portable / PSP go Playstation Vita / Playstation TV Other:
Do you fondly remember the games from the time when you first started playing video games? Yes No
If yes to the previous question, how do they make you feel?
Do you share similar emotions with current generation games? Yes No
If you answered no to the previous question, please explain.
If you had to choose between a brand new modern game that you haven't played yet, and an older retro game you've played and completed numerous times, which would you choose? Retro Game Modern Game
Would you be interested in participating in the second part of this study, which involves play testing some games from the long running game series Final Fantasy? Yes No Maybe
If you entered "Yes" to the previous question, please input an email address you'd like to be contacted at.

Appendix C: Interview Guide

Interview Questions

Before starting any sessions

Hello and thank you for participating in this research study. You will be tasked with completing one section each from four of the Final Fantasy game series. The tasks will not be difficult. While completing the task, please pay attention to the interface of the menus and everything that is within the current game section.

Before loading the first gameplay session

The Final Fantasy series is one of the longest running game franchises. The fact that the games span a history of almost 30 years makes it the perfect candidate for this research. The game has evolved over those 30 years with new innovations in technology and storytelling.

During each session of gameplay for each game

What is the first thing you noticed about the game? What made you notice it?

What are your opinions on the controls for this game?

After each session of gameplay for each game

What part of the game did you like the least? What about it caused your dislike?

What part of the game did you like the most? What about it caused your joy?

When all game sessions are complete

What elements(if any) would you take from the modern games and place into the older games?

Why did you choose those elements?

What elements (if any) would you take from the older games and place into the modern games?

Why did you choose those elements?

Thank you very much for your time. Have an excellent day!

Appendix D: Informed Consent Form

Dear Participant,

My name is Bryant Thomas. I am a graduate student in the Miami University Experience Design program. My advisor is Dennis Cheatham, the advisor of the program.

You are invited to participate in a study of video game players interaction with games across multiple generations. I will ask you to take part in 4 short video gameplay sections while asking you questions about your experience throughout the process. These gameplay sections are for research purposes and will provide valuable data for this study. The sessions will help illustrate what aspects and design choices from different generations are useful for modern games. The sessions will take approximately 5-7 minutes each. These sessions will include some questions while you play through the game. 5 minutes of setup time will be included before each session and 3 minutes of post game reflection will occur after each session. The total approximate time for the interview will be 1 hour. Your name will not be associated with any data gathered from this meeting. Your participation is voluntary, and you may withdraw from the session at any time or decline to answer any questions. You will not be asked to do anything that exposes you to risks beyond those of everyday life. Playing the games involves minimal physical psychological, social, legal, economic or other risk. If there is any discomfort during the game play session, it will be ended immediately. The purpose of this study is to allow me to better understand how video game players interact with older and newer video games.

If you have further questions about the study, please contact me (Bryant Thomas) at 937.321.3743, or email at thomasbd@miamioh.edu or my faculty advisor Dennis Cheatham at cheathdm@miamioh.edu. This study has IRB approval. Its approval number is 01407r. If you have questions about your rights as a research participant, please call the Office of Advancement of Research and Scholarship at 529-3600 or email: humansubjects@miamioh.edu and reference the approval number when contacting them.

Thank you for your participation. I am grateful for your help and hope that this will be a		
rewarding session for you. You may keep a copy of this page.		
	 	
Keep one copy of this form for your records. Sign and return the other copy.		
	13	
I agree to participate in the four sessions of gameplay. I unde	erstand my participation is voluntary	
and that my name will not be associated with my responses.	By signing below, I acknowledge	
that I am 18 years or older.		
Participant's signature I	Date:	