Effects of Art Styles on Video Game Narratives

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The effect of an art style on a video game's narrative is not widely studied and not much is known about how the general player base views the topic. This thesis attempts to answer this question through the use of two different surveys, a general theory related one, and one based upon images and categorization and a visual novel based interview that aims at gaining a further understanding of the subject. The general results point to the art style creating and emphasizing a narrative's mood and greatly enhancing the player experience. Based on these results a simple framework ASGDF was created to help beginning art directors and designers to create the most fitting style for their narrative.

Key words: video games, art style, art, narrative, games

Taidetyylien vaikutus videopelien narratiiviin ei ole laajasti tutkittu aihe, eikä ole laajasti tiedossa miten yleinen pelaajakunta näkee aiheen. Tämä tutkielma pyrkii vastaamaan tähän kysymykseen kahden eri kyselyn avulla, joista toinen on teoriaan perustuva kysely, ja toinen kuvien kategorisointiin perustuva kysely. Myös visuaalinovelliin perustuvaa haastattelua käytettiin tutkimuskysymyksen tutkimiseen. Yleiset tulokset viittaavat siihen, että taidetyyli vaikuttaa narratiivin tunnelmaan ja korostaa pelaajan kokemusta. Näiden tulosten perusteella luotiin yksinkertainen runko ASGDF, jonka avulla aloittelevat taiteen johtajat ja suunnittelijat voivat luoda parhaan mahdollisen tyylin narratiivilleen.

Avainsanat: Videopelit, taidetyyli, taide, narratiivi, pelit

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1. Introduction

Video games are a very popular past time for many people, myself included. They allow people to escape the stress of everyday, mundane life, and experience a fantastic adventure or story in a way they have never experienced before. Even simple first-person shooter games without any special narrative can take the player on a journey to a different place. But while there has been a lot of research regarding video games and their effect on those who play them, not much research has gone into the correlation between the art style used and the narrative of the video game. In this study, I will examine how different art styles can affect how players view the story of a video game and create some simple guidelines for future game developers on how to choose the most appropriate art style for their game.

I will explain why I chose this particular topic in Section 1.1 and in Section 1.2 I will examine the earlier research conducted on this topic and topics near it. The possible impact of this study on the real world will be explored in detail on the last section of Chapter 1. In Chapter 2 I will discuss the importance of aesthetics in video games in general from how to create good aesthetics for games in Section 2.1, what is an emotional impact and how to create it on the player in Section 2.2 and, finally, how the aesthetics can potentially affect the story in Section 2.3. In the third chapter, I will explain the idea behind my study and in Section 3.1 I will explain how I conducted my study. In the subsections of Section 3.1 I will go over the different kinds of research conducted in my study. In Section 3.2 I will delve into the results of these studies and in Section 3.3 I will analyze these results in further detail, drawing from both experience and previous research around this topic. Chapter 4 will be dedicated to discussions regarding the study itself, and in Section 4.1 I will examine what possible problems my approach to this topic had and how those problems could be solved. Section 4.2 will concentrate on the best possible practices for game developers to follow when creating the visual style for their game, and in Section 4.3 I will discuss interesting studies near this topic. In the last chapter, I will summarize the study and my conclusions and explain what research could be done in the future to further this topic.

1.1 Why this topic

Figure 1: Mass Effect 2 - screenshot from my own playthrough

Figure 2: Civilization 5 - screenshot from mine and a friends multiplayer game

As someone who has been into the creative arts since childhood, I often have strong opinions on art styles in games and other media. I will not, for example, read a manga, watch an animation or play a game with a visual style that I dislike in one way or another. *Spongebob* is one series I could never get into, as I find its art style off-putting, even disgusting at times. Because of my strong bias, I wanted to research whether or not similar biases exist in others in the gaming community. I have also had a habit of writing creative stories since youth and I have always had a preference for narrative-driven games as opposed to multiplayer or simple first-person shooter games. Games such as the *Mass Effect* series (see Figure 1) and *Detroit: Become Human* have drawn me in with their rich story and beautiful aesthetics and belong to some of my favorite games story wise, while games like *Sid Meiers' Civilization 5* (see Figure 2), while I highly enjoy playing them, do not resonate with me as much, and do not inspire me to play them alone.

To quote James Portnow in his video series *Extra Credits* on YouTube about game design "...better games are made by better understanding the medium we make them in,..." (Portnow 2011b). The central reason for my interest in studying the link between the art style and narrative in video games is this: I feel the more I can personally understand how the style in a game affects how the player views the story, the better games I, and other game developers, can create in the future. While this reason is in part a selfish one, I am not alone in believing that creating frameworks and standards within the video gaming industry can help create better games. As Doran from Geometri states

in his interview with Will Freeman at MCV, standardisation can be a scary word in the gaming industry, as there is fear that things such as standards can stifle creativity. He also states, however, that the right standards can help those building the hardware work towards a fixed target and advance the field easier (Freeman 2015). I very much agree and believe this can also apply to artists who work on video games as well. A common framework can help artists choose and understand the possible distinctions of different styles and give them a good guide on how to create the most appropriate style for their game.

When it comes to the narrative in video games, I have always been drawn towards dramatic stories in fantasy worlds where I can dictate the way the story flows. The story is also an extremely important part of any game, no matter how little story it has, as the narrative and overall story of the world cannot only create structure for the gameplay and enhance the experience, it can impart sense into the game graphics as well (Arsenault & Larochelle 2015). The narrative of the game world can affect how the gameplay should play out, and things, such as the time period in game, will greatly affect both the graphics, symbolism and the art styles that should be used in that game.

Figure 3: Darkest Dungeon - Screenshot from the beginning of the game

Figure 4: Doki Doki Literature Club – website banner image

I believe the narrative is equally important as a game's art style. When done right, when the symbolism, effects and style used suit the narrative, the game's world will feel more realistic and more alive, regardless of how abstract or photorealistic the art style is. My favorite example of this is absolutely *The Darkest Dungeon* (see Figure 3), a dungeon crawling game with horror-like elements. The game itself is painfully difficult at times and extremely punishing, and the dark, gritty art style and story

both reflect that perfectly, creating a wonderfully anxiety-inducing atmosphere. A game which did not succeed in this, in my opinion, was a visual novel by the name of *Doki Doki Literature Club* (see Figure 4). The art of the game itself is very bright, colorful and childlike, very much similar to what you often see in Japanese romance-visual novels geared towards a younger female audience, but the twist of the story vastly contradicts the high-spirited, youthful style. I know some like the twist of this game, as they could not see it coming, but personally I found it extremely jarring and out of place, and took out any joy I had in the story of the game.

I feel strongly that the field of computer science and video game research needs more emphasis on the artistic side of things. Humanist fields have always been important in creating understanding and finding reason in both human history and culture and especially in human behavior (Stanford University n.d.), and I hope to be able to contribute something meaningful to the video game industry by studying games from a more humanist standpoint. I also want to be able to combine my passions for both the arts as well as video games and help those in the video game industry create games that resonate with people even more through story and art than before.

1.2 Previous research

Not a lot of research has been done on the more artistic side of video games in general, but I find it rather alarming that there is barely any research regarding how an art style can affect the narrative within *any* medium, let alone in video games. I found some articles and books about the art of video games, but none of these touched on how the art style of a game can affect the story. While I researched mainly free sources from places like google scholar, the IEEE database and my local libraries for example, even those kinds of research papers were scarce. I was able to find studies that somewhat resembled my topic however, and while they are not exactly on my own topic, they are close enough that the conclusions drawn in those research papers and articles can be used to support my thesis and my arguments as well. Before examining the research closest to my thesis, however, I find it is important to examine the different ways video game art styles have been categorized in the past, to gain a better understanding of both the kind of vocabulary I will be using, and the reasoning behind the kinds of styles I used in my research project. Categorization is also important for many other reasons, as

it helps future game creators and researchers to understand the topic better and to comprehend how people view different art styles. Categorization and analysis of these categories is also important, because it can help us understand what kinds of styles persist and how they change over time (Järvinen 2002).

The most common taxonomy I came upon was the division of art styles into three categories: abstract, stylized and realistic (Keo 2017), or as Järvinen calls them: photorealism, caricaturism and abstractionism (Järvinen 2002). I personally prefer the former way of naming the categories, as caricaturism reminds me very much of the kinds of over-the-top portraits you can see artists create on the streets of New York (see Figure 5). I also feel stylized describes the styles underneath it better than caricaturism, as it feels to encompass more than simply faces unlike caricaturism. Another category we can add to this is: text (Keating et al. 2017), but as this paper concentrates on the visuals I will not be discussing this category. I will add one more category to this set of three however, and that will be the stylized realism category. This style is a mix between realism and stylized (Anhut 2016), where the proportions and anatomy are not quite realistic, but more realistic than

Figure 5: A caricature drawing of Hugh Laurie by Tom Richmond

Figure 6: Steven Universe – example of stylism

something like what we see, for example, in *Steven Universe* (see Figure 6). The reason I want to add this fourth category here is that stylized is too broad as a category and needs more specification (Keating et al. 2017), and I feel the addition of stylized realism

allows the stylized category to be split evenly in the middle. Keating, in his study of how players viewed visual styles, notes that visual styles are very complex and some are hard to categorize. He states that both abstract and stylized are far too broad as categories and need more specification. These specific taxonomies also fail to account for mood and things like color and lighting styles (Donovan & Hall 2018). I believe adding stylized realism to the list of categories helps, to a certain extent, in giving those categorizing different styles an easier way to categorize stylistic styles. Stylized realism is also used more often than actual realism, as it is easier to achieve. Photorealism especially is extremely difficult and tricky to attain, as even a single little detail, such as a light being reflected the wrong way, can completely break the immersion and ruin the illusion of photorealism for the player (Keo 2017). This is another reason for me adding stylized realism to the categories.

Those who categorized the different styles provided in Keating's study said the taxonomy lacked terms for things such as cute, colorful or bright styles, in response to which Keating proposed categorizing styles according to five different aspects:
- visual looks or appearances
- visual mood
- visual representation of gameplay mechanics
- visual techniques
- visual motifs

Visual looks are quite self explanatory, but they refer to the way items or characters look on screen, while the visual mood can easily be described by words such as cute or dark. The visual representation of gameplay mechanics explains things such as the camera model used and how the controlled characters or items move on screen, for example, a top down, grid-based movement system. Visual techniques, on the other hand, mean whether the style is hand drawn or digitally drawn, and visual motifs include things such as blood and gore and other such effects and details.

Figure 7: Detroit: Become Human - Connor RK800 model on the rooftop in the "Hostage Situation" introduction chapter.

I think this way of describing different visual styles is quite adequate, as it encompasses most of the important aspects. Obviously, abstract, realistic, stylized and stylized realism do not reflect all of these five aspects, but I believe they can work harmoniously together if they are included in the visual looks or appearances aspect. For example, if we were to categorize the game *Detroit: Become Human* (see Figure 7), according to these categories, I would assign it to realism as its visual look, cyberpunk as its mood, third person free-camera as its gameplay mechanic, digital as its technique and futuristic lighting and details as its motifs. You can see the character, Connor, on screen, one of the three main characters the player is able to control, looks very human-like and quite realistic as well. I would classify it as cyberpunk because of the use of neon-lighting in the buildings, as well as the lighting effects the game uses. The game employs a third-person camera that the player can control quite freely to look around on most occasions and its style is clearly created digitally. The motifs are evident from futuristic lighting, just as the cyberpunk-like theme.

On the other hand, if we take a game such as *Dead in Vinland*, the classification would be completely different. Firstly, I would categorize it as stylized realism, because while the proportions of the faces are mostly realistic, it takes some small liberties with other aspects of the characters, for example, the cel-shaded style as is evident from how the characters look (see Figure 8). For the mood, I would describe it to be mysterious,

Figure 8: Dead in Vinland - a stormy day in my playthrough

maybe a little dark as well considering the direction the story takes once you progress further in the game. During certain weathers, like during a storm or rain, the colors are more muted and suited to a darker themed game as well. The representation could be classified as side-scrolling and even grid-based because of the combat, and while the techniques used to draw the art are clearly digital, the slight sketchiness of the characters compels me to put it in a hybrid "digital hand drawn" category. There is not much blood or gore in the game, or any other specific motifs I would give it, although I would say the game is overall very Norse inspired, which can be clearly seen from the symbolism in the game, the Norse runes littered all over the interactable items and environments in the game, as well as the actual narrative itself. While these examples are of course simply that, I think it illustrates how useful this taxonomy could be.
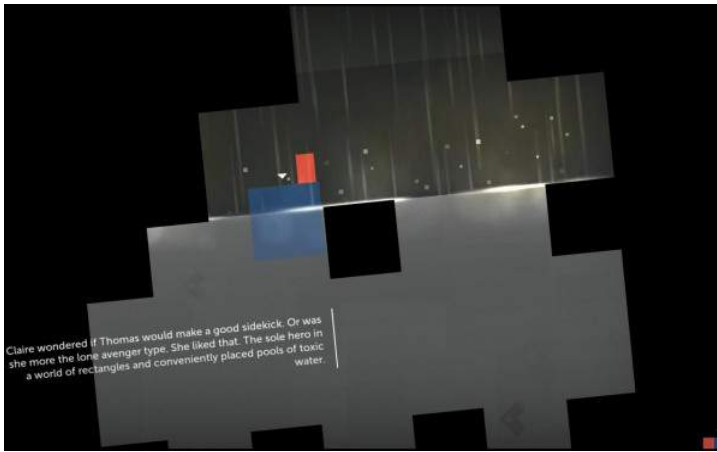
Figure 9: Thomas Was Alone - example of an abstract style

But what exactly are abstract, stylized, stylized realism and realism? According to (Keo 2017) abstract-styled games are games such as *Tetris* and *Pong*. I would include *Thomas Was Alone* (see Figure 9) in that category, seeing as all its characters are different geometric shapes. This style is not often used anymore in computer games, because not only has technology improved vastly since the beginnings of video games, but it is also far easier to market story and characters (Keo 2017) than it is gameplay or mechanics. The abstract style does not allow for much complexity in terms of character appearances as seen in *Thomas Was Alone*. While *Thomas Was Alone* has a standout story as well as wonderful gameplay, it is not quite as visually striking as a game with a realistic style, like *Mass Effect 2*.

Figure 10: A game of Overwatch on Temple of Anubis - an example of stylized realism

Stylized, on the other hand, is often seen as a style that is somewhat realistic, but the proportions of the characters are not quite life like, and often features are more abstract and more exaggerated. A good example of a stylized game is the *Darkest Dungeon*. A

stylized realism game would be the same in all aspects, except the characters look a little more realistic. For example, *Overwatch* is a good example of stylized realism, as the characters are mostly anatomically correct, with only slight exaggerations in their features (see Figure 10). Often the stylized category is used to create some kind of emphasis on a certain atmosphere. As stylized games are not realistic, they often do not need to follow rules so closely as realistic games, and thus have more freedom and are more flexible and expressive. Certain things can be emphasized easier in stylized games, and often stylized games can be more timeless, because as graphics improve, games look more and more photorealistic. For example, were we to compare how realistic *Heavy Rain* by Quantic Dream is in comparison to the same company's newest PlayStation 4 title *Detroit: Become Human*, we would see a vast improvement in both how realistic the characters look, and in overall graphical quality. The character in Detroit: Become Human, Connor (shown on the left in Figure 11), clearly looks more human (despite being a model RK800 Android), from his expression, the way his skin reflects light and the textures of his hair and face. Each detail on Connor's face is masterfully rendered, from the slight stubble to the pores of his skin and the little moles and freckles, while the face of Norman Jayden from *Heavy Rain* (shown on the right in Figure 11) looks more airbrushed and yet more uneven due to the way the shadows interact with the characters face. It is obvious in this case that *Heavy Rain* is older than *Detroit: Become Human*, while it is not as easy to tell such differences when it comes to stylized games, especially if they are in 2D instead of 3D. Often a stylized look can also be less demanding technically than something like photorealism (Keo 2017).

Figure 11: Detroit Become Human 2018 (left), Heavy Rain 2010 (right)
comparison of graphic quality

Realism as a style is quite self-explanatory. In realism, the idea is to resemble real life as closely as possible, from facial features of the characters, to movement and speech patterns. Realism itself can be divided into two categories according to Keo: televisualism and illusion. Televisualism includes games such as the *FIFA* series (see Figure 12) while illusion games include things such as *Witcher 3: Wild Hunt* (see Figure 13), where the style of the characters is realistic, but the world itself is full of fantasy and non-realistic content like fantastical beasts and creatures. Because of the nature of my study, I will not focus on the slight differences between televisualism and illusion, instead I will keep my categorization simple and only use the four visual appearance categories: abstract, stylized, stylized realism and realism.

Figure 12: FIFA 2018 - example of televisualism

Figure 13: Witcher 3 - a friend's screenshot - an example of illusionism

The reason I am describing these taxonomies is that I will use these ways of categorization to classify the different art styles I used in my research project that I will discuss more in Chapter 3. I will be using Keating's five aspects of visual styles to describe each of the styles I created for my project, and the four visual appearance categories will be the abstract, stylized, stylized realism and realism.

Besides research on the different kinds of categorization methods for video game art styles, here is some other interesting research that relates to this topic. One such topic is the idea that clothes can affect how we think (Adam 2012). A study by Adam et. al., found that wearing a labcoat that was said to belong to a doctor increased the test subject's focus, but decreased their lateral problem solving skills. While this is not directly applicable to art style, I believe it brings up an interesting point of whether the clothes we dress our video game characters in affect how the players view both them and the story. The same can be asked about whether players play differently depending on the kind of clothes they are able to give their player character, for example, will

dressing the character in very heavy armor make it more likely for the player to play them as a "tank" character, regardless of what the character's stats actually are (Portnow 2016). While not directly applicable to my topic of study, I find it interesting to examine whether the same clothes depicted in different art styles could change how people view the characters. While I did not study this possibility in my research project, I believe it is an interesting angle to consider and take into account. There has also been research done on how graphics and the audiovisual appearance of games can affect them. I will discuss those in more depth in Chapter 2.

1.3 Impact on the real world

The first thing a player (with no visual impairments) usually sees or finds out about a video game is how it looks, and according to game publishers, the game's graphics are the most important feature of a game when it comes to marketing the game (Keo 2017). I believe that creating unique and eyecatching graphics and art styles for games can help publishers sell more games, and not only that, but I believe they can sell better games as well. People tend to gravitate towards eyecatching and impressive games according to Keo, and in my personal experience I find that statement to be true. I was originally drawn to *Overwatch* not, because it is an FPS, but because of its unique and interesting art direction. In fact, the fact *Overwatch* was a multiplayer FPS was originally a deterrent, but the art style and interesting, yet unfortunately lacking, story drew me in. The fact that it is technically advanced and mostly well execcuted in that regard has of course helped keep me interested in the game, but I mostly still play it for the occational bits of story and art we are granted by the development team. I believe a good and cohesive story and art style can help draw in people from all kinds of backgrounds and make games more immersive, fun and engaging. The better the art and story correspond, the easier it is, at least for me personally, to remember the story and its lessons.

Other than my own personal experiences, people across the internet have stated that visually unique and interesting games have left more lasting impressions than those with only technical prowess (Users 2011). Although the gamespot forum discussion "art style vs technical graphics" is from almost seven years ago, I believe the thoughts expressed in it are still valid to this day. One user said that with good art direction, games can look better than they actually are and it can even hide possible technical

shortcomings. Multiple users noted that both are equally important as technical ability allows, for example, the game to represent the art better. While this discussion is about which is more important, graphical quality or art style, I believe it is a valid example of my topics possible impacts on the real world. With the combination of good quality art and story direction, good technical graphics and gameplay, game developers will be able to create more meaningful, interesting and fun gaming experiences for the players. If we are able to improve the cohesion of the art direction and story in games, it could greatly help future game developers create interesting games for their target audiences.

2. Background of aesthetics in games

Video games in general are a highly visually dominated culture (Wilhelmsson et al. 2015), and vision is the human race's most dominating trait, as around 70% of the information we receive is received through our sight (Masuch & Röber 2005). It is important to remember this while designing games. But what are aesthetics exactly? In short, aesthetics are features in a game that are able to elicit a desirable emotional response in players (Hunicke et al. 2004). Aesthetics encompasses everything from art style to symbolism used to visual clues like written language (Wilhelmsson et al. 2015), the user interface, animations and more. Aesthetics should not be confused with things like mechanics, which can be described as the different technical components of the game such as algorithms, or dynamics which descibes the run-time behaviors of the game's mechanics (Hunicke et al. 2004). Hunicke et al. describes multiple different kinds of aesthetics, and explains that these distinctions can help describe why certain kinds of games might appeal to different players, or the same players at different times. These kinds of aesthetics are: sensation, fantasy, narrative, challenge, fellowship, discovery, expression and submission. As this definition of aesthetics is quite vast and does not include only art style, we will discuss aesthetics only in connection to the art styles and graphical qualities it encompasses.

What about graphics then? How do graphics differ from art styles? Graphics are the mechanical aspects of how the game looks. They are the technical rendering techniques developers use to show objects and images to the player in a certain way (Portnow 2011c), but they are also more than that: graphics are a system based on a certain set of rules that affects how the player interacts with the game; they are not only visuals (Arsenault & Larochelle 2015). Things such as rasterization, lighting, shadow work, shading styles, level of detail and so on are part of the overall graphics of the game. Graphics, however, are not the same as art style or aesthetics. While graphics can certainly

Figure 14: Player Unknown's Battlegrounds

influence style, it is important to remember that they are separate from each other. It's also important to remember that good graphics do not always mean the gaming experience will be good (Masuch & Röber 2005). Even if game mechanics and dynamics work well, the underlying art style can be bland. Take *Player Unknown's Battlegrounds*, or *PUBG* (see Figure 14) for example. The graphics are not bad, the environments are semi-realistic and quite detailed with the highest graphics, but the color scheme and art style of the game brings absolutely nothing to the game and lacks personality. Now compare *PUBG* to its better-doing competitor *Fortnite* (see Figure 15): the art style of *Fortnite* is whimsical, colorful and very stylized. In comparison, *Fortnite* looks easily more appealing than *PUBG* simply based on its visuals, even though the two games gameplay is very similar. The bright colors and fun atmosphere *Fortnite* promotes through its art style beats *PUBG*'s dull, lifeless look by far. Even the character animations in *Fortnite* are more interesting and fun than *PUBG*, that tries so hard to go for a darker, gritty and realistic look in a game that is supposed to be basically a fun adventure. So in short, both games have good graphics and are basically of the same genre, but their art styles and thus, their moods, are completely different.

Figure 15: Fortnite

How do you create good aesthetics for games then? What kinds of things do you need to consider when creating your game's aesthetic looks? How much do graphics and art style overlap and how can game designers make their style as cohesive as possible? I will discuss this further next.

2.1 Creating good visual aesthetics for games

Figure 16: Persona 5 - example of good visual aesthetics

The better the visual aesthetics and story are in a game, the more I findmyself enjoying the game. Despite the extremely frustrating difficulty of *the Darkest Dungeon*, I still find myself enjoying the narrative and story, because its aesthetic is amazing. So what is it that makes a good visual aesthetic in games? Consistency is the first thing that comes to mind. Let us examine *Persona 5*'s visual aesthetics for example. The dark yet whimsical feeling is evident in the design of *Persona 5*'s menus and characters. Each character has a unique appearance with their own quirks and stylistic choices, and the menus are not only dark and edgy, but the font choices reflect the quirkiness of the games characters by being a little uneven in their spacing and formatting. While the 2D and 3D styles used in the game sometimes clash, especially during the animated sequences, the rest of the UI and art is so well designed it hardly matters. The style fits amazingly well with the game's narrative as well, as the game takes on a much darker tone than its predecessors and discusses serious themes like bullying, sexual assault and abuse of power. The game did not do anything groundbreaking when it came to its graphics, however. *Persona 5* did not invent anything new in regards to style and font, it simply used in ways that made it seem new and exciting. And part of graphic design and art design is about making ideas we are already familiar with seem new, and also to adapt to changes happening in the world as both the artist and the audiences change. In Netflix's series *Abstract: The Art of Design,* it is also said that it is important to be in a state of play to design (Dadich 2017). But what kinds of things does good visual

aesthetic design need to take into account?

What people classify as satistying aesthetic depends a lot on their culture and what expectations that culture assigns to media (Arsenault 2013). The culture we are born into and the culture or cultures we experience affect every aspect of our daily lives from the way behave to the jokes we enjoy. For example, in many of the more rural areas of the United States, like the smaller cities of Colorado, it is perfectly normal to greet a neighbor or even a stranger passing by, while in Finland, or in a place like New York City, the same action would be frowned upon. Culture affects art as well. We can compare how people view classical paintings from both Eastern and Western cultures, for example, and find out that in general, Western audiences tend to rate Western art slightly higher than Eastern art and vice versa (Yan Bao et al. 2016). The same applies to video game art, but there are still some general rules we can draw upon when creating visual aesthetic rules for games.

Most importantly, it is important to remember that every design within the game must take into account human behavior (Dadich 2017). You must remember simple practical things such as how a design might work within an environment, its purpose and how it is used in game and by whom, and what its other details such as animation speed, complexity and amount of detail are (Seegmiller 2001). These factors play into how the player interacts with the object or character, as these clues give the player context into the purpose of this object and it of course lets the players know how they are able to interact with it. It is always good to keep in mind how the design looks outside of the game's context completely. A well designed character will be easily recognizable simply by its silhouette. When creating art for any game, the designer must keep in mind that technological, budgetary or time-related issues can always arise, and designs might always have to be changed, so keeping an open mind and being able to adapt is important when designing aesthetics for games as well (Pletcher 2001).

So what is important when designing characters specifically? As mentioned before, having a recognizable silhouette can help identify the character. When a character is easily identifiable by simple things, like color palettes and silhouettes, they are usually more pleasing aesthetically. For

Figure 17: Tracer (left), Zarya (right) - example of good character design in regards to silhouettes

example, look at the two characters silhouette's from *Overwatch* in Figure 17 for example: they are all easily identifiable by simply their colors and silhouettes alone. You can tell which character is Tracer, and which is not, and their form gives a good idea of what kind of character they could be. Tracer is small and lithe, with a slick design that is cohesive with her speedy nature in the game, while Zarya is bulky and muscular and you can easily tell she is meant for something that requires a sturdier build than Tracer. The silhouette especially gives the player a first impression of who the character is and what they do by using stereotypes: small build means a faster, speedier character, while a bulky build means the character is tankier.

While creating character designs, using stereotypes wisely can help create the right kind of first impression as they are easy to understand and remember (Isbister 2004). Apart from stereotypes, there are multiple different things that should be considered while creating the character, like their physiology, whether they are humanoid or beastly or something completely different and what environment that character belongs to (Seegmiller 2001). To create a believable character, especially if the character is not humanoid in its features, the artist must study the subjects their character is inspired by, for example, if their character is a beastly, lion-like creature, they should study the looks and mannerisms of a lion to gain an insight into how they move and behave (Snyder 2001). Other things that should be payed attention to that show the audience who the character is are their facial structure, their diet, their methods of travel, their history and how that defines them (e.g., if they have religious connections), the technological advancement of their world, accessories and personal belongings, their pose and what the audience expects out of them (Seegmiller 2001).

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When it comes to visuals other than characters and specific objects, it is important that they are used smartly. For example, visual effects like lighting and highlighting certain items through color should be used sparingly, and only when the specific object they light up or highlight is in someway relevant to the story or topic within the game (Bomberguy 2017). Even typography, or the choices of font styles can be extremely important for visual aesthetic design. Take the capital of the letter E. Imagine its middle bar is shorter than its ends and closer to the top of the E than the bottom: the font looks like it was drawn in the 1930s, meaning it looks perhaps older. A bold font might alert the player to something immediate (Dadich 2017). The typeface can tell you what kind of text is in question simply by how it looks. *Persona 5*'s font choices, for example, are chaotic, which fits in perfectly with the chaotic nature of the game's narrative. Color design is also important. Finding the perfect color scheme to convey the moods and atmospheres a designer wants their game to exhibit is very important (Masuch & Röber 2005). For example, if you wish your game to convey misery, blue colors are naturally thought of as sadder than warmer colors like red and orange, hence the saying "to feel blue" which means to feel sad.

Figure 18: Ryuji Sakamoto from Persona 5 - example of good aesthetic design

The narrative of the game also affects the aesthetics. Not only does it somewhat dictate what the overall aesthetic should feel like, but it is also an important part of the aesthetic itself. The way a character speaks is a part of that character's aesthetic. Their intonations, their use of slang and lingo, their accent and the way they phrase their lines of dialogue are all part of that character's personality and all create a distinct feeling in that character, a distinct aesthetic (Portnow 2013), and can show in a multitude of ways visually and audio wise. Creating dialogue for a character that fits the character's visual aesthetic is important, to make the character seem more realistic. For example, take Ryuji Sakamoto from *Persona 5* (see Figure 18). His entire aesthetic speaks "bad boy", from his cheeky haircut and dyed hair (seen in Japan as controversial and stereotypically dyed hair is attributed to delinquents), to his purposefully disheveled looking outfit and his somewhat aggressive and defiant pose: he does not stand up

straight, but instead decides to stand with his back hunched, and arm up in a position that resembles the "come here" movement, and his other hand is in his pocket, as though he were hiding something. The way he speaks, using words like "man" at the ends of his sentences and shouting lines such as "I'm all fired up!" and "Whip 'em, Persona!" during combat, all point towards someone who is stereotypically thought of as a rule-breaker or a bit of a punk. He even has an ability called "Punk Talk", which further colors the way the player sees him as a character.

Even things like how a character's skills show up at the beginning of the game can speak volumes about that character and their backstory. Imagine a scenario where a game uses "in medias res", where the narrative starts, not from act 1 which is the introduction to the story and the world, but in act 2, where the action starts (Portnow 2011a). If you are given zero background for your character, who has amnesia, or for the story, it can be hard to get a grasp of how your character interacts with others, or what is the smartest way to interact within your world. Context clues such as what kinds of skills your character has at the beginning of the game, can give the players hints as to who the character was before they became amnesiacs, and can thus contribute to that character's central aesthetic.

All the separate elements of the visual style and story together form the aesthetic of the game. Each isolated element, their isolated meaning creates associated meanings with other the elements, and together they all create the dynamic meaning of the game, which changes the gaming experience (Portnow 2017). This dynamic meaning, the entirety of the aesthetic create a feeling in the game that the player experiences. Even the user interface or UI contributes to this overall aesthetic. For example, take *Dead Space.* Its simplistic UI is extremely telling, and fits the game's futuristic theme extremely well, creating a seamless UI that blends into its world (Warbot 2017).

2.2 Art style's emotional impact

As mentioned briefly in Section 2.1, the use of mindful and well-used, not over-exaggerated stereotypes can help to create a first impression on the player. This first impression is crucial in forming an emotional connection to the characters presented in a game. All the visual clues and context help with creating the first impression the player gets, and each contributes to how the player feels about that specific character (Isbister 2004). It will of course be easier to relate emotionally to a character that feels realistic in terms of their character traits, how they act and talk, and what the player's personal experiences are when it comes to characters similar to the one in question. But can the art style itself, the way the character's faces and features are drawn, the thickness of the lines and the hues and values of the colors used create an emotional impact?

Games are able to open up new aesthetic experiences as opposed to other types of media due to their interactive nature. They can transform the computer screen into a broadly accessible realm of both experimentation and innovation (Jenkins 2000). We know things like pose, accessories, clothing and stereotypes help to create emotions within a character. We know it is important for character's looks to be understandable for there to be that emotional connection as well (Seegmiller 2001), but we do not yet know much about how the art style itself can create emotions, and what kind of styles create what emotions. There is not really any research on that particular topic, but what can we learn about emotional attachments to different kinds of styles from other research out there?

There has been some research done on custom avatars and how they affect the narrative in the player's eyes. One study examined the amount of engagement experienced when the player character's avatar was a custom avatar, created by the player themselves compared to when it was a generic avatar, created by the research team. In this scenario the players found it easier to engage in the game when they were able to create a custom avatar, and it made the gameplay feel more immersive and engaging (Ng & Lindgren 2013). This makes perfect sense to me: as someone who often longs to escape reality, I enjoy games best when I am allowed to create my own custom player character, with custom looks, background and skills. It makes it easier for me to identify with my character's plight and allows me to engage myself easier in roleplay. As Ng and

Lindgren note, the custom avatar makes it more likely that the player will project themselves into the game and that the player will also adopt the physical perspective of their avatar, or what the avatar sees before them in the game world. At least in my case, I find this to be true. For the same reason I personally find it easier to play as a female character (or nonbinary if the option exists), then as a male character: I am able to identify with a female character easier than a male character, being a woman myself. Take for instance *Mass Effect*'s choice of male or female characters, from which the default female and male avatar's can be seen in illustration 19. I always play as a female Shepard, or FemShep, because I find it so hard to play effectively as the male option, and FemShep has better romance options for me.

Figure 19: Default Male Shepard (left) vs default Female Shepard (right) from Mass Effect

Hamilton (2010) has tested how the subjects view the people behind different looking avatars; whether they seemed honest, reliable, intelligent or competent socially. This study is not exactly relevant, since its focus is on how the subjects view human beings based on avatars, but I found it interesting that the more realistic avatars were deemed to be more trustworthy than less realistic ones, and that men preferred more masculine and women more feminine avatars and rated them higher on all fronts. Both extremes, androgynous and extremely masculine and feminine avatars, however, were rated less favorably, so there was a clear trend with both of the tested genders (Hamilton 2010). These findings are quite fashinating, despite not being quite relevant enough for my thesis to further analyze them.

2.3 Art style's effect on the story

Now, it is quite apparent that certain aspects of aesthetics can easily affect the player's emotions. We know that games can spark children's imaginations by taking them on quests to fantastic new worlds (Jenkins 2000). We know clothing choices can change how people in real life think (Adam 2012), but is it possible for the art style to directly affect how players view the game's narrative?

Artworks can tell amazing stories to their viewers, and while static artworks differ greatly from the dynamic form of video games, they are, in their own way, artworks themselves. Vayanou (2017) examines how to make exploring museums more exciting and immersive for the viewers, by creating an outline for a game that had one participant creating a story based on a piece of art and the rest of the participants attempting to guess which piece of art the story creator was referring to. The study found that engagement was higher when these stories were created, and aroused a sense of familiarity and increased interest in both the artworks and the artist behind them (Vayanou 2017). This study shows that the story related to an artwork can enhance the experience of that artwork. I believe it can work similarly the other way around that the art can greatly enhance how players view the game's narrative. As this has not been studied yet, it is obviously a mere conjecture on my part, and should be treated as such. I still recommend Vayanou's study, as apart from highlighting the importance of introducing new, more interactive ways to experience art, it also shows how games (like the one they created for their study) can create shared experiences between the participants. This is something games in general attempt to do, for example, through multiplayer and co-op game modes.

I find that a lot of video games employ much of the same design principles as classical artists do, things like perspective, form, value and different shapes to emphasize certain meanings. Different shapes have different meanings and the three most often singled out are circle, square and triangle. The circle, or a curved line is often attributed to mean innocense, youth, energy and femininity, the square or a straight up or horizontal line means maturity, stability, balance and stubbornness and the triangle or an angular line is attributed to aggression, masculinity and force (Solarski 2013). In paintings and art,

these shapes are static, but in video games, these shapes must be used within a changing 3D or 2D environment by combining them into different kinds of dynamic compositions. The dynamic compositions can be said to be made out of character shapes and animations, environment shapes and the pathways that can be taken in those environments. Different shapes used in these dynamic compositions create meaning within the game. Take a character made with mostly curved and rounded lines. This character can be thought of as quite a feminine and soft character, because of the use of circles and curved lines. Now take an environment that is mostly rocky and made out of rough angular edges. This environment can be seen as cruel and hostile. Placing this rounded character within this harsh environment can create the impression to the player that the character is potentially in danger in this environment. The environment and the character are not in harmony, but in dissonance with each other (see Figure 20). Vice versa, if we take an angular character and place it in an environment with mostly rounded edges, that character can seem like a threat to that environment. These kinds of shapes and meanings can be used to create a visual narrative in the game and first impressions of the game world for the player (Solarski 2013) .
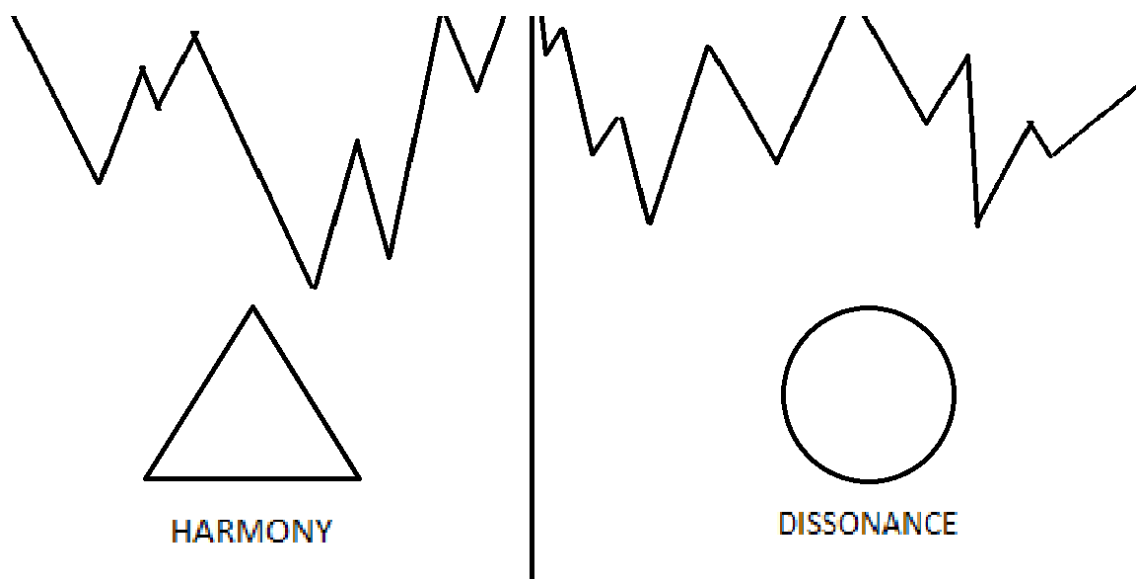

Figure 20: Example of harmony versus dissonance

Just as games can use shapes to guide the player's perception of narrative, so too can they use perspective. But how exactly does perception play into art style? Any good artist can use perspective in a way that draws attention to specific elements and creates a different impression on the player (Arsenault & Larochelle 2013). This principle can be applied to more than just perspective of course, but even perspective can change how

the art style looks. Even simply looking at a face from different angles can reveal how much perspective changes the way the face appears to be. From certain angles, a human's face can appear rounder and softer, while from others, it can appear more angular and thus more aggressive or masculine. Choosing what perspective to use in the art style can change how it appears to the player. Now it is important to remember that in the way I use the terms, perspective is not quite the same as the camera angle used in game. The perspective can affect multiple aspects of the art, while the camera angle simply shows from what general angle the game is presented. Different perspectives show the differences between distances differently, while the camera angle shows you whether the objects in view are viewed from the front, back and so on.

Can these principles be applied to the art style chosen in a game? I believe so. The more angular the art style in a game seems to be, the darker and more horror-like it seems, while the rounder the style is, the more innocent and happier it appears. My hypothesis in this work is that this can affect how the story appears to the players as well. We will examine further whether we can say the art style can affect the game's narrative in Chapter 3.

3. Empirical study set-up

My study examines whether or not a certain art style can affect how the player perceives the story. The study was conducted in three parts, with two of those parts being surveys and the last one being an interview based on a visual novel. The first survey attempted to establish if people believe the art style to affect the narrative, while the second survey attempted to establish if specific styles affected how people view that story. The first survey employed the use of simple questions to ask people how they felt in general about the topic of art and video game narrative. The second survey used images to showcase different styles and asked the participants to assign genres to them based on what genre they believed to fit that specific art style the best. The final part of the survey was conducted with a small group of people, who played through a short visual novel of my own making. The participants in this final part of the study were divided into four groups and each group played through the same narrative, but with a different art style. After each participant had played through the game, an interview was conducted. Based on the results of all three parts of my study, I will attempt to answer the question of whether or not the art style of a video game can affect the narrative, and create a simple framework on how to create the most fitting art style for a game's narrative.

 I will not discuss the tools used for this survey in detail, as they are not important regarding the aims of this study. It is said it is best to not let the tools dominate the message (Dadich 2017). Instead, I will discuss the setup of the study in Section 3.1 in more detail, and finally, I will discuss the results of all three studies in Section 3.2. Further analysis of the results of my study will be conducted in Section 3.3.

In this section, I will briefly explain the setup for each survey and I will discuss the creation and thought process behind them and the interview. I will explain the setup for both of the survey's in Section 3.1. and Section 3.1. and the setup for the visual novel and the interview that followed it in Section 3.1..

3.1 The surveys

The setup for the survey's is quite straightforward. Both surveys were created using Google Surveys, and both were shared on various poll-sharing websites, such as PoolPoll and SurveyTandem. They were both also shared to various Discord servers I frequent, such as my Dungeons and Dragons group, Ignis's Discord. Other servers I shared both surveys on include the LGBT Overwatch Discord server and the Riders of Icarus guild server Fury. I also shared both of them on my Twitter and publically on my Facebook and also Tumblr, as well as on the subReddit SampleSize.

The first survey was based on questions I personally had, and questions I gathered from friends and my thesis supervisor about the subject. Multiple questions were also inspired by different articles that I had read up to that point, as well as opinions I had found online, such as through the Gamespot Forum post that discussed art style versus technical graphics. After jotting down my initial question ideas, I went over them with friends and my supervisor, took their advice and added whatever questions they deemed could be of use to my survey, and created the first outline on Google Surveys. Once that survey had been checked and approved by my supervisor, I published it on the different sites I mentioned in the previous paragraph, and used the poll sharing sites to get more replies. All in all, the first survey gathered over 150 replies during the course of the slightly over three weeks it was open.

The first survey included, in total, 28 different questions regarding video games, art and their correlation in general, as well as some basic demographic questions, such as age, gender-identity and region. These demographic questions were included to see whether one's gender, age group or region affected the way the participants felt about the topic. The rest of the questions were separated between art related questions and video game related questions. Art related questions were the following:

- Are you interested in art?
- Do you draw / paint or otherwise do art?
- Do you follow any artists online or elsewhere?
- What kind of Art do you like?
- What do you look for in Art?
- Do you buy art books for shows, games, etc?

- Why do you buy art books?

- Do you think the art style can affect the story?

- Why do you think the art style can affect the story? Do you have any examples?

Questions related to video games were the following:

- Do you play video games?

- Do you design, code or in some way create video games?

- Do you follow video game designers / coders etc. online or elsewhere?

- What kind of games do you enjoy in general?

- What do you usually look for in games before buying them?

- What are some of your favorite games?

- Do you usually pay attention to the art style in a game?

- What kind of things do you pay attention to in a game's art?

- Do inconsistencies in the art of a game bother you?

- Do inconsistencies in the game's user interface bother you?

- Do you sometimes play a game simply for the art style?

- Do you sometimes pass on a game simply for the art style?

- What are some of your favorite games visually?

- Has a game ever had an art style that affected you emotionally in some way?

- Why did that art style affect you and how?

The results for each of these questions will be discussed in Section 4.2. Each question was chosen to establish as broad an understanding of the participant's mindset regarding the topic, by examining every little detail they brought to the table. Some of these questions will be analyzed more than others. For example, the demographic questions will be discussed only in relation of whether or not they affected the results in any way, and questions regarding favorite art styles, favorite games, and favorite games visually will be compared to the answers given, to see if their favorite games and art styles affect what games they see as visually pleasing. Questions such as whether the participant is an artist, follows artists, gamer, follows people in the gaming industry or are game creators themselves will be used to determine if these factors affect how these participants answered questions and in how much depth. I also want to see whether participation in either form of art affects how the particular participant sees the correlation between art and video game narrative.

My second survey was created similarly to the first one, but this time the questions were

inspired by the answers I received in the first survey. The second survey was published, once all four art styles needed for the visual novels had been completed, as a screenshot of each different art style had to be used in the survey. The screenshots used were comprised of the same background in each, and an image of each of the characters in the four styles created. All four art styles can be seen below in Figure 21.

Figure 21: Upper left: general, upper right: animu, lower left: cartoon, lower right: Edgy

The different art styles were named as they were, based on my personal view of these styles. As the general style is very much inspired by my own, normal art style, as well as semi-realistic artists I follow, I called it "general" since many games now tend to go for a more realistic look. The "animu" art style is inspired by many different Anime's and Japanese romance visual novels that are geared towards a female audience. The name "animu" itself is a play on the word "anime" as Anime itself is not really an art style, it simply means that an animation originates from Japan. The cartoon style's name was chosen, because it was inspired by a lot of children's cartoons, such as *Steven Universe*. The edgy style was named thus because it has the sharpest lineart out of all the styles and has the darkest, edgiest feel to it. I will explain my thought process behind the art styles a little further in Section 3.2.

In survey 2, the participants were first asked to assign each art style a category they felt would suit it the best. The different genre categories available for the participants were

- Tragedy

- Comedy
- Fantasy
- Adventure
- Mystery
- Horror
- Drama
- Romance
- Science Fiction
- Childrens

These categories were chosen using the list of writing genre's provided by Wikipedia[1]. Most of the major classic genres were used, and some larger ones, such as horror and romance were chosen from the other major book genres list. They were chosen based on what I perceive to be the most common genres seen in stories, and so that none of them overlapped with each other too much, for example, tragic comedy was excluded since it overlaps with both comedy and tragedy. Instead, participants had to further explain why they chose the specific genre or genres they did. Participants were also asked to specify the possible target audience for each four styles and were given the option to explain why that specific target audience is the right one in their opinion.

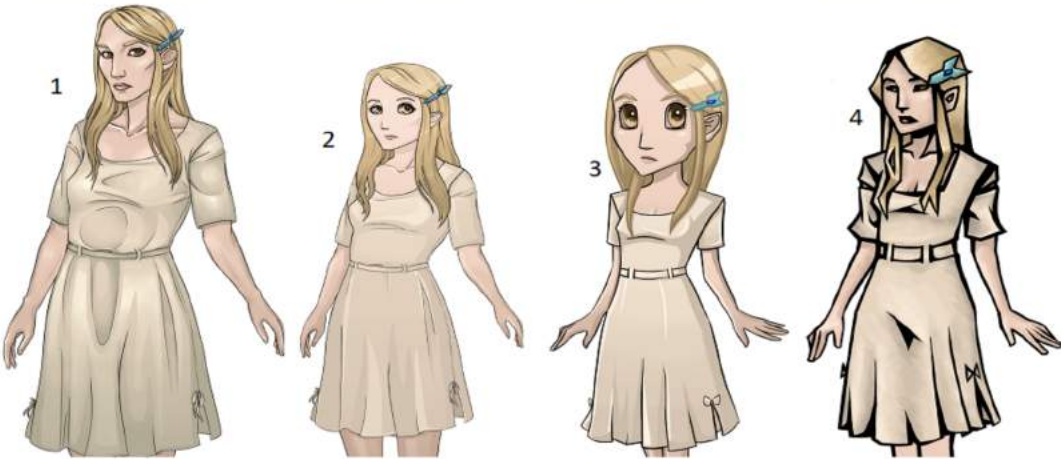1 https://en.wikipedia.org/wiki/List_of_writing_genres

Figure 22: All four main characters. From top down: Mera, Shale, Anu and Tima.

In the second part of the second survey, each participant had to read a short summary of the plot synopsis. This synopsis was written in four different ways, the first a general summary I would give to my story, the second with a strong emphasis on the romantic aspect of the story, the third was written using very youthful, childlike words such as "wacky", and the last one emphasized the horror aspect of the story. Each participant was asked to further explain their choices in their own words.

The third part of the second survey had the participants view each of the different characters in all four different styles. A short description of each character's personality was given before the images, which can be seen on page 31 in Figure 22. The participants were asked to choose which art style suited the character best based on the description they were given, and why. The fourth and final part of the second survey had each participant choose their favorite, or preferred art style and explain why they chose that particular style. An option to leave other comments was included at the very end of the survey.

The results of these surveys will be examined in part using the Grounded Theory, meaning that as not much previous research has gone into this field, I will be forming my theory based on the results of these surveys and interviews. A part of the Grounded Theory, it is important to ask questions that avoid any potential preconceptions the researcher has, and thus, in preparation for these surveys, despite my own personal beliefs on this matter, I attempted to create the surveys without any of my own bias showing through. For this reason, I asked opinions from friends and attempted to ask questions that did not hint one way or another in any way. I also limited how much research I did into the subject before writing these questions, although I did read some shorter articles. I do not believe they influenced the questions much, however, they simply gave new ideas about what I could ask. The same applies to the second survey. While at this point I had read some articles already, I had written the questions before reading any of them, however, and they were created based on the answers I had received for the first survey. I attempted to avoid any bias in regards to responses as well, by posting the surveys on survey sharing sites and a dissertation survey Facebook group. These groups and sites have users from all kinds of fields and all walks of life, and while some of the personal servers I posted the survey links on are gaming related, I do not believe that affected the results much, as the majority of responses came from

outside of those groups and nearly everyone who answered the surveys played video games regardless of where their response originated from.

Regarding the responses I got, I have read through each and every one of them. I read each individual response for each question without looking at the other responses the participant left, to avoid becoming biased that way. After reading the responses that way, I began analyzing the individual participant's responses further. This way I hoped to avoid being biased by whether or not the participant is a female, male or non-binary, and so on, as every human has some biases based on their experiences in life depending on people's gender-identity, age and country or region of origin.

3.2 Visual Novel

The idea for the visual novel was born out of both my inability to program a proper game, as well as the visual nature of these kinds of games. While their interactivity is quite limited, their main focus is on the visual and the narrative side of games, which suited my study's purposes perfectly. As visual novels are a very visual medium, images such as backgrounds, text boxes and character art had to be created, but before that, there had to be a story. As my project is not so much reliant on the interactive nature of the game, but the narrative and art styles used, I used a ready-made story that I had written during the National Novel Writing Month November, or NaNoWriMo in 2014. This story, with characters, world and mythos of my own creation, was rewritten to better fit into a visual novel format. While I created the visual novel's script with interactivity in mind, I did not create any branching paths for the visual novel, meaning every choice the player makes in this visual novel has the same outcome, with only a small difference of a few lines of dialogue. The aim of this visual novel is to examine how the art style affected the choices the participants decided to make, and how that art style changed the kinds of emotions the participants felt while playing the game.

Creating the visual novel itself, the story, was simple, thanks to the fact I already had a story written that was of my own making and was easy enough to translate into a visual novel that could ellicit multiple different kinds of emotions in people. My story is a short introduction into the life of Mera, a 23-year-old young woman who is unhappy with her life and has been deeply depressed since her childhood best friend disappeared.

In this story, Mera is just returning from a visit to a neighboring town when she begins to feel as though someone is following her. She soon finds out the reason why, when her childhood friend reappears and she finds out about a society of people with strange powers; powers she also appears to possess. The story itself is nothing new, similar stories have been done often in the world of young adult fiction, but it was a story I personally connected with, as it deals heavily with themes such as depression and sexual orientation, both things I personally have struggled with a lot in my life.

While it is not ideal for a visual novel format to have a story ready before everything else, especially a story that is meant to be a linear experience, I felt it was better to have a story that I personally felt connected to, as it is easier for me to write it believably than a story I was forced to come up with that suited the visual novel format better. Not only would it have taken me a lot more time, I do not believe the narrative would have been as good. The positive aspect of using this story as the basis for my visual novel, is that the characters I had to draw for my story already had personalities and looks established in my novels script.

The process of drawing the art for the visual novel was a lengthy process. The different styles had to first be decided upon, which took some fiddling around. I looked through different genres of games on Steam, through Google and through friends to find what kinds of styles existed and where. I also examined things such as anime, manga, cartoons and comic books to find a wide range of styles. Eventually, once I had figured out which four styles I wanted to go for, I had to figure out each character's facial expressions, poses and clothing options that needed to be shown in the art. The different styles, General, Animu, Cartoon and Edgy, can be seen in Section 3.1. It did not take too long to figure out what types of clothing and expressions were needed once the script was done, but as I had drawn some of the styles before creating the final script, I had plenty of expressions left over, and there were some that I was lacking that I had to create afterwards. I had thankfully created each possible expression for the brows, eyes and mouth separately, which made creating new expressions easy, by mixing and matching the different layers together. All of the different poses and clothing options were also drawn on separate layers, so the missing expressions for each option were easy to create within a few minutes.
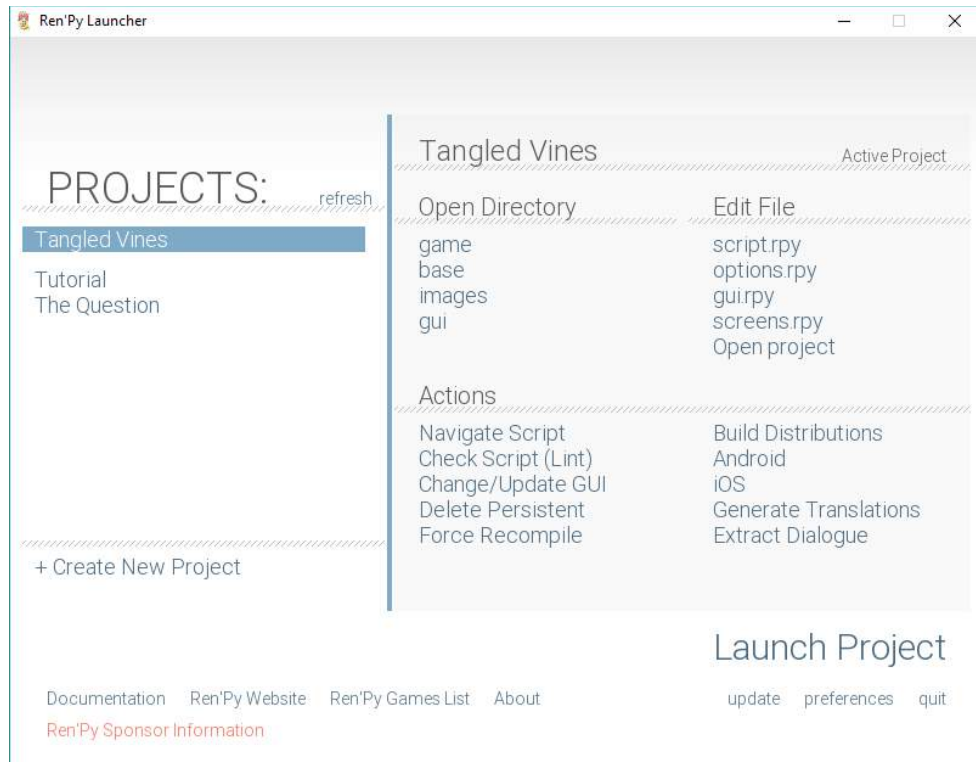
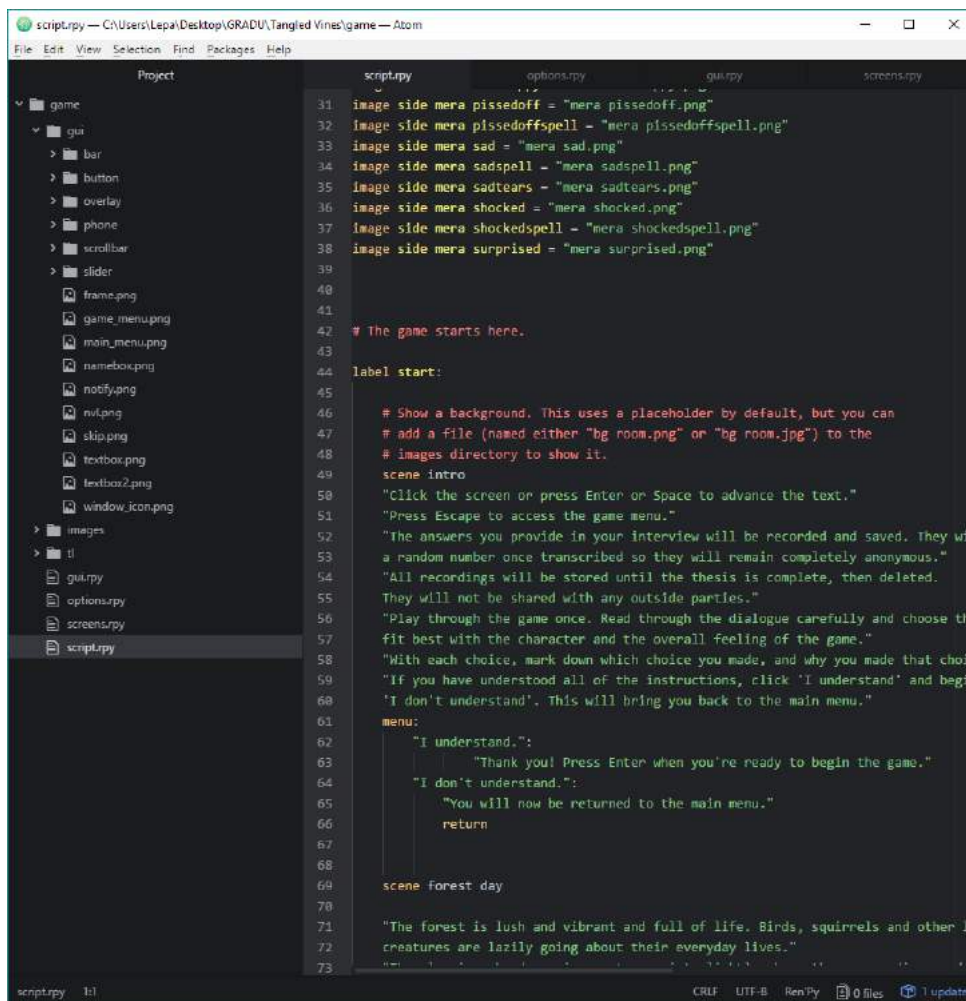*Figure 23: Ren'Py Launched project view*

Figure 24: Ren'Py Script view - the beginning of my visual novel's script

Once the art and narrative for the visual novel was done, it was time to put them together into a visual novel format. For this, I used a program called Ren'Py (see Figure 23), which is a free software specifically made for creating simple visual novel type games. The program has its own script, which is similar to that of Python, and was extremely easy to use. There was not much coding that had to be done to create the visual novel, the lines of dialogue and images simply had to be added into a text file in a specific way, which barely took any time at all. For an example on what the script looks like, see Figure 24. I made sure to check whether or not everything was working as intended after I finished scripting each scene. I also played through the game once it was all done multiple times to ensure each dialogue option was coherent, the choices made sense and that all the images were correct and nothing was missing. Creating this visual novel was the special project that accompanies my master's thesis. For more informatio about the creation and the thought process behind this project, see the documentation of my master's project, which can be found in Appendix A

Once each of the four different art styles had been exported as working games, it was time to begin the interviews. The participants for all of these interviews were chosen from both my friends who had agreed to participate, as well as a few people who volunteered through the first survey. The interviews were conducted through Discord and Skype, mostly through the use of voice chat, although some had to be interviewed via text. The interviews done via voice were all recorded and later transcribed. Those interviews that were conducted through voice chat were recorded with the knowledge and permission of the participants, and those who were interviewed through text had their answers copied and pasted into a text file with their knowledge and permission. These interviews will be showcased in Section 4.2, and further analyzed in Section 4.3.

The questions that were asked in the interviews were the following:
- What did you think of the story in general?
- What genre would you categorize the story as?
- What did you think of the art in general?
- What genre did you expect the game to be when you saw the art?
- Do you think the art and the story fit together? Why or why not?
- What emotions did you feel while playing the game?
- What were the character's two defining traits in your opinion?

- What choices did you make and why?
- How did the ending make you feel?
- Which of the following styles fits the game best after playing it through?

The last question was presented with images of each character in each different style. The images that were shown to each participant can be seen in Figure 22 (page 31). The questions were not always asked in the same order, and some participants were asked follow-up questions depending on their answers. I will discuss the follow up questions the participants were asked in Section 4.3, but they were mostly related to things such as their reactions to the different choices they made during the game or specific emotions they felt during the gameplay. Often they were also simply questions attempting to gather more imformation from the participants who answered the questions too briefly.

All in all, 11 people participated in the interviews. All of these people were chosen from among those who responded to the first survey as interested future participants. Many of these participants were personal friends of mine, as a large amount of those who first volunteered later either never responded or did not have the time to take part, which is of course understandable. All participants responses have been recorded anonymously, and were analyzed a few months after the initial interview, so even I do not know who is who. The only personal details recorded from each participant was their age group and their gender identity, for the sake of examining whether these factors had an affect. Considering how small the test group is however, there is no point in analyzing any correlations between these details and the responses. Two people played through the visual novel with the animu style, three people played through the cartoon style, three the general and three the edgy styles. My original goal was to get at least 5 people to play through each, but as explained before, many cancelled last minute or never responded in the first place.

Each participant was given an ID with a number and the identifying letter for the style they played through. The Animu style's letter is A, cartoon's is C, Edgy's is E and General's is G. Originally each ID also included a "y" or an "n" to denote whether or not the participant believed that the art style could affect the narrative, but as I was unable to get anyone who did *not* believe the art style could affect the narrative in the end, that letter was scrapped from the final ID.

4. Results and analysis

In this Section, I will present the results from the different surveys and the visual novel interviews in short. I will further analyze all of the data in Section 4.3, while here I will concentrate on showcasing the raw data gathered from the study. I will be discussing results in Section 4.3 by comparing how different demographics answered the different questions, and how different answers correlate with each other. An example of this is a comparison of how many people, who said "yes" to the question "Do you sometimes pass on playing a game simply because of its art style?" answered "yes" to the question "Do you sometimes play a game simpy beccause of its art style?". Most of the information presented in this Section will be in graph or chart format, while others, such as longer paragraph answers, will be summarized and the most common results will be presented in short. The questions with short answers that can be shown in graph form will be described first, while the questions that require longer explanations will be explained last. First I will describe the results from the two surveys in Section 4.1 and Section 4.2 and then I will finally present the summary for each of the 11 interviews I conducted based on the visual novel in Section 4.3.
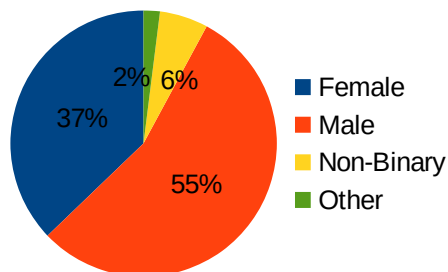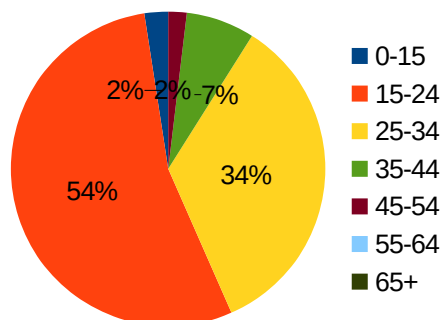

Figure 25: Survey 1: Gender distribution

4.1 Survey results – 1st survey

The results of the first survey gave me a good idea of the kind of demographic I was working with. It was clear from the general questions such as age and whether or not the subject played video games that a big majority of the participants are young
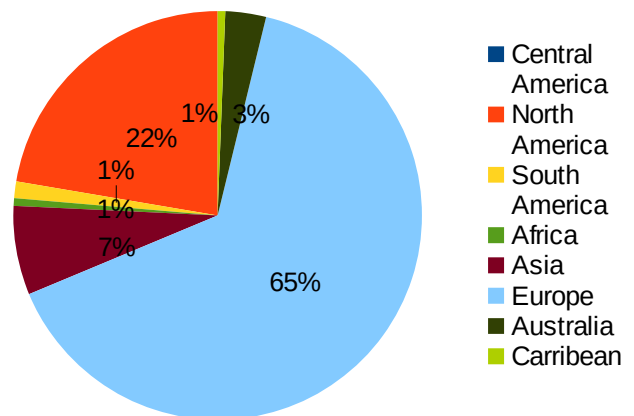

Figure 26: Survey 1: Age distribution

Figure 27: Survey 1: Region distribution

adults who play games often. A little over 50% of the participants also identified as male, and over 60% of the participants were from somewhere around Europe. Figures 25, 26 and 27 illustrate the distribution of all the different ages, gender identities and regions. While men were certainly the majority of participants, there is a good amount of women who answered the survey as well. The somewhat large number of people who identified as non-binary or agender is due to the survey being shared on an LGBT+ gaming group that has a lot of non-binary people in it. The region being mostly full of Europeans could have something to do with the time of day I posted my surveys, as I posted them in the evening my time, when most Europeans are still up. The age distribution could have something to do with the fact that a large amount of people who play games and answer surveys on survey sharing sites are college or university aged. I of course cannot confirm this, but I find this to be the likely reason for this divide.

In the art Section, I asked the participants to answer whether or not they are interested in art. They answered on a scale of 1 to 5, with 1 meaning not at all and 5 meaning a lot.
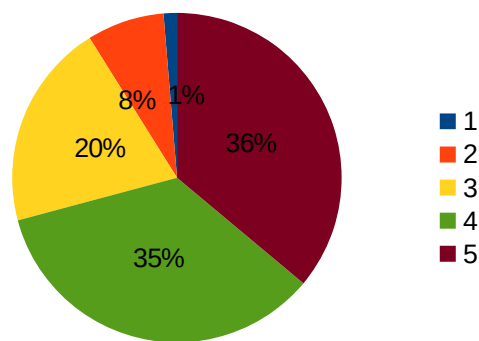

Figure 28: Survey 1: Are you into art? (1 - not at all, 5 - very much)

As can be seen in Figure 28, most of those who answered are moderately to very interested in art (4 and 5), while very few were not interested in art at all, in fact, less than 2 percent of the over 150 participants expressed no interest in art at all. This question was asked to establish how much the participant's responses depended on their interest in the subject. The question of whether or not people followed artists was asked to establish how actively interested the participants were (see Figure 29). It was found to have very little correlation with other responses however, but it presents an interesting statistic to me as an artist myself.
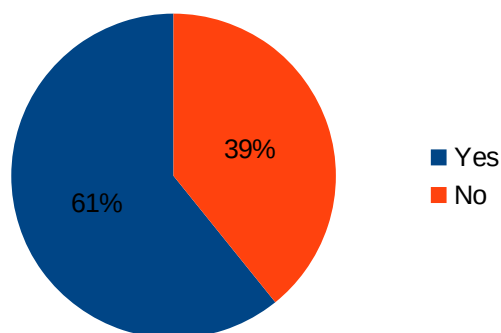

Figure 29: Survey 1: Do you follow artists online?

One of the most interesting statistics that presented itself in my thesis was how many people actively participated in some form of arts and crafts (see Figure 30). I admit to being surprised that over 50 percent of the participants practice art in one way or another. I was expecting a smaller number. Regardless, there seems to be some correlation between whether or not the participant was an artist and whether they thought there was some kind of connection between an art style and the narrative of a video game. I will explore these connections further in Section 4.3.
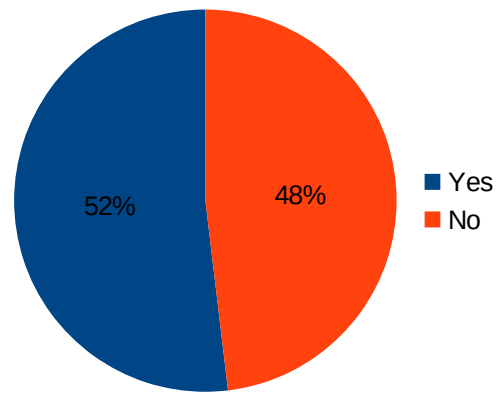

Figure 30: Survey 1: Do you draw, paint or do some kinds of crafts?

I was interested in knowing whether or not people bought art books and whether or not that had any effect on how people viewed
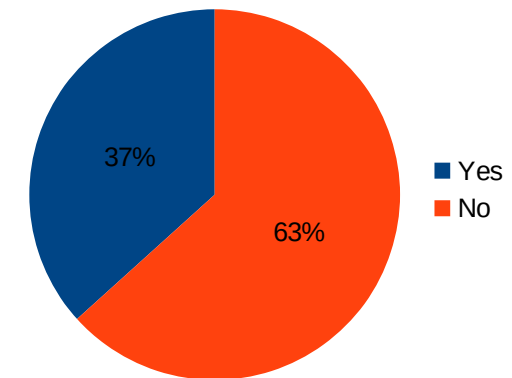
Figure 31: Survey 1: Do you buy art books?

the connection between art and story (see Figure 31). While it appears that men were more likely to not buy art books, there does not appear to be other correlations between whether people bought artbooks and how they viewed the topic so it will not be discussed further in the results analysis Section 4.3.
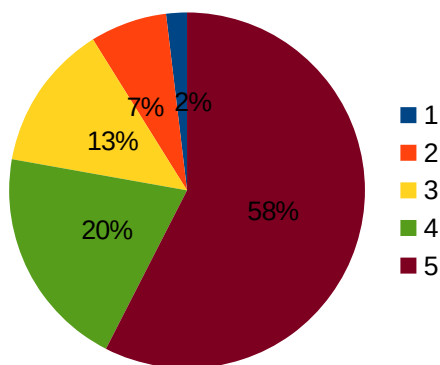
Figure 32: Survey 1: Do you play games? (1 - not at all, 5 - a lot)

When it came to video games, most of the participants played games a lot (see Figure 32). Nearly 60 percent of the participants expressed playing games very much, while only around two percent said they did not play games at all. The percentage of people who often play video games is very high, which can be attributed to the majority demographic being young adults and the survey beign shared on multiple gaming

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servers. The result is unsurprising considering the topic of the survey, and although I placed no restrictions on participating in this survey, it is possible those who play little to no video games or do little to no art were scared away by the topic. If someone does not play games or do art at all, it is normal to be wary of answering questions relating to either, as that participant would have no reference point to draw from. What did surprise me, however, is how many of the participants were involved in creating either video games or non-video games. While the amount of participants that were not involved in any game design processes was 66 percent, the 34 percent remaining is quite a large margin of people (see Figure 33).
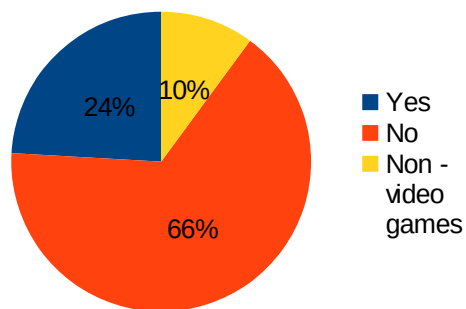

Figure 33: Survey 1: Do you create games in some way?
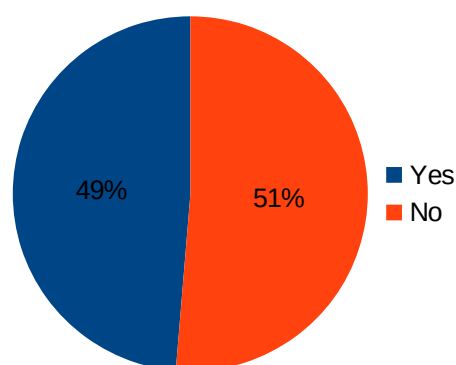
Figure 34: Do you follow Video Game designers, coders, etc online?
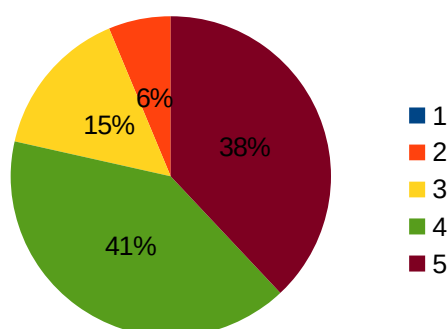
Figure 35: Survey 1: Do you pay attention to the art in a video game? (1 - not at all, 5 - very much)

I was interested in seeing how many people follow video game designers, coders and so on online, for the same reasons I wanted to know how many follow artists online: whether this statistic had any effect on how people viewed the connection between art and story (see Figure 34). Like with the artbook question, there does not appear to be a connection between this question and any of the other questions either.

One of the most important questions I asked in my first survey was how much attention people paid attention to the art style in the games they played. A surprising amount of people appear to pay attention to the art quite a lot (see Figure 35). Not a single person answered that they paid absolutely no attention to the art in games. There were interesting correlations between how much people paid attention to the art in a video game and the next two questions the participants were asked: whether or not inconsistencies in either the art style or the user

interface bother them (see Figures 36 and 37). Most of the participants were bothered at least to some extent by inconsistencies, which is understandable especially if the inconsistencies are extremely noticable. I did not specify the extent of the inconsistencies, which is something I should have done, but I will discuss possible future changes and improvements to the study more in Chapter 4. The most interesting correlations between all of the responses were between these two questions and all the others, and all of those correlations will be discussed in Section 4.3 in depth.
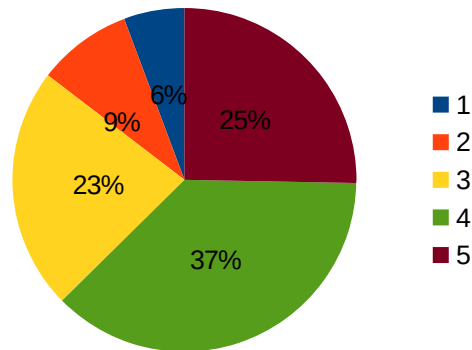
Figure 36: Survey 1: Do inconsistensies in the art bother you? (1 - not at all, 5 - very much)
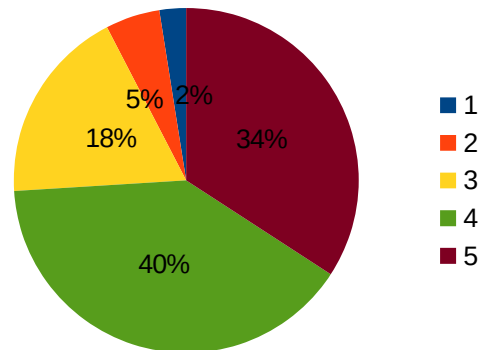
Figure 37: Survey 1: Do inconsistencies in the user interface bother you? (1 - not at all, 5 - very much)
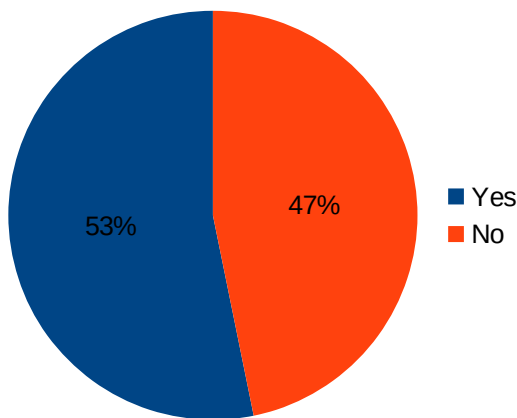
Figure 38: Survey 1: Do you ever play a game simply for its art style?
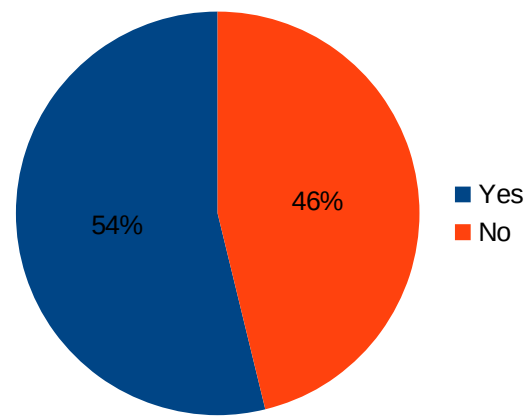
Figure 39: Survey 1: Do you ever pass a game simpy because of its art style?

Some of the last questions were whether the participants ever played a game simply because of its art style (see Figure 38), or whether they passed on a game simply because of its art style (see Figure 39). Slightly over 50 percent answered yes to both questions, a surprisingly large margin, but one I can absolutely understand as someone who also either plays or passes on games depending on the art styles.
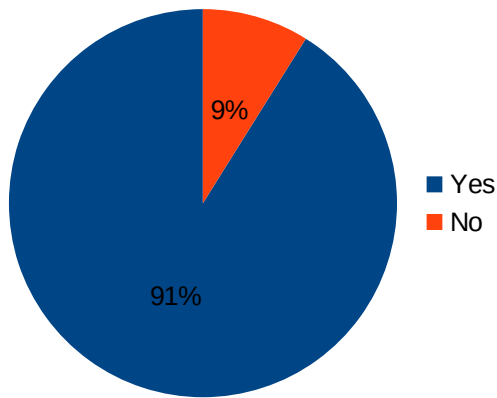
Figure 40: Survey 1: Do you believe art style can affect the game's story?
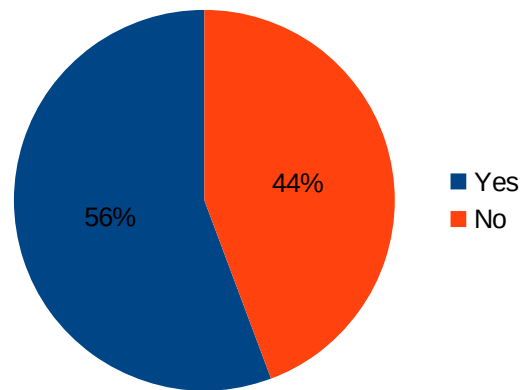
Figure 41: Survey 1: Has a video game's art style ever affected you emotionally?

Finally, the survey attempted to establish whether or not the participants felt that the art style of a game could affect the narrative (see Figure 40), and whether any game's art style had ever affected any of the participants emotionally in some way (see Figure 41). 91 percent believed that the art style can definitely affect the narrative, while 56 percent had been emotionally affected by an art style in a game. I was expecting more of a correlation between these numbers, but I will discuss that further in Section 4.3 when I begin to analyze the results.

The questions I have not yet discussed are the answers that are slightly less easy to analyze and visualize as data. These questions included the following:

- What kind of art do you like?

- What do you look for in art?

- Why do you buy artbooks?

- Why do you think the art style can affect the story? Do you have any examples?

- What kind of games do you enjoy in general?

- What do you usually look for in games before buying them?

- What are some of your favorite games?

- What kind of things do you pay attention to in a game's art?

- What are some of your favorite games visually?

- Why did that art style affect you and how?

As the participants were allowed to answer these questions with as little or as much detail as they wished, some answers are quite lengthy and others short. I will analyze some individual responses from the anonymous participants in Chapter 4, but here I will simply provide the most common cases for each question as I have already stated before. Beginning with "What kind of art do you like?", the objective of this question was to establish whether or not the participants had a preference of a certain stylistic choice over another, and in the description of said question, I provided examples such as abstract, traditional or hand drawn, realism, expressionism, impressionism and more. Most people had a preference of some kind and the largest majority by far liked realism. Other popular forms were abstract, hand drawn and painterly art and even sketches. Those without a preference usually listed features that they enjoy in art, things such as how detailed the piece is, its contrast levels, unique styles, clean lines and so on. Many of the responses included multiple preferences as well while some simply stated they enjoyed art that seemed to have some kind of emotion in it.

This brings us to the next question the participants were asked to answer to in paragraph form: "What do you look for in art?" Emotion, story and meaning were clearly the most dominant answers, although a lot of people also replied that they simply looked for art of their favorite characters or series, or pleasant usages of color. Many also had trouble describing exactly what they were looking for, and what kinds of art styles manage to ellicit preferable responses in them. This is understandable, as describing different art styles has proven difficult in the past, as is apparent from the different studies conducted by Keating et al. (2017), Järvinen (2002), Donovan & Hall (2018) and Keo (2017).

Regarding the question of whether people buy artbooks: most of the participants said they bought artbooks to gain references, inspiration or learn more about different kinds of art styles or the processes behind the styles, others simply enjoyed looking at good art or collecting things from their favorite series.

Those that answered yes to whether or not the art style chosen for a game can affect the narrative were asked to elaborate on it. The short answer is that most people feel the art is able to enrich the story by creating a certain kind of feeling or atmosphere. The art

can make the story seem more vivid and realistic and can even improve interest in the story. There were many, truly insightful responses to this question that I will go over in detail in the result analysis Section of this chapter.

The question "What kind of games do you enjoy in general?" allowed the participants to choose multiple answers from a list or add one of their own. There were three responses that surpassed 100 votes each and thus taking the majority, which were role playing games like *Dungeons and Dragons*, adventure games such as the *Zelda* series and story-oriented games such as visual novel games. This was not a surprising result considering the subject of my survey of course. Other popular options were social games, meaning any games where the player plays with others in a multiplayer environment, action games such as the *Assassin's Creed* series and strategy games like *Civilization V.*

"What do you usually look for in games before buying them?" was a similar question to "what kind of games do you enjoy in general?" as they both had the same method of answering. The top answer by far was story, meaning a majority of the participants expect a great, coherent and interesting storyline out of their games. Self-expression was also high on the list, which indicates that people are interested in being able to both roleplay and customize their experience through cosmetic choices such as clothes and character looks. This corresponds to the findings of the study about how having a custom avatar in a game affects how people remember, see and experience a narrative (Ng & Lindgren 2013).

A lot of different games were listed under the question "What are some of your favorite games?", which makes sense considering the relevant variety of the participants. The most common examples included games like the *Mass Effect* series and *Witcher 3: Wild Hunt*, for example, but overall the list of people's favorite games was all over the map. When it came to people's favorite games visually, however, there were some very clear winners over others. *Bioshock*, *Borderlands*, *Okami* and the *Zelda* series were all extremely popular choices alongside *Persona 5*, *Final Fantasy* games and Blizzard games. The common uniting features many of the participants mentioned for why these specific games were their favorites visually were things such as the atmosphere, the

uniqueness, shading style, contrast, detail and story links, consistency, different environments and the timeless style in these games.

When asked "What kind of things do you pay attention to in a game's art?", the majority of participants paid attention to things like the color scheme, consistency and how well the style fits with the game's theme. Realism was also a high priority for some, while others preferred uniqueness. Some people said the art style must fit with the story theme as well, which has been established in other responses as well. The most in-depth question that was asked of the participants was why a particular art style affected them and how. As with the question "Why do you think the art style can affect the story? Do you have any examples?", the participants mostly answered that the art style elicited certain emotions in them, and for many, it was the environments more than the character art that affected their emotions. This was certainly a surprise to me, as I personally find more depth and emotion in character art than environmental art, but seeing as many also cited that nostalgia was definitely a factor, it makes more sense, as different environments could remind them of their childhood home for example.

4.2 Survey results – 2nd survey

Figure 42: General style

The second survey consisted of questions paired with images that the participants were asked to categorize. The first style the participants were asked to categorize was the

regular style which can be seen in Figure 42. The vast majority of responses categorized this style as mystery with 34 votes out of 71. Both adventure and fantasy were close seconds at 11 votes each. Drama received 7 votes, while all the other categories received anywhere from two to zero votes. The majority of the participants also categorized the target audience to be women, though the age group the participants marked this style down as was all over the place, although young adult and teen were the most popular categories, but only by a margin. Why the participants chose these particular categorizations is less easy to pinpoint. Many pointed to the fact the characters are female and look like they are adults, others pointed towards the fact that the game simply looks girly.

Figure 43: Animu style

The second style to be categoried was the Animu style which can be seen in Figure 43. The results were far more mixed than with the first style, with fantasy taking only a slight lead with 17 over romance at 14. Mystery was the only other style to reach more than 10 votes at 11, while all other styles had less than 10. The target age group was far more clear this time around however, and most of the participants categorized this style to definitely be for a younger female audience. The reasons behind these categorizations were mostly because of the cutesy, girly style.

Figure 44: Cartoon style

The third style, the cartoon style visible in Figure 44, was the easiest for the participants to categorize by far. The style is quite childlike, which is why both the genre and the target audience were marked as being for children and pre-teens. The reasons for this ranged from things such as the large eyes and because it looks cutesy and childish, which came as no surprise, considering the way the participants categorized the style.

Figure 45: Edgy style

The last style to be caregorized was the edgy style seen above in Figure 45, which had three major categories the participants gave it: Adventure and horror with 17 votes and mystery with 15 votes. The fitting age category was given to be for people over the age of 15 and for people of any gender. This is the only style where the participants classified the fitting group to be for any gender, while all the others were categorized to be more for females, or feminine presenting folk. The thicker lines and comic book style designs, as well as the more edgy and dramatic look of this style is what brought the participants to this conclusion.

The next questions the participants were given had them read a short description of a story and then choose which of the four art styles above fit that story the most. Below you can find the different descriptions given in the survey numbered from one to four in the order they appeared in the survey.

- 1. "A small town girl, runs into her childhood best friend, who disappeared four years ago, and finds out about an underground organization of people with mysterious powers; powers that she appears to have as well. Together they uncover a conspiracy to return the corrupt family of the overthrown King to power, and work with the organization to bring a stop to it."

- 2. "A small town girl runs into her long lost best friend and the two begin to rekindle their friendship while training their magical powers. They soon uncover a conspiracy to return the corrupt family of the overthrown monarch's to power, while realizing there's something more than simply friendship between them."

- 3. "A small town girl runs into her long lost best friend and finds out about a magical world where even the wackiest powers exist. She and her friend work to thwart the plans of the bad guys while rekindling their friendship and training their magical powers."

- 4. "A small town girl finds herself fighting her growing paranoia as she learns about a hidden organization of people with strange powers from her long lost best friend. As she struggles to learn to control her own out-of-control powers with the help of her best friend, they discover a conspiracy to demolish the democracy and return the country under the rule of the corrupt monarchs. Together, they are forced to fight against powers more horrifying than they could have ever imagined."'

Table 1 summarizes the results regarding these different styles and how the participants rated each style. As can be seen from the results, the participants clearly categorized the first description to fit the regular style, as I had intended when I wrote that description. It would be the description I would use, were I to finalize the story and write it in book format. The reasons given for this particular categorization were due to the serious facial expressions that seemed to exhude mystery for some of the participants. One participant even said that the plot seems complex, with multiple layers which is why they felt a more realistic style fit it the best. The animu style was also categorized according to how I expected, as I wrote that particular description to fit the best with the style as well. The reasons the participants gave for this ranged from the fact that the romance aspect of the story was emphasized in the description to the fact that the style is more girly and the description more focused on the magical than the first description. The cartoon style was overwhelmingly chosen for story description three, where I purposefully used youthful language. The participants were aware of this, and multiple participants pointed out the use of words like "wacky". Many also referred to the fact

that the style looks the most youthful because of how simplistic the style looks. The last description, which emphasized the horror aspects of the story was overwhelmingly voted to fit the edgy style, just as I had designed. Some of the reasons given for this included that the story seems darker which fits the darker look of this style and that the style itself seems to carry a horror-like element in it, which is exactly how the style was designed.

Table 1: Result on different text styles

Story description	Regular style (percent)	Animu style (percent)	Cartoon Style (percent)	Edgy Style (percent)
1	39,4	25,4	9,9	25,4
2	22,5	49,3	21,1	7
3	7	19,7	69	4,3
4	26,8	8,5	1,4	63,4

The next set of questions attempted to figure out whether certain personality traits affected which art style the participants thought fit the characters best (see Table 2). The first one on the chopping block was Mera, the main character. She was described as being "...a short-tempered woman who enjoys solitude and quiet. She has a tendency to act before she thinks, but she's generally a kindhearted person." The second character to be introduced was Shale, the childhood best friend, who was described as "... a calm and relatively quiet woman, who likes to keep to herself. She's often stoic and firm, but she has a tendency to be very emotional if caught off guard. " The third character was Anu, the baker and Mera's love interest, who was introduced to be "... an optimistic and talkative woman, with strong opinions and an outgoing personality. She can act quite childish if angered, however." The last one to be shown to the participants was Tima, the main characters elder sister and Mayor of the town they lived in, who was described as "... friendly and authoritative. She is a natural leader and she loves to make others laugh. She can come off as intimidating at times due to her height and commanding nature."

Table 2: Personality traits and art style

Character	General Style (percentage)	Animu Style (percentage)	Cartoon Style (percentage)	Edgy Style (percentage)
Mera	32,4	32,4	9,9	25,4

Shale	36,6	40,8	1,4	21,1
Anu	14,1	46,5	32,4	7
Tima	62	11,3	4,2	22,5

Mera's scores were split between the general and animu styles. Some of the reasons those that voted for the general style gave were that this style made Mera look both kind, yet still tough and as though she had a strong personality. Some also said this style made her look older, which fit the character description. Many of those who voted in favor of the animu style said she looked kind in this particular style, which contributed to them choosing it. One person even said that the animu style made her look the most attractive while another said that Mera looked too much like a man in the general style. The edgy style was not far behind the general and animu styles in second place. The participants that chose the edgy style said this style made Mera look the most short-tempered and even aggressive compared to the others.

Shale's scores were very much in favor of the animu and general styles just like Mera, but for Shale, the animu style wins by a slight margin. Some of the reasons the participants gave for choosing the animu style is that it made Shale look quiet, emotional yet still calm. One participant noted that in the animu style, "[Shale's] eyes look like she could cry at any moment and she looks calm and quiet", which fits her character description of being calm but still emotional. The general style came in at second place not far behind the animu style. The reasons behind participants choosing this style over the animu one were mostly drawn from Shale's more serious personality traits, such as her calm posture and her habit of being quite reserved and stoic. Edgy also gained some votes with reasons such as "[Shale in this style] looks serious" and "She looks like she can be firm" for example, while only one person voted for the cartoon style.

The animu style was a very clear winner when it came to Anu, and she was the only one who had a big amount of votes for the cartoon style as well. The wording used in her description speaks very loudly of her childlike personality, which is clearly represented in the answers received. The reasons for the participants choosing the animu style were mostly that Anu looks the most feminine and a bit childish in this particular style. In the words of one participant: "She looks a bit childish, something between a grown woman

and a young adult. Her posture looks almost like it would be floating off the ground. There is a feeling of carelessness in her." The reasons participants gave for choosing the cartoon style are very similar, but even further emphasize the childish aspect of Anu's personality as a reason for choosing that style. The cartoon like style was also deemed to look the most outgoing. The general and edgy styles got very few votes, though the ones that voted for these two pointed towards Anu's more opinionated personality.

Tima was an easy character for the participants to classify. A majority of 62 percent agreed that the general style is best for her. Most of the participants thought the general style made Tima look the most authoritative partly because of her height and otherwise commanding nature. Some of those who chose the general style for Tima also agreed that the edgy style made her look too unapproachable, and thus did not fit her character description of being more kindhearted side. Those who chose the edgy style based it on how intimidating the character looks. The animu and cartoon styles were not very popular with Tima, although one participant commented that the cartoon style made her look like Michelle Obama, which is why they chose that particular style over the other three.
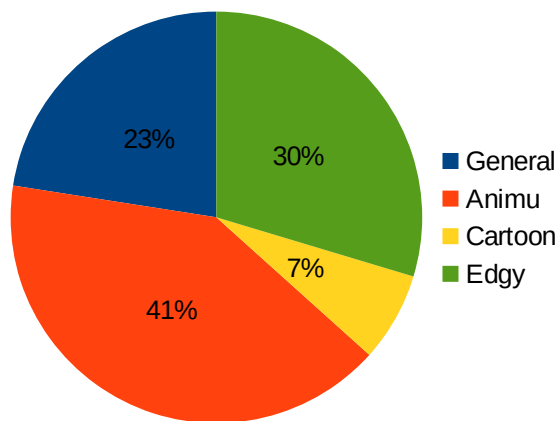
Figure 46: Survey 2: Participant's preferred style

The last question in the second survey asked the participants to choose their personally preferred style (see Figure 46). The animu style was clearly people's favorite with over 40 percent of the vote, while the edgy style came in as a distant second at around 30 percent. The cartoon style as the least favorite of the lot with only seven percent of the vote and the general style came in as third with 23 percent of the vote. The reasons the participants had for their personal preferences were all over the board. Those who chose the animu style as their favorite pointed towards the big eyes and the possibility of very expressive faces that this style could allow these characters, while others enjoyed the soft mix of realism and cartoon styles. Those who preferred the edgy style enjoyed how grim and mature the style looked and some referred to the possible psychological themes a style like this could explore as their

reason for picking it over the other styles. Some also simply liked the strong lines and contrasts as well as how different the style looked compared to the others. The fans of the general style pointed toward the realism as one of the reasons as well as the details present in this style, as it was the most detailed of all four styles. According to one participant, it also seemed like the style that would make them take the game with this style more seriously. The cartoon style, the least popular of the four was chosen as some people's favorite due to how childish it looked. One participant remarked that it looked more childlike and fun to them, while another said it seemed more calming than the other styles.

I asked the participants favorite style to establish whether or not the participants' personal preference affected how they responded. There appears to be no correlation between whether or not someone preferred one style over another and how they categorized the different styles. If there is a correlation, it is a miniscule one and thus not of any major importance regarding my study.

4.3 Visual novel interviews

I was able to get 11 participants for my interviews, which is quite a small number. Two people played through the anime style while the remaining three styles all had three participants. I attempted to divide the 11 willing participants into the different art categories so that each category would have some representation from different gender and age groups. This was partly, because I wanted to see whether someone's gender or age would affect the results, but the results of the interviews turned out to be very inconclusive and thus I did not examine this aspect further. As I analyzed the results from the interviews, I simplified all of the responses and created a table with all of the simplified answers to make it easier to analyze them. As age and gender were not examined, they will not be included in the tables. The first table includes the participants' answers for what they thought of the story in general, what genre they believed the story to be, what they thought of the art in general, what genre they believed the art to be and whether or not they believed the art and story made sense together.

Table 3: Participant opinions on story and art

Participant ID	Story in general	Story genre	Art in general	Art genre	Do art and story fit together?
A1	Intriguing	fantasy	good	mystery	Compliments story
A2	interesting+cliche	adventure	Good, nondescript	action	Fit eventually
C1	interesting	fantasy	cute	fantasy	yes
C2	good	horror	inconsistent	anime	Kind of
C3	Fluid, lacking	fantasy	Created mood	fantasy	Yes
E1	Forced to format	romance	good	action	yes
E2	interesting	adventure	Colorful, pretty	romance	yes
E3	interesting	fantasy	Creepy characters	fantasy	Kind of
G1	Has potential	fantasy	Has depth	children's	yes
G2	Nothing new	fantasy	Has personality	Comic	yes
G3	unfinished	fantasy	Had some errors	fantasy	Kind of

As can be seen from Table 3, many found the story interesting. One participant found the story to be a bit forced into the visual novel format, which is absolutely true, as the original story was not designed with branching storylines in mind. Most designated the story itself to be fantasy, and while the participants mostly saw the art to be fitting of a

fantasy story as well, there was more variation, but not really the kind of variation that indicates any kind of correlation between the art styles and how the participants viewed the narrative. Art in general was viewed differently and most of the responses spoke more about the background art than the character art, which I found interesting. Most of the consensus was that the art was good, despite the occasional perspective errors, but once again there did not seem to be much of a connection between the art style and what the participants thought of it in the end. Most participants agreed that the art style and narrative fit together, although a few responded that a different style would have suited the visual novel style better. Participant G3 for example, believed the Animu style would have suited the narrative better, because they were used to seeing visual novels in a style that is more anime than realistic.

Table 4: character traits assigned by participants

ID	Mera's traits	Anu's Traits	Tima's Traits	Shale's Traits
A1	Optimistic, short tempered	Extroverted, outgoing	Authoritative, bossy	Sensitive, in-control
A2	Stubborn, personable	Humble, sensitive	Ambitious, responsible	Timid, focused
C1	Socially clumsy, spicy	Talkative, short-tempered	Forgiving, helpful	mysterious
C2	Introverted, headstrong	Flirty, attention-seeking	Stern, supportive	Caring, strong
C3	Conflicted, fumbly	Sweet, shallow	Firm, caring	Pretentious, unaffected
E1	Driven, naive	Self-aware, nice	Neat-freak, authoritative	Leader, caring
E2	Distractable, irritable	Annoying, talkative	Dominant, upright	Mysterious, smart
E3	Frustrated, hopeless	Selfish, creepy	Commanding, old-fashioned	Secretive, bossy
G1	Troubled, scorned	Kind, selfish	Workaholic, control-freak	Mysterious, troubled
G2	Word-ready, impulsive	Sweet, independent	Strict, caring	Mysterious, socially awkward
G3	-	-	-	-

I asked each participant to give each of the four characters two character traits that they believed described their personality (see Table 4). One participant left out the descriptions completely and did not respond to further inquiries about them, while everyone else gave at least one trait for each character. The problem with Tima and Shale for most people was that they are not in the story for a long time, so not much is

known about their personality. Most of the participants agreed, however, that Tima seemed to be authoritative, yet supportive, while the general consensus for Shale was that she was mysterious. Many found Anu to be talkative, and just as many saw her as slightly annoying or selfish, while Mera was a bit more of an open book, although traits such as troubled, irritated, impulsive and short-tempered are all somewhat similar traits and could be described as her most dominant trait. In the interviews, I asked the participants what kinds of moods they experienced during their gameplay experience as well, and most experienced at least some kind of curiosity towards the story and there were a few who expressed feelings of joy and a few who experienced irritation, mostly toward Mera. This is completely understandable, as Mera was designed to be irritating at first, to showcase the negative aspects that depression can sometimes bring to a person.

When it came to the different choices the participants made, there was no correlation that I could see between what art style and what responses the participants made. Each participant responded that they chose what they did mostly, because it seemed to be the logical option.

I will analyze further results in Section 4.3, and I will break down some of the longer answers I received during the interviews, but overall, so far the results seem to be very inconclusive.

4.4 Result analysis

As stated in Section 4.2, I will analyze the results and the correlations between different results of both the surveys and the interview in this Section. Beginning with the first survey, the connections I looked into were whether age and gender affected the way the participants answered, how much being an artist affected the results, how much being a gamer affected the results and so on. Whether the participants bought artbooks or followed designers or artists online did not have any detectable effect on how they responded, so those correlations will not be explored. Age did not have much of an effect on the responses either, although there was a slight difference between how much the older participants played games and how much the younger participants played. The younger participants tended to play games more, but only marginally so, so in the end,

the participant's age group had little to no effect on how they viewed the topic at hand, and thus will not be discussed further. Gender identity also seemed to have little to no effect, although those who identified as female tended to be slightly more into art than those who identified as male. The amount of nonbinary participants was too small to draw many conclusions unfortunately, although from those who did respond, nearly all of them were extremely interested in both art and games.

I analyzed whether being an artist affected how the participants answered, and those who were artists seemed to pay slightly more attention to the art style in a game as well as the inconsistencies in the art and the user interface. Unsurprisingly, it also appeared artists had a tendency to be more interested in art in general than non-artists, and artists also seemed to play more games than the non-artists who responded to the survey, although the difference is very small and does not necessarily mean anything. It appears that artists were more likely to be influenced by a games art style emotionally, than non-artists. From the 82 artists, 54 had been affected emotionally by a game's art, while from the 76 non artists, only 34 had been affected emotionally in some way by a game's art style. This means that while around 66 percent of artists had been emotionally affected, only around 45 percent of non-artists had been affected before. That appears to be quite a difference. It cannot be said for certain whether artists are more easily affected by art, but it appears to be perfectly possible that that is the case. This aspect requires further research before any proper conclusions can be drawn regarding this possibility, but is an interesting result nonetheless.

Those participants that paid attention to the inconsistencies in UI and art were sightly more likely to either play a game based on its art style, or pass on a game based on its art. Those who paid attention to both were also very slightly more likely to be affected emotionally, but once again, the correlation is too marginal to take into account.

Looking at the general results of the first survey, it appears clear that a majority of those who answered believe that the visual art in a video game can change how the player views the narrative. A lot of the responses agreed that the art style can create feeling and atmosphere and also reinforce any feelings and emotions that are already present via the narrative. The correct art style can make the story seem more realistic and vivid and can even improve ones interest in the game. One participant, for example, replied to the

question "How does art affect story?", using games from SuperGiant Games and Blind Sky Studios as examples like this:

> *"The story exists through the art. Art is a langage [sic] through which*
you *can tell a story. Therefore, it can be used as an element to give a specific feeling about something ... Only the feelings you get from playing the game are there to tell its story. So the style they use is a very important part of the story telling process. They couldn't have recreated those feelings with any other art style."*
> *(15-24y, nonbinary)*

The response very clearly states that the participant believes a specific art style can create feelings that no other style could. This participant does not simply feel that an art style can enhance the emotions a story illicits in the player, but create them as well, while another participant believes otherwise:

> *"Art can set the tone for a game, but in my opinion it usually does not have a major effect in the story." (15-24y, male)*

This participant, as well as many others, believed that the art style mostly helps emphasize the emotions and feelings that the narrative causes in the players. More participants agreed with the latter quote than the former, that art can enhance the story, so it seems the more general consensus is that the art can help enhance the mood of the narrative through its visuals and stylistic choices.

The second survey presented some interesting results as well. The participants answered a lot of the questions how I expected them to, for example, assigning the different story descriptions the exact styles I had intended for them, and while I agree with the genre choices for the art styles that the participants assigned, I did not anticipate just how many of the participants would classify the art styles as befitting a younger female audience. Perhaps this is in part due to the fact that I personally do not view, especially the general and edgy styles to fit any one gender more than another, and the same goes for the other two styles too. This could be because of personal bias and my personal experience with groups of people who play games with similar styles, as in my friend groups, there are many people from many different genres who play games with styles

similar to the four I created. Part of the reason for this majorily female audience could be the fact that the game is meant to look like a visual novel, and often visual novel gamer bases have a female majority. Regardless, the second survey appears to point towards different art styles at least having expected genres or styles of stories that fit them the best. The conclusions that could be drawn from this is that somewhat realistic looking styles could be used for many kinds of games, especially ones with a more serious tone, while they might not suit games that are meant, for example, for children. Styles similar to what we can see in anime seem to fit visual novel style games, as well as games with romance and even fantasy elements, but they might not fit a darker story as well. The cartoon style, with the big eyes and very unrealistic, abstract character designs seems to make the best fit for games meant for a younger audience, children and preteens especially, or even comedy style games, while the edgy style seems to best fit horror, mystery and adventure style games.

If we are to examine the individual aspects of the art styles in relation to the genre they fit the best, we can create a general framework for what kind of style features fit what kinds of stories the best. If I were to generalize certain features from the styles I created, I would say the general styles most identifying features are:

- realistic anatomy
- thin lines
- high level of detail
- realistic shading

The identifying features for the anime style could be the following:

- large eyes
- small mouth and nose
- thin lines
- cel-shading
- moderate level of detail

The features for cartoon would be:

- huge unrealistic eyes
- abstract anatomy
- moderately thick lines
- cel-shading
- low level of detail

The defining features for the edgy style would be:
- abstract anatomy
- cel-shading
- blocky and thick lines
- low level of detail

Based on the results from the first and second surveys, I would probably simplify the level of abstraction to:
- realism
- semi-realistic
- stylized-realism
- semi-abstract
- abstract

An example of a realistic style is the *Mass Effect* series, semi-realistic could be something like *Fable 3*. I would classify *Overwatch* as stylized-realism, *Little Big Planet* as semi-abstract and *Thomas Was Alone* as abstract. Since my styles only used four of these, semi-realistic (general style), stylized-realism (animu style), semi-abstract (edgy) and abstract (cartoon), I will only be able to classify these ones. There are only two shading styles that were used in my thesis, so while there are more styles, such as watercolor style, available, I will only be able to classify these properly. Level of detail is classified into high, moderate and low and line thickness is classified similarly into thin, moderate and thick. Table 5 lists each of these features and the story style they best fit. The story styles I will assign these features to will be explained simply through the kind of emotion the narrative of said story is supposed to illicit in the players, and the kind of world that suits the style the best, for example, a realistic rendering of our world or a Tolkien-like fantasy world. I will also give some general genre examples, although the mood of the narrative should absolutely be the number one priority when selecting the appropriate style. These are simply guidelines on what I believe would fit each feature the best based on the kind of responses I received in my surveys, and should always be taken with a grain of salt. The most important thing is to create a style that the art designer or director best believes fits the game's narrative and its intended style, but this framework can be used as a starting point that can be tweaked later. If I were to name this framework I suppose I would call it Art Styles for Game Narratives Framework, or ASGNF for short.

Table 5: Art styles for different game narratives framework

Feature	Story style	Genre examples
High detail	Realistic world, serious atmosphere	Mystery, crime...
Moderate detail	Fantasy world, any atmosphere	Any fantasy
Low detail	Fantasy world, extreme emotions	Comedy, horror...
Thin lines	Realistic world, any atmosphere	Mystery, drama...
Moderate lines	Fantasy world, any atmosphere	Any fantasy
Thick lines	Fantasy world, extreme emotions	Comedy, horror...
Realistic shading	Realistic world, serious atmosphere	Mystery, crime...
Cel-shading	Fantasy world, any atmosphere	Any fantasy
Semi-realistic	Realistic world, any atmosphere	Any non-fantasy
Stylized-realism	Fantasy world, any atmosphere	Any fantasy
Semi-abstract	Fantasy world, extreme emotions	Comedy, horror...
Abstract	Fantasy world, lighthearted atmosphere	Comedy

Because line thickness and how abstract or realistic a style looks are often correlated and can affect the overall feel of the world, it is important to remember to choose and combine the different features so that the style best represents the narrative. For example, if you were to combine a high level of detail, moderate lines, cel-shading and an abstract style, you could create something that could belong in a fantasy world and a more serious genre like mystery or crime. Creating something with a low level of detail, thin lines, realistic shading and a semi-realistic look could, on the other hand, fit a narrative with a less serious tone than the same style would with a high level of detail. With the right art direction, it is possible to create a style using any of these combinations to fit any kind of narrative of course, but it is good to have at least some kind of framework to go off of for those who are newer to art design or direction in video games.

Judging from the interviews, however, it does not appear as though there is too big an affect on the story regardless of the art style. It seemed more that the narrative affects the art style instead of the other way around. The participants all did have clear opinions on what specific style fit the story, however, but that was mostly due to the fact that the game was in a visual novel format. The correlation between type of game, like visual novel, first-person shooter and so on, and the narrative will definitely require more study, as it seems to have some effect on the players' perceptions. Perhaps the test group

for this game was too small, or perhaps the choice of game type, visual novel, was wrong, as the visual novel games people often play have very specific art styles that all look closer to the animu style than any of the other styles in my visual novel.

Regardless, it is clear that at least in theory and when ranking individual images, that the art style of a video game can absolutely affect how the players percieve the game's narrative. It is also clear that depending on the art style, around half of players may or may not pick up a game, so it is important for game designers to be aware of this and choose their art style accordingly.

There are many aspects of this field still yet to be explored that the responses I received for my surveys opened my eyes to, and I intend to explore at least some of them in my future research of which I will talk about more in the final chapter. In the next chapter, I will discuss what I could have done differently regarding my surveys and visual novel interviews, other interesting studies close to this field and what other practices I believe would be good to consider when creating the visual style for video games.

5. Discussion

While I was working on my study and analyzing the results, I realized a lot of mistakes I had made while creating the original studies. I also discovered a lot of different new possibilities for fields I would love to study further. I will discuss what could have been done differently in my thesis in Section 5.1, while other interesting ideas and even some interesting studies that I came across while working on my thesis that did not quite fit my topic will be discussed more in Section 5.2. I will discuss the best practices further in Section 5.3, going into further detail about the small framework from chapter three, and discussing more its possible uses and variances. Before I delve further into these, however, I wish to discuss some general thoughts I had during the course of both working on my study and analyzing the results.

Despite the problems that arose with my thesis and the study, I was still able to gather valuable data and create at least an idea for a simple framework on how to create the best kind of art for a specific narrative. I personally find these kinds of very simple frameworks helpful, since they do not steer anyone too close to a certain path, but give them something simple to start from. Of course frameworks can be a bit intimidating and even scary for some, since some people can interpret them to be unbreakable, while that should never of course be the case. ASGNF is not a perfect framework at all, and I would not advice it to be used quite yet, not until more study has gone into this topic, but it is at least a starting platform for me and future researchers in this field to go off of, if nothing else. I personally believe that a style with a deep connection to the story's lore, and a well designed interface are more important than the little stylistic features. If we take *Persona 5* as an example, the style itself does not, in my opinion, usually suit that kind of slightly darker story, but the choices in color, contrast and lineart made by the art team working on that game made it suit the narrative perfectly well. I believe a framework can help those who are less experienced, it should never be adhered to strictly. And as much as I believe my framework is not terrible, I would still use it only when strictly necessary.

5.1 What could be done differently

As mentioned, there were a lot of things that I felt I could have done differently while conducting my study. First and foremost I believe including at least a second person in this study could have improved it greatly. A team of people with all varying backgrounds, opinions and experiences could have provided great insight into this field and how different people view this topic, while my viewpoints are very objective as both a life-long gamer and artist. Having a second set of eyes would also have helped in noticing the other mistakes I believe I made throughout the course of this thesis. It is possible I will repeat a similar study in the future with possibly a pair or a small team of people from various fields of study. In this possible study I would certainly examine the different aspects of my study in more depth, but I will discuss those further in Section 5.3. It is also worth mentioning, that I could have done more research in the fields of media and movie studies, as these fields could have provided interesting insight into this study.

Mistakes related to my surveys were plentiful. I found that some of my questions may have been a bit too generalized, for example, the question about how an art style can affect the story. I believe had I phrased it so that I emphasized the emotional effect of the style more, I would have gotten slightly different answers, but the responses to the question were all very informative nonetheless. There was also a different question about the emotional effect, but I noticed that some people did not differenciate between that one and this particular question, so perhaps I should have phrased them or explained them further to make it clear there was a difference. Had I had the time and possibility, I would have tested the surveys with a small test group first, to simply see whether they thought the questions were sensible. As it was, I asked a few close friends and my supervisor about them, and while they approved the questions, they are all either gamers, artists or like my supervisor, an expert in this field, and thus they of course will have more knowledge of the vocabulary and phrasing used within this field. I attempted to make my surveys as easy to interpret as possible, but as they were not tested with any kind of focus group, it is clear that that may not have been enough.

When it came to the second survey I created, I realized too late that I should have presented the art styles without the visual novel -like user interface that was present in

the images used in the survey. While analyzing the results, it is clear that the visual novel interface within these images clearly affected how some people viewed these art styles. The differences between the backgrounds and the character art also affected the responses, so I should perhaps have presented the characters without any backgrounds, and the backgrounds separately, to gain an understanding of how the participants saw simply the styles and what they thought of the background styles as well. As it was, the participants found it distracting that the backgrounds clashed with some of the art styles, namely the cartoon and edgy ones. The same issue was presented during the visual novel interviews along with concerns about one of the background's perspective errors, which I noticed myself as well after finishing the piece. Regardless, it would have probably given me better results had I not included the visual novel -like interface, as too many participants likened the styles too much to simply visual novels, which was not the emphasis of my thesis. Not all narrative driven games are visual novels, so redoing this study without the visual novel style interface could be beneficial for this field in the long run.

Regarding the visual novel itself, it would certainly have benefited from a story that was specifically designed for a visual novel type game, instead of the linear story I had originally designed. To at least one participant, it was clear that the story was not originally designed to diverge. The backgrounds were also only drawn once, so they were not drawn with the different styles in mind. This was mostly because I was both running out of time, and I am not savvy with drawing backgrounds, so redoing them all for the four different styles would have increased my workload too much. If I were to redo this visual novel, I would revamp the story of the visual novel to allow for the branching paths visual novels require, and I would also redraw the backgrounds to fit better with all four of the styles. One of the backgrounds would also require to be completely redrawn to fix the terrible perspective errors and low quality compared to the other ones.

While I certainly made plenty of mistakes during this study, I cannot say I regret it at all, as these mistakes have opened my eyes to new possibilities. Knowing all the different mistakes I have made, I can now go forwards and not only examine the other interesting studies with more fervor than before, but also design future studies more efficiently than before.

5.2 Related work

There were many studies that I read while researching for my thesis that unfortunately did not make it into the thesis itself, as they were not relevant enough to my topic to make the cut. There were a few that I personally found interesting, however, and would like to find a way to incorporate into studies in the future.

One article that did not make it into this thesis was about how the quality of the sound and visuals affected the players enjoyment of the video game (Skalski 2010). The study used the term presence, to help explain the user immersion in game. It described presence as a psychological state that depends on that individuals personal and current experiences that is generated by human made technology. The research team created a hypothesis for each different combination of graphical definition and sound quality (surround versus two-channel), and tested their hypothesis with a small group of participants. Their results found that a greater graphical definition did not significantly increase prensence or enjoyment in players, while surround sound greatly increased presence compared to two-channel sound. As this study concentrated on graphical quality instead of art style, I did not include it in the actual study, but I believe this is something that could be implemented to include art style as well. Testing the combination of art style and graphical quality, how great the style's graphical definition is, could be an interesting thing to study. It would also be interesting to see how surround sound and sound in general could affect player perception of different art styles.

There were some articles that I mentioned briefly, but did not go into any further. One such article, for example, was about accessibility regarding video games by Wilhelmsson et al. (2015). This study tested both those who were visually impaired and had no visual impairments at all. The study mentioned a gender bias between players, that male players tend to play more and especially online, while female players tend to play a little less and more single-player games. I believe it would be interesting to test simply how gender can affect player perception of the art style in comparison to the narrative. While this was certainly examined in my thesis, it was not examined in much detail and it was not the main focus of the study. I would like to explore this facet of my thesis more in detail, to gain a better understanding of the differences between genders.

I would include multiple gender identities other than simply male and female as well, however, as I find it extremely interesting to see how those who identify with neither male or female, or as both, view the topics that have typically been researched on only males and females. The non-binary category of people has so much variety, I think it would be extremely interesting, not to mention highly beneficial for science to study how the non-binary identifying folk view things, as that way we can possibly gain new view points, that those belonging to the gender-binary do not think about.

I would also find it interesting to further examine how customized avatars affect player perception of art styles and the narratives of games. Custom avatars allow players to feel more engaged in their character's story (Ng & Lindgren 2013), but how would that change how they feel about the art style or the narrative? I would be interested in studying this further in the future.

5.3 Best practices

When it comes to the best practices, I believe the most important thing to remember when creating art for a game is to create it with purpose. If the art style does not fit with the narrative in some way, through the use of colors, hues, contrast and values to boost the intended atmosphere; dark colors and values for spookier stories and bright colors for happier stories; through the use of either very smooth and fluid lineart or very sketchy lineart, or simply through the use of perspective and symbolism, then the game itself is a failure. This is of course simply my own thought, but judging from the many responses I received for my surveys, I am not the only one who believes that the style must fit with the story. One participant responded about what kind of art they liked by saying "I wouldn't say I have a preference, as long as the style makes sense in context." which is very close to the thought that art should fit the story, simply in a broader, more general sense. Another participant responded that especially in video games "-I look for art that tells a story." while another responded that:

"If the art style doesn't match the tone of the story, the result is often comical."

Another interesting point that a participant hit on was the movement included in the art style:

"In my opinion, I believe the art style can clearly effect the tone of a story and the mood of a scene. This change in visual context can greatly change how a story conveys its messages and themes as well as its effectiveness in sharing that message. For example, the visuals of the anime Fooly Cooly (FLCL) to me greatly effect the emotions I experience when watching the show. It's high use of artistic shots (ie using background blurs, fisheye lens) combined with the almost constantly of model characters but rigid feeling movement creates a certain atmosphere of innocence, but with something boiling beneath the surface. This certainly amplifies the story of the show and adds to its themes and messages."

This participant also mentions the use of background blurs and fisheye lenses, and I find that this aspect is something worth considering in every art style. What is the style's perspective, what kinds of effects will you use to emphasize the elements of your art and how? These should most certainly be considered, as certain effects, lense flares among others, can greatly affect how a certain style looks to the player. With games that have animated elements in their art, it is important to consider how the characters and elements move too. One participant explains why animation is important to them well in their response to the question of how art affects narrative:

"Maybe this is more because I'm an art geek too, but beautiful animation can affect me. That when something has taken that extra thought from a creator like how they can make this even more special..."

I fully agree. The character animations in *Overwatch*, for example, speak a great deal about the characters the player plays as. Although you only see the characters arms and weapons as you play; although there are some small exceptions like Reinhart when his shield is up; the way the character's arms and weapon move and how the character moves in comparison to the static environment around them says volumes about that character (Floyd 2017). For example, take one of my favorite characters, the support character Lucio. His movement is very fluid and musical, the transitions between the movements of his arms and how he holds his weapon are very smooth. Just from his idle animation, in which he bounces slightly from side to side to the beat of the music that blares from the speakers, tells you a lot about his character: he is a very energetic

and bouncy personality. These reasons should be enough for art directors to consider the animation style and quality in depth when designing their characters. Making every character move in exactly the same way forces the designers to implement personality in other ways, but it also lessens the impact of the rest of the elements of the character's personalities I believe.

When it comes to using my framework, it is important to notice that it does not mention things such as special effects and animation, because those were not the main focus of my study. In the future, I would like to include special effects and animation as well, but for now the framework will stay as is, as an extremely simple little way to guide the art style in the right direction. It is very likely the framework will change greatly in the future when I continue these studies. What should be noted about the framework however, is that I believe it splits art styles into easy to understand features, lineart thickness, shading technique and abstraction level. Those three features, when considered separately and together can help any artist create an art work that fits nearly any type of game when used together well.

6. Conclusion

In this thesis, I examined how different people perceived the correlation between an art style and a story's narrative. In the first chapter, I discussed why I chose this particular topic, what previous research there was to be found on this particular subject and what this topics impact is on the real world. The fact that I am an avid lover of narrative-driven video games and art led to me choosing this subject as my thesis topic. This topic allowed me to explore both my artistic side, as well as my more scientifically inclined side and gave me the freedom to work on a topic that as of yet, has little to no research done about it. The effects of this kind of research were as of writing this study somewhat unknown, although it can be said from common sense that a fitting visual style can do wonders for a game's narrative. The correct art style in a game can also boost sales, as many marketing companies rely very heavily on the visual artistic side of video games to sell them, since the narratives are often unfinished when games begin to be marketed.

Another aspect explored in Chapter 2 is why the aesthetics and visual arts in vide games are important. This chapter contained tips from experts gathered from articles and conferences on how to build good aesthetics for games, tips such as remembering that culture affects player perception, that mapping out why each item, each detail on a character is important, and creating worlds that seem realistic and especially coherent to the players. The theory behind whether or not an art style can have an emotional impact on the player or participant was discussed heavily, and while it is clear that things such as the clothing worn, the details of the characters and whether or not the player avatar is a custom made one or a general one assigned to the player, can change how the player views the narrative, it was not immediately clear at this stage that the art style itself can have an impact on the players emotions. The question of whether an art style can have an effect on the story of a game was more clear cut. We know from previous research done that creating stories about art works can help those viewing the art works to remember them better and enjoy them more, so it could potentially be said that the same holds true the opposite way around. It is also known from studying art history that certain shapes hold certain associations, a circle being associated with femininity, for example, and these shapes combined in certain ways can cause players to view the

setting in specific ways.

The third chapter concentrated on the studies I conducted for my thesis. It explains the two surveys, the creation of the visual novel and the interview that followed it. The results from the surveys speak clearly that at least in theory, people believe an art style to have at least a moderate effect on how they view a games narrative, as evident from their responses. For example, the things they deemed to effect narrative the most were the choices of color values and contrasts and the abstraction levels. The interviews themselves were far less conclusive and did not produce such clear results, possibly because of the format, visual novel, that was used. Based on these results I created a simple framework ASGNF that could potentially help those who are beginning their journey as art directors to create a good, fitting style for their narrative and game genre. While this framework is extremely bare bones and hardly covers more than a fraction of the possibilities, I believe it is at least a helpful starting point.

In Chapter 4 I discussed the mistakes I made throughout the study, how these mistakes could be rectified and what kinds of interesting studies could be conducted in the future both by fixing these mistakes, and based on the results achieved. Possible future studies such as studying the effect of graphical quality combined with art style and how that affects player perception of a games narrative and how the combination of sound and art style affect a player's perception of a game's narrative, were mentioned and some further best practices were given in short. Things such as how different visual effect such as the use of lense flares, distance blur and so on affect the narrative also came up as interesting studies for future researchers.

As this field is not yet very much explored, most of the conclusions that can be drawn are drawn from only the surveys and the interviews I conducted during the course of my study. That being said, it is clear that there is at least a passing interest in this sort of study, as the many articles I used to construct the basis of my thesis were related to this topic. As it stands, studying the effect of the art style on the narrative is still a relatively new subject, and very little research has been put into it. The field holds a lot of potential, and can, in the future, be explored from various, equally interesting angles.

References

Adam, H., 2012. Enclothed Cognition. *Journal of Experimental Social Psychology,* 48(4), pp.918–925. Available at: https://www.sciencedirect.com/science/article/pii/S0022103112000200.

Anhut, A., 2016. Stylized Realism. *How to Not Suck at Game Design*. Available at: http://howtonotsuckatgamedesign.com/2016/01/stylized-realism/ [Accessed May 31, 2018].

Arsenault, D., 2013. Reverse-Engineering Graphical Innovation: an Introduction to Graphical Regimes. *Game Journal*. Available at: https://www.gamejournal.it/reverse-engineering-graphical-innovation-an-introduction-to-graphical-regimes/ [Accessed May 31, 2018].

Arsenault, D. & Larochelle, A., 2013. From Euclidean Space to Albertian Gaze : Traditions of Visual Representation in Games Beyond the Surface. *DiGRA Conference*.

Arsenault, D. & Larochelle, A., 2015. The Game FAVR : A Framework for the Analysis of Visual Representation in Video Games. *Loading...*, 9(14), pp.88–123.

Bao, Y. et al., 2016. Aesthetic Preferences for Eastern and Western Traditional Visual Art: Identity Matters. *PMC*. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5071313/ [Accessed June 14, 2018].

Bomberguy, H., 2017. Sherlock is Garbage, And Here's Why. Available at: https://www.youtube.com/watch?v=LkoGBOs5ecM.

Dadich, S., 2017. Abstract: The Art of Design. , p.Episodes 1, 6, 7. Available at: https://www.netflix.com/title/80057883.

Donovan, A. & Hall, 2018. Art in an Algorithm : A Taxonomy for Describing Video Game Visual Styles. , 69(5), pp.633–646.

Floyd, D. 2017. How Overwatch Animation Conveys Character in First Person - Extra Frames S1 E7. Available at: https://www.youtube.com/watch?v=1xeTMCPG2gg&t=1s.

Freeman, W., 2015. The Future of Game Graphics. *MCV*. Available at: https://www.mcvuk.com/development/the-future-of-game-graphics [Accessed May 31, 2018].

Hamilton, M., 2010. Advancing a Model of Avatar Evaluation and Selection. *Psychology Journal - The Other Side of Technology,* Vol. 8, N.(1720–7525), pp.33–65.

Hunicke, R., Leblanc, M. & Zubek, R., 2004. MDA : A Formal Approach to Game Design and Game Research.

Isbister, K., 2004. 10 Tricks from Psychology for Making Better Characters. *GDC Vault*. Available at: https://www.gdcvault.com/play/1013517/10-Tricks-from-Psychology-for [Accessed June 1, 2018].

Jenkins, B.H., 2000. Art Form for the Digital Age.

Järvinen, A., 2002. Gran Stylissimo : The Audiovisual Elements and Styles in Computer and Video Games. *Computer Games and Digital Cultures Conference Proceedings*, 1, pp.113–128.

Keating, S., Lee, W. & Windleharth, T., 2017. The Style of Tetris is … Possibly Tetris ?: Creative Professionals ' Description of Video Game Visual Styles. , pp.2046–2055.

Keo, M., 2017. Graphical Style in Video Games.

Masuch, M. & Röber, N., 2005. Game Graphics Beyond Realism : Then , Now , and Tomorrow. *DiGRA '05 - Proceedings of the 2005 DiGRA International Conference: Changing Views: Worlds in Play*, 3(2342–9666).

Ng, R. & Lindgren, R., 2013. Examining the Effects of Avatar Customization and Narrative on Engagement and Learning in Video Games. , pp.87–90.

Pletcher, A., 2001. Art Creation for a PlayStation 2 Launch Title - The Ups and Downs of Summoner. *GDC Vault*. Available at: https://www.gdcvault.com/play/1013974/Art-Creation-for-a-PlayStation [Accessed June 1, 2018].

Portnow, J., 2011a. Amnesia and Story Structure - Character Development in Fallout: New Vegas - Extra Credits. Available at: https://www.youtube.com/watch?v=bIQ6yWptvfA&t=0s&index=28&list=PLB9B0CA00461BB187.

Portnow, J., 2011b. "Art" Is Not the Opposite of "Fun" - Why Analyzing Games Makes Them Better - Extra Credits. Available at: https://www.youtube.com/watch?v=fLKVg-2d54c&t=0s&index=55&list=PLB9B0CA00461BB187.

Portnow, J., 2016. Enclothed Cognition - Do Character Outfits Affect Our Play? - Extra Credits. Available at: https://www.youtube.com/watch?v=NQAKOdZw7F8&list=PLB9B0CA00461BB187&t=0s&index=288.

Portnow, J., 2017. How Games Speak - Learn the Language of Design - Extra Credits. Available at: https://www.youtube.com/watch?v=c06uoVVFZd4&t=0s&list=PLB9B0CA00461BB187&index=347.

Portnow, J., 2011c. Graphics vs. Aesthetics - Why High Resolution Graphics Aren't Enough - Extra Credits. Available at: https://www.youtube.com/watch?v=5oK8UTRgvJU&t=0s&index=43&list=PLB9B0CA00461BB187.

Portnow, J., 2013. Word Choice - How to Handle Exposition in Games - Extra Credits. Available at: https://www.youtube.com/watch?v=5j1PXhkXJ2A&index=131&list=PLB9B0CA00461BB187&t=0s.

Seegmiller, D., 2001. Character Design, Sketching, and Painting. *GDC Vault*. Available at: https://www.gdcvault.com/play/1013975/Character-Design-Sketching-and [Accessed June 1, 2018].

Skalski, P., 2010. Image versus Sound: A Comparison of Formal Feature Effects on Presence and Video Game Enjoyment. *Psychnology Journal - The Other Side of Technology,* Vol. 8, N.(1720–7525), pp.67–84.

Snyder, G., 2001. Aesthetics Beyond Technology: Nonphotorealistic Rendering Art Styles. *GDC Vault*. Available at: https://www.gdcvault.com/play/1013973/Aesthetics-Beyond-Techology-Nonphotorealistic-Rendering [Accessed June 1, 2018].

Solarski, C., 2013. The Aesthetics of Game Art and Game Design. *Gamasutra - The Art & Business of Making Games*, pp.1–6. Available at: https://www.gamasutra.com/view/feature/185676/the_aesthetics_of_game_art_and_.php [Accessed June 1, 2018].

Stanford University, Why do the humanities matter? | Stanford Humanities. *Stanford Humanities Center.* Available at: http://shc.stanford.edu/why-do-humanities-matter [Accessed June 10, 2018].

Users, G. forum, 2011. Art Style vs. Technical Graphics. Available at: https://www.gamespot.com/forums/system-wars-314159282/art-style-vs-technical-graphics-28743653/ [Accessed May 30, 2018].

Vayanou, M., 2017. Storytelling Games with Art Collections. *IEEE*.

Warbot, 2017. Good Design, Bad Design - The Best & Worst of Graphic Design in Games ~ Design Doc. Available at: https://www.youtube.com/watch?v=bE_ZuNp1CTI.

Wilhelmsson, U. et al., 2015. Accessible Game Culture using Inclusive Game Design Participating in a visual culture that you cannot see.

List of Video Games

In order of appearance:

Bioware, *Mass Effect* Series, Microsoft Game Studios, Electronic Arts, 2007-2017

Quantic Dream, *Detroit: Become Human,* Sony Interactive Entertainment, 2018

Firaxis Games, Sid Meyer's Civilization V, 2K Games, 2010

Red Hook Studios, *Darkest Dungeon,* Red Hook Studios, 2016

Team Salvato, *Doki Doki Literature Club!,* Team Salvato, 2017

Dead in Vinland

Various, *Tetris,* Various, 1984

Atari, *Pong,* Atari, 1972

Mike Bithell, *Thomas Was Alone,* Mike Bithell, 2013

Blizzard Entertainment, *Overwatch,* Blizzard Entertainment, 2016

Quantic Dream, *Heavy Rain,* Sony Computer Entertainment, 2010

EU Vancouver, *FIFA 2018,* EA Sports, 2017

CD Projekt Red, *Witcher 3: Wild Hunt,* CD Projekt, 2015

PUBG Corporation, *PlayerUnknown's Battlegrounds,* PUBG Corporation, 2017

Epic Games, *Fortnite,* Epic Games, 2017

JP: Atlus, *Persona 5,* Katsura Hashino, 2016

Nintendo, et al., *The Legend of Zelda Series,* Nintendo, 1986-2017

Ubisoft, et al., *Assassin's Creed i,* Ubisoft, 2007-2017

Irrational Games, et al., *Bioshock* Series, 2K Games, 2007-2013

Gearbox Software, et al., *Borderlands* Series, 2K Games, 2009-2015

Clover Studio, *Okami,* Capcom, 2006

Square, Square Enix, Final Fantasy Series, Square, Square Enix, 1987-2018

Media Molecule, et al., *Little Big Planet* Series, Sony Computer Entertainment, 2008-2014

Tangled Vines

A Visual Novel Four Ways

By Leena Hölttä - 506974

Table of Contents

1. Visual Novel description

The visual novel is a short, around 20 minute long story about a girl named Mera, and her journey back home to Veis and the festival that takes place there in honor of the country of Suom having gained independence 100 years ago. The world of the visual novel is set in an imaginary island country in the Northern half of the planet in an era where electricity was not yet invented. The living conditions in the world are similar to those of the worlds of Skyrim and the Elder Scroll series for example, without the dragons and mystical beings. Life in the world is usually simple and concentrated on survival and trade. Towns often trade with neighboring towns, but otherwise live very independent lives from each other.

In this world, people are born with a natural magic that they can use to either manipulate objects or living beings in some way. These magics may, or may not present themselves strongly. In rare cases, the magic is so strong, that the person can manipulate it consciously. In these rare cases, if left untrained, the magic can spiral out of control and cause problems, and in the worst case, even death, depending on the type of magic. It is more common for strong magic to spiral out of control for those whose emotional state is unstable due to things such as depression or an otherwise strong moodiness. This magic, as categorized by aware magic users, is divided depending on how strong it is and whether of not the user is aware of its existence. For example, Tima, Mera's sister and the Mayor of the town of Veis, has a low level unaware manipulation magic. She is not aware of its existence, but she can unconsciously affect people's emotions to correspond with her own. Mera, on the other hand, has a strong level of aware bending magic, that allows her to manipulate plant matter according to her will. At the beginning of the story, her magic is untrained and is beginning to spiral out of control due to her unstable emotional state and untreated depression.

The novel itself has 4 different versions of it, each with the exact same story, UI and backgrounds. The versions all have different character art, however. The purpose of this is to examine the correlation between the artstyle, specifically the style of the character art, and the story in story-oriented games, such as visual novels. While the format used in this project is "visual novel", the conclusions of this study can theoretically be used for other story-oriented game formats, such as point-and-click adventure games or puzzle games. Even games without a strong story can potentially benefit from the results of this study.

The study will be conducted in three parts. The first part is a pre-game survey with general questions about the correlation of story and artstyle used. The second part is an image-based survey, where images from the visual novel will be presented to the user, who will then answer questions such as "What genre do you feel is appropriate for this artstyle?" according to

the images. The final part is a game-based interview, where a group of 20 or so people, randomly assigned to different styles, will play through the visual novel and answer questions based on how they felt at different points of the game and what genre they believe the game to be based on the combination of story and art. The first survey has already been conducted and the questions for survey's two and three will be created based on the first survey's answers.

1.1 Idea behind the Visual Novel

The original idea behind the visual novel format and the nature of this study came from a game called Doki Doki Literature Club[1]. The game itself is presented as a dating simulator, where the main character attempts to romance the girls in the schools literature club. The true nature of this game, however, is much darker, as the player is thrown into a strange world where the romanceable characters suddenly kill themselves in strange ways and the president of the club becomes aware of the game being a game. The strangeness of this combination of a cutesy, japanese-romance-story -kind of artstyle and the dark storyline threw me off, and made me feel uncomfortable even. I personally dislike it, when the story and artstyle do not mesh together. For this reason I don't like the popular Japanese horror-anime Higurashi no Naku Koro Ni either. I am also the kind of person who will easily pass on reading a manga, watching an anime or an animated series, or playing a game if the artstyle is not pleasing to the eye. I have never wanted to watch the anime One Piece or Spongebob for example, as the artstyles of both creep me out and are far too different from my usual aesthetic.

The inspiration behind the story and the characters stem from my own original novel that I wrote during the National Novel Writing Month: November, or NaNoWriMo, back in 2014. While the aim of NaNoWriMo is to write 50 000 words in one month, I managed to write nearly 93 000 due to sheer excitement for my own story. Having reread it recently, I realized it had multiple scenes and parts that could easily be interpreted differently depending on the artstyle and the person who viewed the scene. For this reason, I revamped the introduction of my story and scripted it to fit the visual novel format. The story went through some serious rewrites to make the plot more coherent and to create a more believable world, otherwise it was left nearly unchanged from its original unedited form.

The main reason for the visual novel format itself, was the ease of coding one. As one whose coding skills are not quite up to par with my colleagues, I felt this would be the best way to showcase my skill in other areas: storytelling and art. There are also easy-to-use tools available on the internet for visual novel creators. The tool I used for this project is called Ren'Py, which I will talk about in more detail in section 2.2.

2. Creating the Visual Novel

The creation process of the visual novel was quite simple. The first steps were to come up with visually distinctive and different art styles that could theoretically produce different emotions in the players, sketch these styles, draw them digitally, create the storyboard for the game, script the final dialogue and choices and finally create the visual novel itself with each style using the Ren'Py engine.

The styles were chosen according to different games and series I found online, and were sketched based on the different styles I found in these inspirations. The first style and sketches I created were made using my own personal art style, which I named "regular", and the other styles all follow the character features, such as eye and nose shape, posture and body shape, present in this style.

2.1 Art

The four different artstyles I settled on are named "regular", "animu", "cartoon", and "edgy". Each style was inspired by different games and tv-shows, and was created using a free art program and my Intuos Creative tablet from Wacom that I bought for personal use multiple years ago. Each of the four different styles is drawn in 2D, as creating 2D art was both much simpler, and in my opinion, allows the artstyle to shine more, than if they were in 3D. 2D styles often have differences between their lineart strenght, shape and opacity, unlike 3D that often has no lineart at all, and I felt lineart to be a huge factor in how the artstyle is interpreted.

In general, I wanted to keep things outside of the style itself, such as colors and the backgrounds in the game, portrait sizes, lighting directions and the character's facial and bodily features as similar as possible, so only the style itself would affect the results. The colors that were chosen for each character are ones that suit them and their powers or personality. The lighting and shading are supposed to be simple and as direct as possible, as well as similar in their directions and placements for each style to emphasize the difference in the styles themselves. Things such as tools and gradients are mostly the same for each style as well, and while the styles are clearly distinct from each other, my personal style is clearly influenced by my own style of drawing.

The styles chosen are all styles that I personally see fitting different kinds of situations, games and series. I researched multiple different kinds of animated series, comic book series and games using google, crunchyroll and steam to find different inspirations for each style, and drew each different style using basic principles from these sources of inspiration as my guides. The criteria and inspirations behind each style will be detailed in 2.1.1, 2.1.2, 2.1.3 and 2.1.4

while their technical details will be described more closely in 3.1. The creation process of the visual novel will be explained in 2.2 while the technical side of the novel will be detailed in section 3.2. The different expressions created for each character will not be shown in this documentation, as it would make it far too long, but each character was given 6 base expressions: stoic, happy, sad, angry, confused and shocked. The brows, eyes and mouth were all drawn individually on separate layers for each of these expressions to make it easy to mix and match the different brow, eye and mouth expressions to create numerous expressions other than the six basic ones mentioned above.

The creation process was simple, but it took multiple hundred hours to get done. The design of each character and the different styles itself took tens of hours, while drawing and shading each and every detail, expression and posture for each character took around 20 hours per character to finish, if not more. The backgrounds themselves took nearly as long, as they each had to be planned, and as someone who is not used to drawing backgrounds, getting them right took some time. As each and every image used in this visual novel, except for some of the graphic user interface elements, were hand drawn by me it took me around three months to finish everything. The detailed explanation behind each style as well as examples of each of them can be found in the subsections 2.1.1-2.1.5.

2.1.1 Regular

This regular style is my normally used style. I enjoy semi-realistic styles and admire artists who have mastered the art of semi-realism. Artists such as Kwiitin, who publishes much of her fanart on twitter, and Anemonetea, who drew the character portraits for the first campaign of Critical Role, a D&D series narrated by voice actor Matthew Mercer, have influenced my personal artstyle a lot, and thus, the "regular" artstyle used in this study.

A lot of games nowadays use a semi-realistic or highly realistic artstyle. Most triple-A games use a 3D style that attempts to mimic realistic human faces as closely as possible. While my styles are all in 2D, I felt a semi-realistic style would suffice as a replacement for the hyperrealism of these triple-A titles.

While the style is somewhat realistic, it still takes some liberties with human anatomy. For example, the characters' eyes are larger than what humans have in general, and the shading isn't as smooth or as sharp in places as what realistic shading would be on the human face. These little unrealistic details are there to emphasize the characters' features and make it easier to adapt them to the other styles. Hyperrealism would have been more difficult to translate to other styles than the simpler semi-realism as well, as the features wouldn't have been as apparent and clearly defined.

In regards to the story, I believe this style will not affect the story much. It is neutral and often used, and I do not see it as being genre-specific like the other styles used. This style, in essence, is a very basic style, but it is the one I would personally use, were I to turn this story into a fullblown visual novel in the future.On the next page you will find examples of the inspirations behind this style. The sources for each of these will be available in section 6. On page 7 you will find the base expression for each of the four characters used in the visual novel in this style. More expressions and a more detailed introduction to each character can be found in the Thesis_instruction.pdf attachment.

Illustration 12: Overwatch by Blizzard

Illustration 14: Dream Daddy by Game Grumps

Kiwii's year of Transfor... ART
...ration 13: Kiwii or @sockpuppetpanda on twitter

Illustration 15: Critical Role campaign 1 art by @Anemonetea on twitter

Illustration 16: Transfusions webcomic by Anni K. or @kindly_anni on twitter

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2.1.2 Animu

The "animu" style was chosen due to the fact that I've personally played a lot of Japanese visual novels and watched a lot of anime in my past. The name is a tongue-in-cheek joke-version of the word "anime" which is a genre of animation originating specifically from Japan. While anime itself isn't a particular artstyle per se, there are a lot of features that can be drawn from different kinds of anime that create a style far different from the regular one used. For example, the large, sparkly eyes, small noses and mouths, tiny necks and heads that are much too large for the character's bodily proportions are very common in many anime's and manga's, especially series in the slice-of-life and romance categories.

This style was specifically chosen for its connection to many romantic visual novels. Games such as Dramatical Murder and even Doki Doki Literature Club, despite its twist ending, as well as other visual novel type games like the Persona series often use a style similar to this one. While I opted to go for the more cutesy kind of style in series like K-on and Puella Magi Madoka Magika, I also drew inspiration from my favorite anime of all time, Fullmetal Alchemist. The characters drawn in this style look much younger than their counterparts in the "regular" style, as is common in romantic anime's. Their eyes are also much more sparkly than in the "regular" style. Excessive sparkliness of the eyes is often attributed to a feature called "moe", which basically means that something is super cute. While I may not fully agree, and while I may not be the biggest fan of this particular style, it is something I've grown up to see as "adorable" thanks to the kinds of series it is often used in.

I highly believe this style will seem more like a romance to people, than the other styles used, as similar styles are so often commonly used in romantic visual novels geared towards the female (and non-binary) audience. And while this was the main reason this style was chosen, I admit to being selfish in part, and choosing it so I could practice this style, as it is one I've wanted to master for quite some time now.

On the next page you will find some of the inspirations behind this particular style. On page 10 you will find the base expresson for each of the four characters in this style. More expressions and a more detailed introduction to each character can be found in the Thesis_instruction.pdf attachment.

Illustration 17: Angel Beats anime

Illustration 18: Persona 3 character art

Illustration 19: Puella Magi Madoka Magika anime

ustration 20: K-on anime

Illustration 21: Persona 5 character art

2.1.3 Cartoon

This style was very difficult to design, and I spent weeks going back and forth between multiple designs. I first attempted an 8bit style and styles similar to what you would have seen in older games like the first six Final Fantasy games and some newer indie games, but I couldn't make it fit the visual novel style at all. I also felt the pixelated style wouldn't have suited the other styles as well, because it was just far TOO different. I finally decided on the cartoonish style.

Despite not finding many games with styles like this, I felt this style was still appropriate for this study, as I believe it can illicit a different response than the other styles. I don't think the 8bit one would have made much of a difference in comparison to the "regular" one, while this "cartoon" style could very well be seen as more childish and befitting a younger, more naive audience than what the other styles would. I believe this because a lot of children's shows have a style somewhat similar to this, very abstract, simple and unrealistic. These kinds of styles are often used in children's cartoons to emphasize each character's uniqueness, their unique style and shape. Anatomical correctness is often not so important in styles like this.

I believe that the positive emotions, things such as happiness and joy will be emphasized in this style, while the negative emotions will be less impactful on the player. I also believe that the players may find this style to be a bad fit for this particular story, as there is some slight cursing in the script. I think it's important to have a style like this one included in the study, however, as I believe it can bring out some interesting viewpoints from the players who experience the story. It could also serve as a good example of what not to do in regards to mixing story and artstyle.

On the next page you will find some of the inspirations behind this particular style. On page 13 you will find the base expresson for each of the four characters in this style. More expressions and a more detailed introduction to each character can be found in the Thesis_instruction.pdf attachment.

Illustration 22: Steven Universe cartoon

Illustration 24: Avatar the Last Airbender cartoon

Illustration 23: Kim Possible cartoon

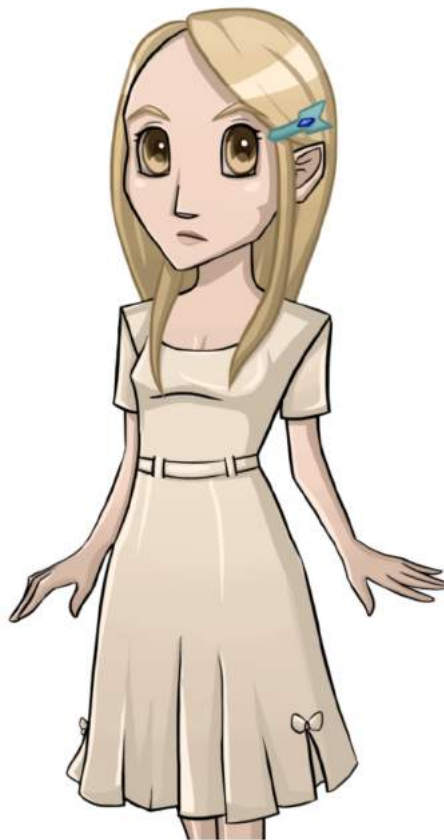
Illustration 25: Gravity Falls cartoon

Illustration 26: Power Puff Girls cartoon

Drawing 9: Mera, main character

Drawing 10: Shale, childhood friend

Drawing 11: Anu, town baker and romantic interest

Drawing 12: Tima, elder sister and Mayor of Veis

2.1.4 Edgy

This was the final style that I created. I had sketched ideas of this style at the same time as I was drawing sketches for the "regular" style, but I had trouble getting the style just right. I ended up taking most of my inspiration for this style from a game that I simultaneously love and hate due to its difficult nature, The Darkest Dungeon. This style is much different from the rest. In comparison to the others, it has very sharp edges and very dark lines, and even some of the shading has been done through the lineart. The style is something that could easily suit a game with a darker theme, something like a tragedy or horror game, something that fits the Darkest Dungeon very well for example, and I believe it makes a great fit for my visual novel's story as well, as it is a slightly darker story with themes ranging from corruption of government to depression and so on.

This kind of style, or similar styles, are somewhat common in games nowadays. This very edgy, dark, high contrast aesthetic has been especially prevalent in many indie games, as the current political atmosphere all around the world has been inspiring games with darker themes. The darker, gritty style was and still is common in American comics as well, in things like Mike Mignola's Hellboy for example, which in part inspired The Darkest Dungeon's art. A lot of this style is also drawn from the gothic period, and I believe it is very much representative of the darker ideology of that time.

This style is highly stylized and somewhat simple, and most of its emphasis is on the heavy lineart. It has a unique look and can make some of the characters look slightly creepy with the way the eyes are drawn. They may even look slightly inhuman thanks to the way they are drawn, which I believe will add to the creepy factor in the game as well.

I expect the players of this style to find the game to have a lot more suspence and horror-like themes than the other styles. I believe they will find this kind of style to fit horror and suspence games as well, or even dystopian themed strategy games. I hope that feelings like anger, terror and anxiety (the expectant: something is going to jump out at me, kind of anxiety) will be emphasized to the players who experience this style.

On the next page you will find some of the inspirations behind this particular style. On page 16 you will find the base expresson for each of the four characters in this style. More expressions and a more detailed introduction to each character can be found in the Thesis_instruction.pdf attachment.

Illustration 27: The Darkest Dungeon

Illustration 28: Mike Mignola's Hellboy

Illustration 29: The World Ends With You

Illustration 31: Don't Starve

Illustration 30: Wild Adapter manga

Illustration 32: Persona 5 menu's

Drawing 14: Mera, main character

Drawing 13: Shale, childhood friend

Drawing 15: Anu, town baker and romantic interest

Drawing 16: Tima, elder sister and Mayor of Veis

2.1.5 Backgrounds

The backgrounds were the last thing I drew for this project. In hindsight, that might have been a mistake as it took me quite a while to get them right and two whole days of time wasted drawing one version that clashed horribly with the art. An example of that bad background with one of the characters as a model can be found below.

Drawing 17: Example of failed background

As you can see, the character is not super noticable in this image. The background is so busy, that it seemes to overshadow her and swollow her. The style is also way too different from the very flat, 2D style of coloring and shading that the character model has. A 3D style would have most likely suited this background better.

In the end, I ended up making the backgrounds all very simple. They all have some light shading and lighting, but it's all very faint and very simple. The backgrounds don't have too much detail either, and aren't especially realistic. The colorscheme is also very toned down and pale. This is to ensure that the characters pop out of the backgrounds.

There are 5 different backgrounds in this piece. The forest, the town, the Mayor's house, the bath enclosure and the bakery. Each of them has a few different versions of it, except for the bakery which only has the one. The forest can be seen during the day and the evening, with some vine-details and a shadowy figure version in game. The town has a day version and an evening version, and versions with festival decorations and vines as well. The Mayor's house has day, evening AND night and also a festival and vine version. The bath enclosure only has an evening version and versions with different densities of vines. There are four different vine densities, low, medium, high and very high, and the more paranoid the main character gets, the higher the density gets. The vines at their lowest are somewhat unnoticable on purpose. The hope is that the player will wonder where the vines came from and become paranoid along with the main character. This little detail is meant to affect the story slightly, but not enough to

override the effects of the artstyles, only to add a little extra flavor.

Some of the backgrounds were inspired and drawn using images I had taken of nature some years ago. The forest is inspired by a photograph I took with my old Nokia phone of the forest by my parent's neighborhood. The image of the Mayor's home was created by tracing a screenshot of a sims 4 house I build just for this purpose, and changing it up. The town and bath enclosure were created by tracing photographs of lego buildings I created for this project. The bakery is the only background I created without using any reference at all. (Yes, I played with Lego's for this project. I had fun way too much fun.)

Pictures of the reference images I used can be found below. Examples of the backgrounds can be found on the next page.
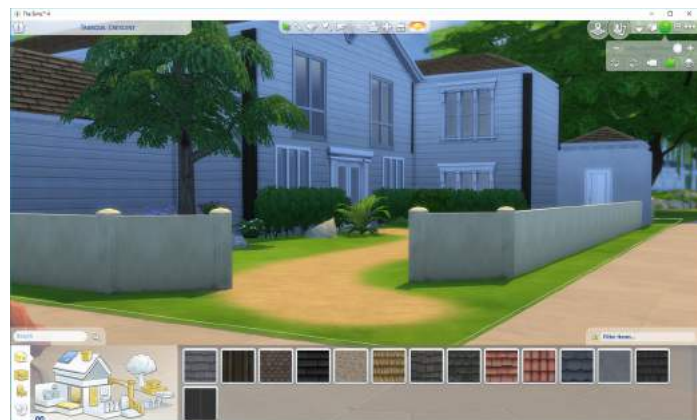

Photo: Forest clearing in my parent's neighborhood

Photo: Blurry perspective shot of lego-town entrance

Photo: Shot of bath enclosure perspective

Screenshot: Sims 4 version of Mayor's House
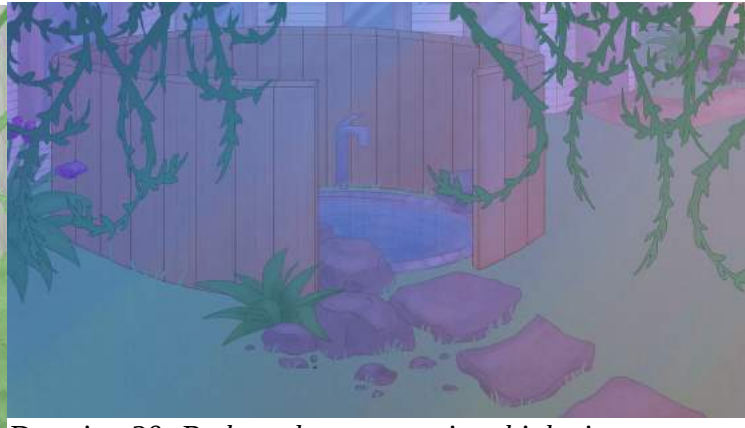

Photo: Lego-3D-map of Veis

Drawing 18: The forest during the day

Drawing 19: Mayor's Home, evening, festival and vines

Drawing 21: Town day, low vines

Drawing 20: Bath enclosure, evening, high vines

Drawing 22: The bakery

2.2 Ren'Py and coding

To create this visual novel, I used a handy tool called Ren'Py. Ren'Py is a free software available for anyone interested in creating a visual novel easily. It allows the user plenty of customization, and provides an easy to use interface through which to edit the script of the game. Very little coding is required when using Ren'Py, which both saved me time and made my job much less frustrating. The program is open source and free even for commercial use, and was a hugely beneficial tool for me while creating my project.

Very little actual coding went into creating the four different versions of my visual novel. While I had to code things like the basic structure, define the side-images of Mera using code and code in the different choices the player would be presented with, these were all easy to do with Ren'Py's own easy to use syntax. It is somewhat similar to Python in fact, and they even discuss the equivalents of Python and Ren'Py statements in their websites documentation. As Ren'Py's scripting language is text-based, it allowed me to work even using my mouse which made my job much easier, as someone who is not used to working on the computer without a mouse. It also let me use my preferred text editor to write the script.

This project was my first look into Ren'Py. I had not touched the program before this project, though I had heard of it as I have been following many artists who have created or are creating visual novels of their own with this tool. Despite never having used the program before, the quickstart guides and other documentations that are available on the Ren'Py website allowed me to finish the first version of my script in one day. I was able to finish the entire visual novel, all four versions of it and the minute changes to stylizations of the text bubbles and font colors and such in less than two days.

All in all, there was not much for me to code, which suits me just fine, as this project is not really about the coding. While creating the visual novel was an important part of this project, creating one from scratch using Unity for example, would not have affected the study in the slightest. This is why I opted to use Ren'Py in the first place, as I felt using this software allowed me more flexibility, gave me more time to work on other important things and lessened my stress regarding the project.

3. Program description

This program basically consists of two parts: the art and the code. As explained in 2.2, the code is mostly Ren'Py's own, and while the story itself was scripted completely by me, it did not take a lot of actual code writing to create the game itself. The majority of the time was spent on working on the art. In 3.1 I will explain the brush sizes and other details in the different art styles, and in 3.2 I will explain a little bit about the kind of scripting I did for the visual novel. I will not explain the code in much detail, as I will include the script I wrote in its entirety in the attachments.

3.1 Art description

I used slightly different techniques to create each different artstyle. In general, each piece of art was first sketched, scanned then resketched on the computer. The lineart was drawn, the basecolors added to the image, the shading / lighting gradient was added, the general shading was done, the lighting was done, and finally the different expressions for brow, mouth and eye were all drawn. In Mera's case, the background was the first to be created. Mera's image was created to be 2336x2644 pixels in size, while all the other character portraits were created to be 1928x3252 pixels. The backgrounds were drawn at a resolution of 3840x2160, or double of 1920x1080. Every image was scaled down to fit the visual novel later. The large size was to ensure good quality in the images.

The "General" style's lineart was 5 pixels wide and was drawn using single strokes, meaning the line strokes did not overlap each other. A shading gradient was added to each base color, and a fading (sharp on one side, faded on the other) shading and lighting were added on top of this gradient. The images of the characters were scaled down to 30% of their initial size, except for Mera, whose portrait was scaled down to 20% in every style.

The "Animu" style's lineart was also 5 pixels wide, and most of the lineart was copy-pasted from the "General" style's linearts. Some small details were changed so the line was slightly simpler and more rounded. The "Animu" style also had a shading gradient, but the shading and lighting were crisp and did not fade like in the "General" one. In this style, Tima and Shale's images were scaled down to 37% of their original size while Anu was scaled to 40% of her original size due to a miscalculation on my part while drawing her originally.

The "Cartoon" style's lineart was drawn with a 15 pixel brush, and a very light shading AND lighting gradient was added on top of the base colors. The shading is crisp like in the "Animu" style, and the lighting is very low and very simple. In this style Tima's images were scaled down to 34%, Shale's 33% and Anu's 32% from their original sizes.

The "Edgy" style's lineart is the only one that was not drawn using single strokes. The technique for this style was completely different in multiple aspects. Firstly, the sketch layer was not hidden in a different layer after the lineart was finished, instead the sketch layer was cleaned up to become the lineart layer. The lineart was also drawn using a 20 pixel brush at an opacity of 50% unlike the others that were all drawn at 100%, making this line significantly thicker than 20 pixels. Shading was also added in the lineart by darkening places where you

expected to see darker shadow, unlike in the others, where shadow was only added through the color palette. The shading was also dabbed on instead of using long strokes like in the others, and it was dabbed on with a brush that had a light texture to it. Each other style used a very simple round brush with no texture. The texture in this style was added simply to make it fit better with the inspiration from The Darkest Dungeon. This is also the only style to change Mera's portrait circle by adding a black border around the circle and dark lines to the leaf-details. This was to ensure that it looked cohesive with the lineart.

3.2 Code description

The coding was a simple process. I will not delve into Ren'Py's own code at all, as it was not created by me. The kind of coding I did, was extremely simple and consisted mostly of paragraphs of text encased within "". For example, all narration was written simply as:

```
"Narration here."
```

The first thing I did, before writing any narration however, was define the characters. Each character was given their own identifier, a single letter of the alphabet, as well as the color of their name tag in game. For example, Shale was defined this way:

```
define s  = Character("Shale", color = "#5c4a72")
```

In the above example, define s = Character() is Ren'Py's own class that generates the nametag for the character speaking. When writing dialogue, if the following is written:

```
s "Today was a slow day."
```

The player will see the nametag Shale before the text "Today was a slow day" is shown below it.

The main character, Mera was defined the same way, but as her images weren't shown on the right side of the screen as the other characters, her images were defined before hand as side-images. For example, the image of Mera with an irritated expression on her face was defined thus:

```
image side mera irritated = "mera irritated.png"
```

The characters who were shown on the right were all added there with code like this:

```
show anu bakeryshockedlax at right
```

Where "anu bakeryshockedlax" is the name of the png file used in the scene, and "at right" defines where the character will be shown on screen.

The backgrounds were added with the "scene" tag, and the way they appeared on screen were listed below it using the "with" tag as such:

```
scene town evening
with dissolve
```

The "with" tag could be used with characters as well, but I opted to only use it with them once, as I felt too many special effects would distract from the purpose of the visual novel.

The most complex, but still extremely easy, bit of scripting done was when the different choices

were added. A choice was added with the "menu" tag, which required at least two outputs.

```
Menu:
    "choice 1":
        "Something happens."
    "Choice 2":
        "Something different happens."
    "Continue normal narration / dialogue."
```

As this game is not a fully fledged game, but simply equivalent to a demo, the choices included in this game did not lead to any major changes. All the choices led to a few lines of different dialogue, before they branched back to the regular path. None of the choices affect the game's story in any way. In other words, while there is some local agency there is absolutely no global agency. This was to ensure that everyone who will eventually play this game as part of my thesis will get the same story. The choices were added to create the illusion of this being a proper visual novel with multiple branching storylines. The players will not be aware of this as they play the game. The other small changes to the script included things such as changing the hex color codes to more appropriate ones, and changing the padding of the text box below to make more room for Mera's icon.

An example of the UI of the game can be seen below. You may ignore the Plays.tv text on the top right. It is a separate program that runs when I have a game running that I forgot to turn off

Screenshot: "Edgy" version of the game. Conversation between Mera and Tima
for this screenshot.

4. Testing and troubleshooting

Due to the nature of this project, all the testing and troubleshooting was conducted by me. As the story element of this project requires the player to be unaware of what the story is like before playing it, I could not allow anyone to help me with the testing phase.

In essense, the testing and troubleshooting that was done was very simple. I played through the game multiple times at multiple stages of the novels completion to ensure that the script I had written worked as intended and did not have any logical inconsistencies when it came to the dialogue and narration. Before each version was created, I played through the game by examining each dialogue option, each narrative branch, each character expression and each background to ensure there were no grammatical errors, each dialogue option joined back to the main branch logically and smoothly and that each character expression made sense in the scene it was in, and was the correct size and in the correct position. The changing of backgrounds was also studied to make sure it looked good and fit the scene, and did not distract from the overall story.

Not much troubleshooting had to be done, as Ren'Py's engine is good at notifying the designer of the game of each error, what the cause is and what line in the script file it occurs in. This made the troubleshooting extremely simple and effortless, allowing me to finish the entire troubleshooting and testing process in around 3 hours total. As the product has not been tested with any people other than me so far, nothing further regarding the topic can really be said at this point.

5. Use in thesis

As made clear in chapter 1, this visual novel will be used to determine through interviews how the different artstyles affect the game's story. In the ideal case, each version will be played by 5 very different people, with different views of art and story. For example, I would like to have at least 1 person play through each version that does NOT think the artstyle of a game can affect its story, however, after scanning through the results of my initial survey, that seems highly unlikely to happen, as the vast majority of the 158 people who responded to that survey believe that the artstyle does have an affect on the story.

Another way in which this project is useful for my thesis, is that it allows me to create my second survey as well through screenshots of the game. I intend to take multiple screenshots of the same scenes with each different style, and use them as the images that will be used in my second survey. For example, the screenshot in 3.2 could potentially be one of them. The same line of dialogue will be shown to the person who is answering the survey in all four different artstyles and the answerer will be asked which style suits the feeling of that scene the best. Similar screenshots will be taken and used to ask the answerers what kind of genre they believe the style is best suited for.

The screenshot and art made for the games will also be showcased in the thesis itself to emphasize the differences between the artstyles and they will be analyzed alongside the results of each different survey.

6. References

Images:

[1] http://knowyourmeme.com/memes/subcultures/doki-doki-literature-club

Illustrations:

illustration 1: https://www.megatechnews.com/overwatch-free-play-play-weekend/

illustration 2: https://twitter.com/sockpuppetpanda/status/943588131261083648

illustration 3: https://www.kotaku.com.au/2017/07/dream-daddy-creators-explain-why-you-cant-smooch-all-the-dads/

illustration 4: https://www.anemonetea.com/gallery.html

illustration 5: http://transfusions.smackjeeves.com/

illustration 6: http://angelbeats.wikia.com/wiki/File:Sssbattlefrontova.jpg

illustration 7: http://megamitensei.wikia.com/wiki/Persona_3

illustration 8: https://fi.pinterest.com/pin/102175485277134606/?lp=true

illustration 9: http://k-on.wikia.com/wiki/Category:Characters

illustration 10: https://www.play-asia.com/persona-5-character-anthology/13/70bb7z

illustration 11: http://steven-universe.wikia.com/wiki/Steven_Universe_Wiki

illustration 12: https://filmschoolrejects.com/disney-remaking-kim-possible-live-action-movie/

illustration 13: https://nerdist.com/avatar-the-last-airbender-blu-ray-release/

illustration 14: https://nerdist.com/gravity-falls-finale-review/

illustration 15: http://kidscreen.com/2015/02/17/spin-master-named-master-toy-licensee-for-the-powerpuff-girls/

illustration 16: https://www.youtube.com/watch?v=_Buwei6ZWqU

illustration 17: https://www.newsarama.com/35857-mike-mignola-the-end-of-the-b-p-r-d.html

illustration 18: https://itunes.apple.com/us/app/the-world-ends-with-you-solo-remix/id544695089?mt=8

illustration 19: http://www.yaoiotaku.com/forums/threads/17707-Wild-Adapter-Anime-(2014)

illustration 20: https://shop.klei.com/product/dont-starve-t-shirt/

illustration 21: https://ridwankhan.com/the-ui-and-ux-of-persona-5-183180eb7cce

Links

https://www.renpy.org/

7. Attachments

Thesis_introduction.pdf – contains a slideshow with an intro to the game and the art

TangledVines_ANIMU.zip – contains the game's "animu" version

TangledVines_CARTOON.zip – contains the game's "cartoon" version

TangledVines_EDGY.zip – contains the game's "edgy" version

TangledVines_REGULAR.zip – contains the game's "regular" version

STORY SCRIPT.pdf – contains the game's basic script in pdf format