A research on amusement park three unique characteristics of: Escapism, Joyfulness and Series of symbols and how those can be used in the recreation of a VR amusement park

WanTing Hong (Iris)

Content Page

Abstract

From a long time ago, the concept of amusement park appeared in the human history. It includes all different kinds of "amusements" --entertainment activities, from the ones for people to interact with, to the others for people to just sit and enjoy. The idea of an amusement park can be broad and full of possibility, but it is always being as a physical space for people to engage inside. However, the development of virtual reality space shows a new way of entertainment, and it is happened inside a virtual space. What are the similarities between the advantage of the physical entertainment space--amusement park and the virtual entertainment space--virtual reality? What are the crossover characteristics and advantages between them, and what might be their differences? This research project will analyze both the design of the amusement park and virtual reality game, compares the examples for both of them and their direction during the development progresses, and propose a possible way to develop a amusement park in the virtual world for people to enjoy inside.

Chapter 1.1 Introduction

In the beginning, the idea of the amusement park is very simple--it is settled up for children to have a place to play with each other. Through researching for the original ideas of the amusement park, people can be amazed by the wisdom and the efforts that human beings have put on developing all different joyful activities for children, or not only for children, but also for themselves. As known by most of the people, an amusement park is not only a place for children, but also a place for all ages of people to enjoy themselves inside, so how can it be designed to bring joyfulness to all different ages of people, and why people want it to be in that form? There are many different kinds of entertainment activities being included inside the amusement park, from the children playground, the roller coasters, the swimming pool, the performance stages, to the theme parks, the festival/celebration activities, the fireworks display. Nowadays, besides the amusement park, there is also a new type of park, which is the virtual reality game parks, opening around the world. Examples like the *VR PARK TOKYO* in Shibuya, Tokyo, Japan, includes 6 different kinds of virtual reality game inside the park which provides amusement experience to people (The Japan Times, 2019). Virtual reality, as a new technology and a new form of entertainment, its own characteristic brings new experience into the traditional amusement parks.

Virtual reality, in the beginning, which the term was coming from novels, is started to be formed in shape with a photographer Morton Heilig developed a machine called *Sensorama* to display his films in a multiple senses experience (Norman, n.d.). Start from that period, these new types of experience have been research, trial and error, and developed, until nowadays. Virtual reality had been through a long way to be able to reach the level to be accepted as a definable entertainment activity, and it still has a long way to go. As it is been used not only for militarily, for medical academically, for educationally, but also for entertainment, more and more people are able to get in touch with virtual reality, and get to enjoy this new type of experience. I define that the entertainment experience of virtual reality is an experience that while experiencing it,

people are escaped and being shut down from the physical world and the surrounding, but at the same time they are diving into a new world theoretically, logically, and psychologically.

For all different types of entertainments/amusement activities, such as sports games, board/card games, festivals, performances, etc... what had distinguished the amusement park as a new types of entertainment activities, or what had made it different as a individual form of amusement? And more importantly, as the pandemic of corona-virus disease appeared suddenly inside the world, the traditional industries of amusement parks were being impacted strongly during these three years. Shown by research articles, *From Gardens to Rollercoasters: A Brief History of Amusement Parks* by Kaley Overstreet in 2022, *AMUSEMENT PARKS HISTORY: FROM THEN TO NOW* by Chantae Reden in 2022 and *What Is A Theme Park?* by Jeremy Thompson in 2020, the outdoor activities had decreased extremely after the pandemic, and more people are willing to spend time indoor or visit spaces with less passenger flows. In this situation, virtual reality, as a new type of entertainment, a place where people are able to both being physically indoor but also being visiting new place theoretically, logically, and psychologically, it has the possibility to bring similar experiences which people can have inside an amusement park, but also give them new experiences which people cannot have inside an amusement park. I will use the selective unique characteristics in the creation of amusement park and analyze how it might be used to re-create the amusement park experience inside virtual reality.

Chapter 1.2 Methodology

The thesis is going to look at the history of amusement parks, the examples of amusement parks, and the development design of the amusement parks, and connects to the similarity of the experience of amusement park and the experience of virtual reality experience. In order to implement this idea, I would start the article with analyzing the historical background, the original of amusement parks using research articles as well as some other journalists and Investigation reports, in order to help me understand better about the basic form of an amusement park. Jeremy Thompson (2020), in the article, emphasized the movement of the

development of amusement park, which would lead me to find the design ideas of the amusement park, along with the analyzation of the design style. I am using two books, *THEME PARK DESIGN* written by Steve Alcorn (published in 2020), and *Theme Park Design*, written by Dvaid Younger and Tony Baxter (published in 2016), to support the design analyzation for building up an amusement park. They generalize the feature of designing the park into themes with series of symbols, which would allows me to draw the similarities between the creation of an amusement park and a virtual reality environment, and also allows me to get a better idea on the creation of my own virtual reality amusement park.

In the case study, I would go to compare different kinds of virtual reality games which would have the characteristic similar with the characteristic of amusement parks, including a VR amusement park game called *Summer Funland*, and analyze the formula of the design inside the game which works with the research of the formula design of amusement parks. Finally, start with a questionnaire I made to give me a basic database of what might people feel interested in a VR amusement park game, I would talk about how I use the design from amusement park to develop my final project and what are the special advantages for this virtual reality experience which are still not able to be accomplished inside an amusement park in modern days.

Chapter 2 Context Review

2.1 History of the Amusement Park

Historically, there are two different roads which were be defined by people that contains the original idea of the amusement park. One of the ideas was that amusement park was coming from a playground which is built for students in a middle school in German around last century. Children are able to meet with each other, play with their friends using the installations inside the space. The other idea, according to articles such as the one that was written by Chantae Reden, called *AMUSEMENT PARKS HISTORY: FROM THEN TO NOW*, published on March 22, 2022, declared that the archetype of amusement parks was coming from Europe, from the *theme*

festivals, religious holidays and seasonal harvests which appeared around or before the Renaissance era. People would sit together on the playground to share their food, they were also able to chat with each other, walk around, watch dancing and musical performance. The other studies of the history of the amusement park also demonstrate that the finish of the evening would be some beautiful *firework shows* (Overstreet, 2022).

In ancient China, there are similar activities such as the *Chinese Lantern Festival*. It is a festival which is celebrated on the middle of the *first month* in the traditional Chinese Luna calendar, which would be around February or later, in the beginning of March. During the festival, there would be many different kinds of cultural performances, which includes activities such as *guessing lantern riddles*, *watching Lion dance*, (Meredith, 2022) and looking at other musical instrument/drum performances. Children would also carry lanterns and go to visit their friends during the festivals. Delicious food are also been shared during the festival, and fireworks is going to cal out the end of the festival.

During 18th century, because of the rising of economy, more and more people with extra time and money to spend, and they become the target customers of the companies, who create a new type of garden called *pleasure gardens* (Reden, 2022). These gardens were be the best match for these middle class to have social communication with people they were not familiar with, to enjoy amusement activities such as play different kinds of games, and also to have a place to show off their best clothes. They also got famous across the pacific ocean, in the North America. Pleasure gardens are opened in the *New York City*, and they added one of the best famous amusement program in the amusement park nowadays, which are the *rides* and *the first carousel in North America* (Overstreet, 2022).

Even though the idea of the pleasure garden was very popular until the late 1800s, due to an unusual reason, (which is not related a lot with the quality of the amusement programs inside the pleasure garden), the amount of the pleasure gardens decreased, and a new types of these kind of amusement park, which is closed to the amusement parks that people are familiar with in

nowadays, has increased during the end of 1800s. The main reason of this movement is because that *the trolley companies* need to pay for electricity fee each month (Kaley Overstreet, 2022). These trolley companies wanted to make people take trolleys not only in the peak times but also the other times, so they start to build up a new kinds of parks that include mini rides, mini games and resting area, which would allow people to stay in the park during the evenings and the weekends. An example of these kinds of parks, which is also known as one of the first and most famous amusement park, is the *Coney Island* in the New York City. Joyfulness is the most important experience that needed to be include inside the design of these kinds of amusement park with no doubt. No matter it is the *"fun" of an escapist attraction, or the "engagement" of a pedagogical attraction* (Younger and Baxter, 2016). From the traditional programs like the roller coasters, the merry-go-round and the ferris wheels, to jumping machine, mini games, and even water park, all different kinds of programs give a variety of interaction experience inside an amusement park.

However, going along with the idea that one of the key experience inside an amusement park need to be enjoyable, people also question if an amusement can provide an escape place for people to escape from their daily life. Some designers also believe that although an amusement park gives an experience linked with escapism, it is also a place about reassurance. One of the park designer called Marty Sklar said that a park is *not about escapism*, but also a place where people can talk to unknown people in a public, clean place, and people can feel that *things can be done right*, and they can say they feel so good and *feel optimistic* about the *future* and the *world* (Younger and Baxter, 2016).

2.2 Movement of the Amusement Park--the Theme Park

Amusement parks, nowadays, had developed into many different kinds. One of the biggest and significant kind of amusement parks, which is also well-known by most of the population who had been to an amusement parks, is the theme park. Normal definition of an amusement park is demonstrated as a place with *mechanical rides* which are designed of a thrill experience for

visitors who are seeking of simulating sense enjoyment, whereas a theme park is a combination of pleasure sensation experience with narrative element/storytelling, in order to give the parks a specialized meaning and a unique playing experience including narratives. In the previous research, I had talked about the history of the amusement park, and the first and famous amusement park called Coney Island in the New York City. By that time, there are also other words to describe these kind of parks besides the "amusement Park", such as the "trolley park". Companies were named the parks simply in order to express their business philosophy of the parks towards the visitors. *Hundreds of Coney Islands, Luna Parks, Dreamlands, White Cities, and Electric Parks* poped up all around different countries (Jeremy Thompson, 2020).

As the result, some large Trolley parks' companies, as well as some companies that owned popular amusement parks, started to claim the copyrights, or the specialty point of their amusement park using different methods. Some of the companies started to develop unique characteristics inside their amusement parks. Not only use the mechanical attractions, but also use themes to attract customers. According to the research article *What Is A Theme Park?*, written by Jeremy Thompsons (2020), the idea of the theme park was developed few years ago before Walt Disney built up his Disneyland Park, but Walt Disney clearly realized that he needed to specialized the park from the other hundreds of, thousands of amusement parks all around the world. Therefore, the term "theme park" appeared at the first time in the newspapers around the beginning of 1960s, and it was also used as a label to advertise the Disneyland Park. The business success of Disneyland gives a new direction for the amusement parks' companies, with more and more companies start to claim their products with the label of the "theme park". Nowadays, many famous theme park examples such as The Six Flags, the Disneyland park, and the Universal Parks&Resorts (the Universal Studios Theme Park), etc...are well known by people. It is way beyond all doubts that the famous amusement park in modern days are following the direction of design of theme parks. Alongside with defining the difference between different kinds of amusement parks or the special points of theme parks, I am going to analyze the feature of the design inside the theme parks as the representation of the design for amusement parks.

2.3 Key of the design of experience in a theme (amusement) park

The theme park, as well as the amusement park, is a place not only for children, but also for all ages of people to have amazing experience inside. There are many different kinds of game programs inside a theme park--from the motive and popular programs such as the Roller Coaster and the Mega drop (Turbo Drop), to the gentle programs such as the Merry-go-round and the Ferris wheel. However, as I start to do the research of the theme park, I found out that the amusement experience that provided by the designers of the amusement park, are not only coming from all the different kinds of game programs these designers had designed in the amusement park, but also coming from the design of the entire visiting experience.

Described by a designer called Bill Walsh, he claims that the idea of Disneyland is very simple, which is not only a space where people can gain joyfulness and knowledge inside, but also a space where family, both children and parents, can play together and have a great time with each other, a space for students to explore the world and get educated. Bill Walsh concluded Disneyland with this paragraph: "*Here the older generation can recapture the nostalgia of days gone by, and the younger generation can savor the challenge of the future. Here will be the wonders of nature and man for all to see and understand.*" This reference from Bill walsh is quoted in the book, *Theme Park Design*, written by David Younger and Tony Baxter (2016), and this type of concept of the theme park leads him to a conclusion, which is that people visit the theme park with many different kinds of reason, but the theme park would give them a variety of experiences, as draws in words for business used, as 10 key words: "*Fun*", "*Story*", "*Escapism*", "*Spectacle*", "*Thrill*", "*Play*", "*Sociability*", "*Pedagogy*", "*Customer Service*", and "*Memories*". More specifically, the designers create space for people to escape from their daily livings, to play and have fun inside, even to have some thrill experience with pleasure and without danger. This kinds of design can be concluded into two key terms, the *Escapism* and the *Joyfulness*.

2.3.1 Escapism

The characteristic of Escapism that a theme park have, can be demonstrated as the immersive experience that the theme parks can provided to people. When people are walking inside the park, they feel that they are involved in the environment and the stories, and a theme park which provides them a space to relax and play, might make them feel relaxing and escaping from the real world's pressure. As one of the example, when people go to Disneyland, with the sections provided inside Disneyland, such as the *Alice in Wonderland,*(A website link with the introduction of the sections of Disneyland would be included in the reference chapter), people have a chance to become Alice and go through the adventure world that Alice had been through inside the story.

2.3.2 Joyfulness

In an amusement/theme park, there are always many different kinds of interactive sections that can provided amazing experience which people normally are not able to experience in daily life. For example, ferris wheel, which a rotating wheel bringing passengers at a height view, can provide a joyful experience based on a beautiful viewing from a higher point of view without security risks. The Roller Coaster section, which is a famous upper air, weightlessness, sensational experience, has been developed into many different kinds of structures in order to fit all different kinds of needs for people who enjoy them. On the other hand, stories are built for making people to engage inside the park, knowledge and the design of the visual sometimes would also amazed people. People often go to park with their friends or family members, but even if they go alone, they are more likely to talk to other unknown people inside the park, or have communication with the staffs or workers who do character performance in the park. As the conclusion, the designers filled the expectation of the visitors with these combination of experience inside a theme park. No matter young or old, female or male, shy or optimistic, a theme park is created for all different kinds of people to enjoy this place.

2.3.3 Series of symbol

Besides a space of escape, a space with joyfulness and thrill experiences which are provided by interactions and communications, narratives are also important inside a theme park, and the narratives, or the stories which are sale by the theme park designers, are incredibly important because stories are the "*brand*" for theme parks. With stories, visitors are able to have immersive experience inside a park, *where the forth wall is removed* and this allow theme parks to continue be popular in the 21st century (Jeremy Thompson, 2020). However, the "story" term inside a theme park, is usually misunderstood by people, since the word originally demonstrates storytelling with narratives. In the research of *What is A Theme Park?* by Jeremy Thompson, he says that "*In truth, a theme park, by its permanent physical presence and free exploratory design, is actually a fairly presence and free exploratory design, is actually a fairly difficult medium for traditional narrative storytelling…Instead, themes parks can perhaps best be conceptualized in terms of 'symbols' and 'series'.* "(Jeremy Thompson, 2020). As an example, Jeremy Thompson talked about *an audio-animatronic crocodile,* which can be considered as a representation for both as an animated figure and as an emotional symbol which would remind people of fear and other emotion. Although the objects inside the parks are different from the reality, they contains symbols, from the architecture styles to the iconic figures inside medias, which would very likely to make people feel like they are familiar with the place and feel more involved into the place.

However, symbols are also been placed in people's daily life, such as the sculptures around landscape and malls. What made a theme park different from these place? This comes to a further design of the symbols inside a theme parks, which is the arrangement of the symbols. When symbols are being placed in certain design arrangement, they become the second part of the formulas to design a theme park, which is "the series". This idea of "the series" is claimed by Jeremy Thompson (2020), and he gives examples explaining how the creation of Disneyland involve the idea to reach a success of creating a story-like immersive place. The former senior vice president, John Hench, attended the design of the main street of the original Disneyland. His design had been used as an iconic example where the idea of "the series" can be used to create

narratives inside a theme park without any specific figures or stories. In the article, Jeremy Thompson analyzed that "*The series on Main Street is used to establish a fixed sense of time and place: A City hall is followed by a Fire Department, then a row of commercial establishments with typical Victorian architectural details including a Penny Arcade and Nickelodeon theater… taken together as a series, the relationship between these objects and the fact that they all share a common category creates a single unified identity: a turn-of-the-century American town.*" (Jeremy Thompson, 2020) .

As a conclusion, in the foundation of a theme park, it is very important that the key idea of the design of a theme park, is to create an immersive experience tour which is an experience infinitely closed to what would make people feel like they are involved inside a series of narratives. Joyful interactions no matter mild or simulated, are important for the amusement park, but most importantly, the designers need to arrange series of symbols in order to create narratives for the park. For a lot of people, the theme park is not only a physical place where they can escape from their real life, but also a place where they can experience joyfulness, experience narratives, and have an irreplaceable, unique, extraordinary time.

Chapter 3 Case studies in Virtual Reality experience

After doing the research of amusement parks, the key ideas of the design can be concluded by certain important terms. In this research, I focus on emphasizing three key terms inside the experience that an amusement park can provided. The three key terms are the *Escapism*—With escapism, the space provides a place for people to escape from their daily livings, to immersive into another world, to play and have fun inside, even to have some thrill experience with pleasure and without danger. The *Joyfulness*—With Joyfulness, the space let people in different ages to enjoy inside the place which includes variety of stories, interactions and amazing experience. The *Series of symbols*—With Series of symbols, the space contains symbols that people are familiar with in order to let people feel that they can get involved in the narratives of the space better.

3.1 Virtual Reality as a place for Escapism—*VR Chat*

Virtual reality space is a place which is physically not exist in the real world. People can escape from the real world, change their identities and become new figures inside virtual reality space. Some virtual reality experience only offer escape experience with limitation, for example, virtual reality with narratives would help people to escape from their live and become the main characters inside the stories, but this experience offer a single-player experience, with no social communication or further development of the stories once it ends. Other virtual reality game, such as the one called *VR Chat*, as one of the most famous virtual reality game, is well-known with its high-level of freedom of virtual online social interaction which make the game to be able to have a huge amount of social communities which are created by people all around the world. In *VR Chat*, players would used the avatars they choose, such as their favorite avatars they download online, or create by themselves. This is the first step where they got rid of their physical bodies and identities inside a physical world. People can become into any figures they want, from male to female, cartoon figure to realistic figure, aliens to non-living things. Although the quality of the avatars are in an uneven level, people can change their avatars inside the game easily and fluently. This provides people to have a chance to have satisfaction of self-identify. An article which is called *Body Language: Avatars, Identity Formation, and Communicative Interaction in VRChat* had talked more about it (Cristina Montemorano, 2022).

(Figure 1 Screenshot in VRChat)

(Figure 2: Screenshot of VRChat group)

Although *VR Chat* only have simple interaction ability, the open world characteristic, which is similar with Minecraft, that players are able to create their own world inside the game, also make the experience of playing *VR Chat* not as an experience of playing a great game, but as an experience of exploring other people's creation as well as developing people's own creation. People can choose what kind of space they want to be inside the game, whether or not they want to talk to people, or how long they want to spend inside the game. The minimum limitation of game rules and the plentiful freedom and spaces for develop creativity give a sense of achievement for players. People create groups, communities, even large organization inside the game, with people who are all around the world, with people who are not familiar with each other at all. This characteristic of escape into another world where contains a new type of social system—the cyber society, has a high similarity with the characteristic that a theme park contains, which is shown in the previous research. *VR Chat* is one of the most success virtual reality game around the world, and both the variety of avatars and the cyber connection between other people provide a satisfied escapism experience for the players.

3.2 Virtual Reality as a place for joyful interaction and physical sensation—*Summer Funland*

An amusement park inside virtual reality, this is the most simple and accurate description of the game. Players are able to experience all different kinds of programs inside this virtual reality amusement park—there are many different kinds of roller coasters, and some of them are set up

with universe background or deep-sea background, which would be impossible to experience inside a real world. There are also many interesting mini games inside the parks, which includes games inside a real world amusement park, such as a shooting games, whack-a-mole games, and also games that are not able to play in real world, such as the Fruit Ninja. People are not only able to play the programs, but also able to interact with the objects in the environment, for example, they can blow away balloons and catch animals (Video reference: Let's STFU and play, 2019).

(Figure3: Screenshot of Summer Funland)

There are no stories in the entire game, but there are goals to achieve. Once players get succeed in all the games and collect all the stars, they are able to reach the end of the game—which is a firework show around the amusement park world with the time of the game switch towards evening. Although players get into the game on their own, there are NPCs characters which are randomly set up inside the game, only that players are not able to interact with them.

As a conclusion, *Summer Funland* seems to be the answer of what a great proportional reproduction of an amusement park with some virtual game elements be contained inside. Players' review show that this is a great game to play, with a great amount of interaction, a colorful visual design and an atmospheric background music. However, it is not a game that is fun for replay, even the rides and the games are only enjoyable enough at its first play. This might also link to the reason why those amusement parks which are without themes in the real world also decreased in the and of last century, since it is hard to attract people and let them feel like the world is worth to play again.

3.3 Series of symbols as narrative design in Virtual Reality experience-*The Invisible Hours*

From the research study above, I find out that even a game that is full of the joyful interaction and sensual pleasure as *Summer Funland*, it is still hard to make people feel like they want to return to the game and play again. This situation is worth to be emphasized and question. Similar with the develop history of the actual amusement parks in the real world, even a virtual reality amusement park, without any narratives, is hard for people to enjoy for a long time. For this section, compared to discuss about how virtual reality creators create stories inside hundreds of amazing virtual reality games, I did a research about best immersive experience virtual reality game, and I found out a game called *The Invisible Hours*.

Not only theme park designers, virtual reality game creators also seek for a better way to build up an immersive experience. *The Invisible Hours*, according to the *Top 10 Story Driven VR Games ranking video* (Ben Plays VR, 2019), is one of the top 10 story driven virtual reality games. This game put players into a new form of perspective inside a murder story. Normally, story-telling virtual reality game would have characters be involved inside the story, and by interact with characters or things, it would push the story go forward. However, inside *The Invisible Hours*, players are not able to change the story as well as not able to be seen by any characters inside the game. Instead, players are able to navigate freely, go anywhere they want, and listen to any characters' talking. Most importantly, players are able to control the timeline of

the game. They can resume the game, pause it, fast-forward it and rewind it. With interesting script, amazing voice-acting as well as amazing character performances, and well-structured background environment, players are able to feel fully immersive inside the story. The interesting interaction, besides the object hunting, which is the time controlling system, also demonstrate a new type of immersive theater experience which could be done by virtual reality.

(Figure 4: Screenshot of *The Invisible Hours*)

There are two main design ideas, which is similar to the use of series of symbol inside theme park design, are shown inside the design of *The Invisible Hours*. One of the designs is the high quality of the background set up, the style of characters' clothes, as well as the objects inside the building, symbolized the time period of the story. The key color tones are red and brown with dark lighting effects, which easily remind people of many classic detective works they might seems before. On the other hand, characters inside the game all includes details of movements and nice voice actings, which add the reliability of the story—people are more likely to get involved inside the atmosphere. The talking between characters demonstrates their identities as well. For example, some of the characters speak arrogantly with peculiar accent and strange

posture, which helps people realize what kind of characteristics these characters might have, and remembers their figures clearly. This is the background design of the game, which is also similar to the idea of the foundation of the main street in the Disney park. On the other hand, the capability of playback function also reminds people of the experience that people normally would have when they are watching movies at home. As studying into this game, I believe that sometimes not only certain objects can be symbolized, but also certain experiences can be symbolized as well. *The Invisible Hours* is a great example to show how people can use the idea of series of symbolization to create a better immersive virtual reality game.

Chapter 4 Final Project Design
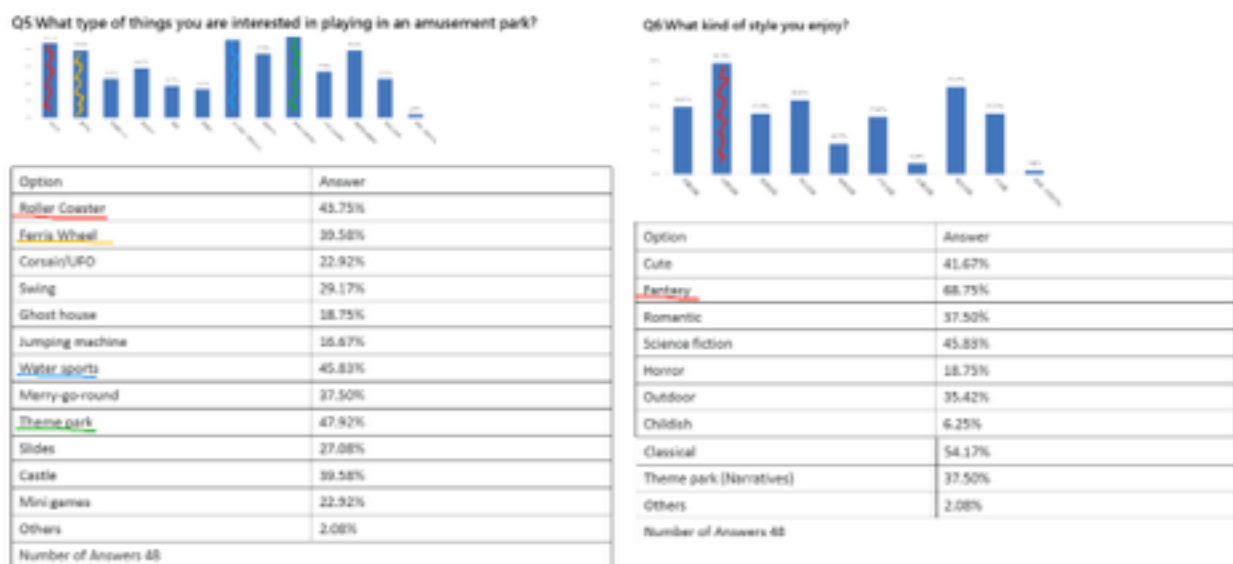
4.1 Concept for final project

For my college project, I had tried to create a joyful virtual world, to make up that I did not have enough time to play in my childhood. It is also a progress of art therapy. Although I only built up a small area, many people talked to me about the world and they say that they also feel getting rest and feel comfortable inside the space. With the knowledge that I had learn in class, and the researches for the design of the amusement park, I wonder if I can recreate an amazing amusement park entertainment experience inside virtual reality. The park might be different from the real world one, and it might not go further enough with the limitation of time, but with the research I had studied, I try to design the experience that includes the idea of escapism, joyfulness and series of symbols.

In the beginning, I have the idea with designing few worlds where people can see the history movement of an amusement park, as well as the variety of playable sections they can enjoy inside the park. However, as I develop my research idea, I found out that instead of reproduce the history of the amusement park, a reproduction of the amusement experience that an amusement park can provide to people is what I am more interested in. I change my idea of creating serval

worlds into three specific different kinds of worlds inside this virtual reality project. All of them represent different design directions that I try to approach with the same three unique characteristics ideas that I have with the research of the amusement park.
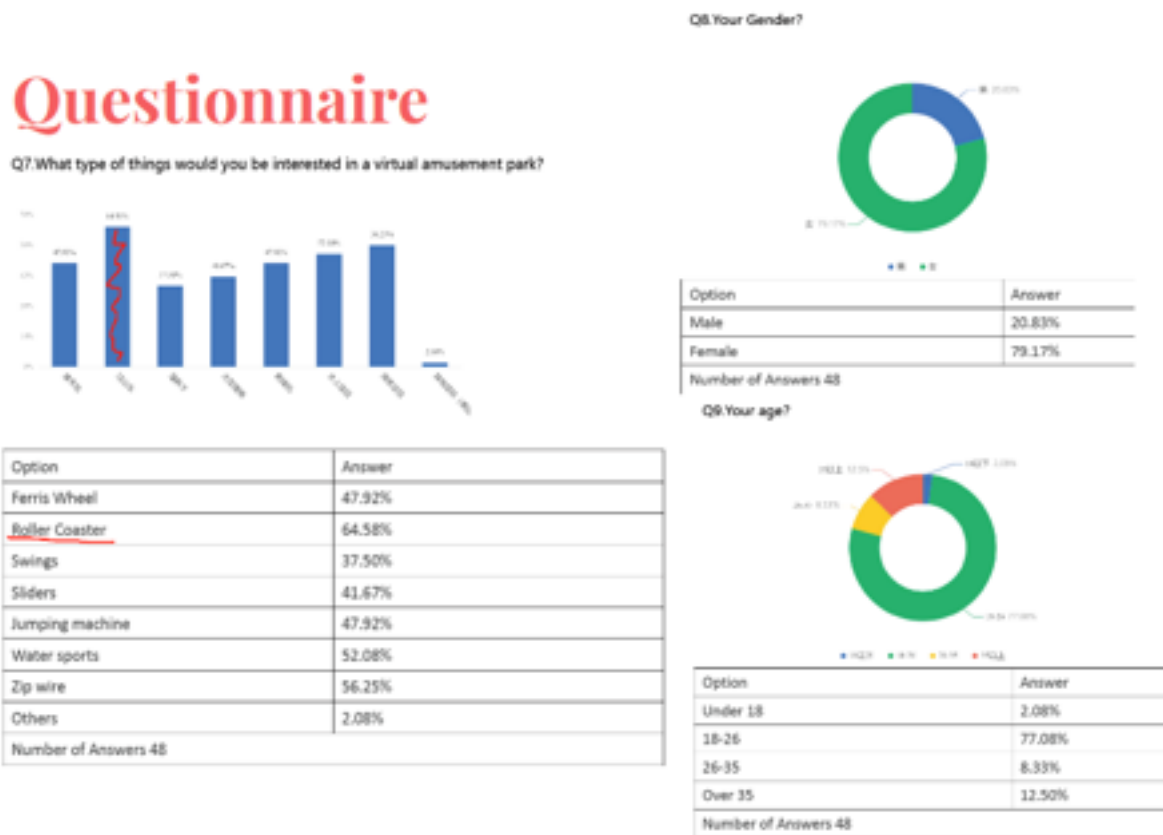
4.2 Questionnaire for early stage game development

I set up a questionnaire in the early stage of the progress of the creation of my final project (A website link with the questionnaire would be included in the Appendix chapter). There are 9 questions inside this questionnaire. Questions like *What type of things you are interested in playing in amusement park?* or *What kind of style you enjoy?* (Figure 5) are designed for getting a basic idea of people's interested inside the amusement parks, what types of themes they might enjoy, what type of sections they enjoy and what kind of playable sections they might be interested in inside a virtual reality amusement park. The questionnaire was been posted on three different kinds of social medias—Weibo, Wechat, QQTencent, and with a good variety of gender and age, I have 48 people in total who completed the questionnaire.

Q5 What type of things you are interested in playing in an amusement park?

Option	Answer
Roller Coaster	45.75%
Ferris Wheel	39.58%
Corsain/UFO	22.92%
Swing	29.17%
Ghost house	18.75%
Jumping machine	16.67%
Water sports	45.83%
Merry-go-round	37.50%
Theme park	47.92%
Slides	27.08%
Castle	39.58%
Mini games	22.92%
Others	2.08%
Number of Answers 48	

Q6 What kind of style you enjoy?

Option	Answer
Cute	41.67%
Fantasy	68.75%
Romantic	37.50%
Science fiction	45.83%
Horror	18.75%
Outdoor	35.42%
Childish	6.25%
Classical	54.17%
Theme park (Narratives)	37.50%
Others	2.08%
Number of Answers 48	

(Figure 5: Questionnaire Screenshot 1)

For the questionnaire, I choose two questions which I think are the most important references that I can used for my research project. They are shown above. The top of the sections that people are interested in playing in an amusement park is the theme park section with 47.92% choose it—which is the narratives/storytelling background of the park. The Roller Coaster section, and the Ferris Wheel sections, which have 43.75% and 39.58% of people chose, are people's favorite upper-air sections. For the style of the park, 68.75% of the people, which is more than half of the people choose the Fantasy theme, and Classical theme is the second choice with 54.17% of people choose it.

Q7.What type of things would you be interested in a virtual amusement park?

Option	Answer
Ferris Wheel	47.92%
Roller Coaster	64.58%
Swings	37.50%
Sliders	41.67%
Jumping machine	47.92%
Water sports	52.08%
Zip wire	56.25%
Others	2.08%
Number of Answers 48	

Q8.Your Gender?

Option	Answer
Male	20.83%
Female	79.17%
Number of Answers 48	

Q9.Your age?

Option	Answer
Under 18	2.08%
18-26	77.08%
26-35	8.33%
Over 35	12.50%
Number of Answers 48	

(Figure 6: Questionnaire Screenshot 2)

There are 48 people in total who answer the questionnaire, 20.83% are males and 79.17% are females. There are ages from children who are under 18, to adults who have families and age above 35. Along with the variety of ages and genders, in conclusion, the questionnaire demonstrates that people are more likely have more interested in having upper air experience,

such as playing roller coasters, ferris wheels or other upper air sections. people are also more likely to be interested in topics that are mild and not too realistic, such as Fantasy theme and Classical theme.

Fantasy theme turns out as the top one in all the themes that people are mostly interested in, and I enjoy the fantasy style as well. Going along with this idea, I decide to create a fantasy space experience inside virtual reality as my final project which includes three different kinds of imaginary worlds inside. I also choose to reproduce the experience of famous upper air sections, such as roller coasters and ferris wheels inside my game. The title of my game is called *The Delusional Play-land*.

4.3.1 Three worlds inside the game: World 1-The Delusional Children Playground

According to the history research of the amusement park, I found out that the beginning of the idea is coming from the playground which is the place for children to play with each other and explore the surroundings. When I first start to develop my final project idea, I saw a music video called *FuwariFuwari* from a Japanese music artist called Hatano Wataru (avex, 2019), which is about a business man who is tired after work, who wants to escape from his heavy life, sitting inside a children park and try to play the things inside the playground to find back his heart which he had lost after growing up. The performance of an adult tries to get back to his childhood inside this children park makes me consider I might be able to recreate this childish space inside virtual reality for anyone in any ages to play inside.

(Figure 7: Delusional Playground Screenshot)

Both of the interactions and the set up are simple but significant. Since this is the beginning scene, I want both of the interactions and the set up are simple but significant. Based on the series of symbols, I choose what people are mostly familiar with in the playground to build up interactions. Slides, swings, seesaws and climbing grids. The whole space is free navigation in which playing and walking around freely is the main idea of the space. People are able to choose to play sands, play slides, or just sit on a rocking horse. This scene is also the beginning scene. By sitting on the swing, people would see the entrance of getting into two other worlds. The idea of designing the children playground as the start of the game and let it be the connection to the path towards other two worlds is to remind people of their childhood age, and make them feel like they are children who are ready to explore new worlds next and have great adventures inside.

4.3.2 Three worlds inside the game: World 2-The Delusional Forest

From ancient time to modern days, many people are sinking for getting in touch with nature. Before the city was developed by human society, people are having more time getting along with living nearby nature. However, people nowadays are being restricted by the society and are being further and further away from nature. One could think that there are needs for some human beings to connect to the nature, which might come from some of their instincts, and that is the reason why some people are interested in viewing or creating art pieces that talks about rivers and forest, such as the *Water Lilies* created by Claude Monet(1920), films about exploring

unknown islands, such as the *Atlantis* directed by Luc Besson(1991), games about living in a
field, such as the *Stardew Valley* produced by Concernedape(2016).
(Figure 8: *Water Lilies* by Claude Monet, 1920)

This space is created for people to experience nature, as a comfortable spaces—which provides a
place for people to escape from the physical world. There are not many interactions but more
about walking around freely, listening to the sound and feeling that the players are being hugged
by nature. This forest is created based on fantasy theme. I want to provide a place for people to
escape from the physical world and feel purified by the nature.

When I develop the scene, I start with the idea of create an unusual forest, with large mushrooms
grow all around the forest and sky are covered by giant trees. For the reference, I look at games
with beautiful fantastic forest designs, such as *Final Fantasy XIV*(Figure 6, Square Enix, 2010)
and *Pokémon Sword and Shield*(Game Freak, 2019), also films like *Avatar*, produced by James
James Cameron(2009), and *Life of Pi*, produced by Ang Lee(2012). In order to make people feel
some variety inside this environment, I also design some changes of the climax, such as raining,
and change of light. Based on the research above—Chapter 2.3.3, regarding the importance of
designing series of symbols, I also include symbols inside the game, where I choose giant
mushrooms as the representation of the combination of fantasy and real nature elements. People

are also able to play simple music by touching the mushroom, and this is designed for making

people have some joyful interaction experience inside the place.

(Figure 9: Screenshot of *Final Fantasy XIV*)
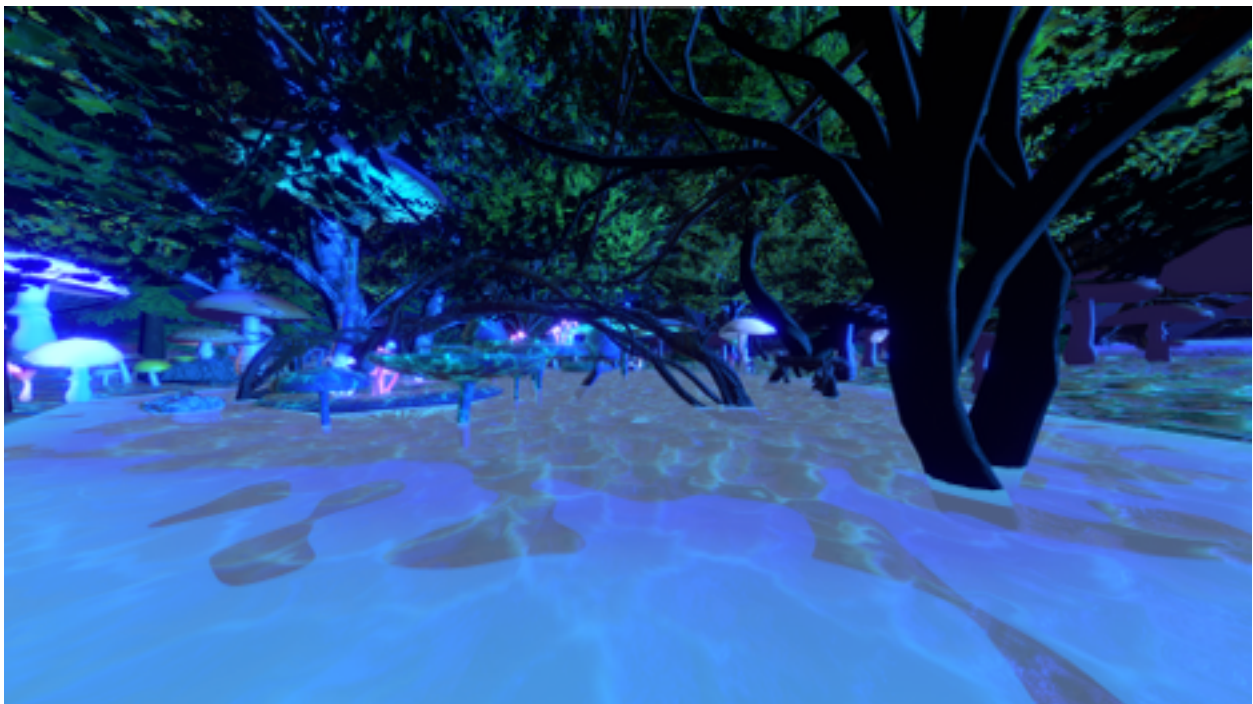
(Figure 10: Delusional Playground Screenshot)

4.3.3 Three worlds inside the game: World 3-The Delusional Main Land

As the representative space of the combination of amusement park and virtual reality, this is the main world where I tried to fill the world with vivid designs and as many interactive sections as I can. Follow with the researches and conclusions I have in the above paragraph, I spend a long time on designing the theme of the park, where I want to have a series of easy understand symbols that are not only what people familiar with, but also are things they normally would not be able to get in touch in the real world, even inside an actual amusement park. The answer I reach is to design a universal background amusement park, and I choose to keep the fantasy style be the same as what I have for my delusional forest scene. I search for databases of the planets, and recreate the community of the solar system inside the universe which people are most likely to be familiar with.

(Figure 11: Delusional Park Screenshot)

As I am creating this scene, I am focusing on trying to create both the experience that people can have inside the amusement park, and the experience they can only have inside a virtual reality game. By doing this I choose some playing sections inside an amusement park and redesign the sections. Sections to play in the games include two types of roller coasters, Mary-go-round, Swing boat, Ferris wheel and etc. People can choose different sections and have fun as long as they want inside the park. As an example of recreation of a playing section, a train guiding around the park is a section that an amusement park usually have, and I choose to make it as the entrance section where people can look around the whole park from an upper level which normally people are not able to experience. The concept of the train coming from a Japanese classic novel with fantasy topic called *Night on the Galactic Railroad*, written by Kenji Miyazawa(1985). On the other hand, inside the park, some of the sections are designed in forms which are different from real sections inside the actual amusement park. For example, there is a mini swing section which has a normal size of swing, and there is a large swing section which has a giant swing for people to try on. The jumping machine section is redesigned into a spaceship shuttle (launching rocket) experience because I want both the design and interaction style of the section to be more connected with the solar system theme. Other small interactions such as having food is also included inside the game. By applying the experience of escaping into this park where full of universe elements, and the experience of enjoying all different kinds of playing sections that are not only similar to actual amusement park playing sections but also have its own special characteristics, I try a lot of directions to create a enjoyable virtual amusement park experience in this world.

4.4 Gameplay

As the picture of the game structure shown above, when people go inside the game, the first scene they would be inside is the Delusional Children Playground. People can have free navigation inside the space, and there is a swing set up at the end of the playground with an indication board saying that from here the players are able to go to other worlds. Once people

interact with the board, they would be sit on the swing automatically, and with a few seconds of animation, they would go to the next scene where they can choose to leave the game, to go to the other two worlds, or to go back to the playground. In the other two worlds, the Delusional Forest and the Delusional Main Land, there are also indication boards/signs which can transfer people back into the scene where they can choose to go to other worlds or end the game.

Chapter 5 Conclusions with further development

For my final research thesis and project, I study the history of amusement parks, research on the design of the amusement park, analyze the unique characteristics inside the design of the amusement park, and use the conclusion of three characteristics, escapism, joyfulness and series of symbols to create a better entertainment amusement world experience inside a virtual reality game. As one of the example on the research above—Chapter 4.3.3, shows that my aim is to combine the unique characteristics of the amusement park and develop a virtual reality experience that can provide unusual amusement park experience (such as an amusement park inside a universe), which is limited in the actual amusement parks inside real world. For the further development, I am thinking of adding more interactions in the environment for the *Delusional main land,* such as adding some mini games and adding a place for water sections. I might be able to apply a better UI design into the game as well. Climbing interaction is also what I am interested in learning since I tried during the creation and it is hard to achieve. On the other hand, for this time I only send the questionnaire to people who have similar grow up background with me (e.x., Asians), because the questionnaire was set up during the summer break, and it is hard for me to get a good variety of gender and age in other background. For the further development, I believe that another questionnaire can be set up towards people who are coming from all different background.

I enjoy the research of the amusement park, and I am interested in develop this research further more in future. Besides the research of the design of the amusement park, I also read through

articles how about artists doing researches on the virtual roller coaster experience and making tests to see if people can feel the weightless experience in virtual reality. I think the research on improving the weightless experience and decrease the motion sickness inside these kinds of virtual reality experience is what I am also interested in developed further. Besides the roller coaster, I believe that having research for the physical calculation and the structure design in all other sections is going to improve the experience better in future.

The research of the articles give me the based of knowledge to build up my project, however, I have faced many challenges through creating it. One of the hardest challenges which is the one that influenced my development schedule the most, is the bronchitis that I started to have after having a heavy influenza in the beginning weeks of the October. It is the time I plan to furnish my design of the space as well as developing the interactions inside the space. The heavy influenza brought me a heavy symptoms of coughing, which turns to chronic inflammation of my throat, highly be bronchitis which is diagnose by my GP. The coughing makes me hard to stay up to work for more than an hour. The symptoms get worse during the morning and evening, which makes me hard to sleep in the evening and make the progress of recover slowly and also make me hard to focus on developing my project. In order to try the best to develop as much as I can, I cut off some interactions ideas and turn them into simple designs. For further development, I definitely want to create as many design as I can, and put more details into building up music and surrounding as well. I am still on the way of creating what I want, further away from the goal, but I tried my best to bring this amusement space to you, and I hope at least they provide some amusement experience to people.

Reference

Book & Online Articles reference:

1. Alcorn, S. (2010). Theme park design behind the scenes with an engineer. Orlando, Fla. Theme Perks.

2. Meredith, A. (2020). Lantern Festival History and Traditions | China's Yuanxiao Holiday. [online] CLI. Available at: https://studycli.org/chinese-holidays/lantern-festival/ [Accessed 10 Oct. 2022].

3. Miyazawa, K. (2014). Night on the Galactic Railroad & other stories from Ihatov. Long Island City, Ny: One Peace Books.

4. Montemorano, C. (n.d.). Eagle Scholar Eagle Scholar Body Language: Avatars, Identity Formation, and Communicative Body Language: Avatars, Identity Formation, and Communicative Interaction in VRChat Interaction in VRChat. [online] Available at: https://scholar.umw.edu/cgi/viewcontent.cgi?article=1382&context=student_research [Accessed 1 Sep. 2022].

5. Norman, M. J. (n.d.). The Sensorama: One of the First Functioning Efforts in Virtual Reality : History of Information. [online] Available at: https://www.historyofinformation.com/detail.php?id=2785 [Accessed 13 Sep. 2022].

6. Overstreet, K. (2022). From Gardens to Rollercoasters: A Brief History of Amusement Parks. [online] Available at: https://www.archdaily.com/985944/from-gardens-to-rollercoasters-a-brief-history-of-amusement-parks [Accessed 8 Sep. 2022].

7. Reden, C. (2022.). The Amazing History of Amusement Parks | Royal Caribbean Cruises. [online] Available at: https://www.royalcaribbean.com/guides/the-amazing-amusement-parks-history [Accessed 8 Sep. 2022].

8. Saffo, D., Yildirim, C., Di Bartolomeo, S. and Dunne, C. (2020). Crowdsourcing Virtual Reality Experiments using VRChat. Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems. doi:10.1145/3334480.3382829 [Accessed 1 Sep. 2022].

9. Thompson, J. (2020). What Is A Theme Park? [online] Available at: https://www.rollercoasterphilosophy.com/philosophy/what-is-a-theme-park/ [Accessed 1 Sep. 2022].

10. Younger, D. and Baxter, T. (2016). Theme park design : the art of themed entertainment. Orlando, Fl: Inklingwood Press.

Videos references:

1. avex. (2019). 羽多野渉 /「フワリフワリ」Music Clip（Short ver.）. [online] Available at: https://www.youtube.com/watch?v=CASD0PCD57s&ab_channel=avex [Accessed 2 Aug. 2022].

2. Ben Plays VR. (2019). Top 10 Story Driven VR Games. [online] Available at: https://www.youtube.com/watch?v=F_KoTXWttcE&ab_channel=BenPlaysVR [Accessed 1 Nov. 2022].

3. Let's STFU and play. (2019). Summer Funland - Full Playthrough + All 12 Stars (VR gameplay, no commentary). [online] Available at: https://www.youtube.com/watch?v=7Bp5tacaZ6Q&ab_channel=Let%27sSTFUandPlay [Accessed 12 Nov. 2022].

4. The Japan Times. (2016). VR Park Tokyo walkthrough. [online] Youtube. Available at: https://www.youtube.com/watch?v=aLa9QgSsiO8&ab_channel=TheJapanTimes [Accessed 16 Dec. 2016].

5. -Yu酱- (2021). 新手亲妈级VRchat手把手详细教程介绍！学不会我喊你妈吧【Yu酱】_哔哩哔哩_bilibili. [online] www.bilibili.com. Available at: https://www.bilibili.com/video/BV1P44y1b7Qg/?p=7&spm_id_from=pageDriver [Accessed 14 Nov. 2022].

Bibliography

1. Adams-Volpe, J. and Perkins, E.J. (1991). The American Amusement Park Industry. Twayne Pub.

2. City of Parkland. (n.d.). Liberty Park. [online] Available at: https://www.cityofparkland.org/facilities/facility/details/4 [Accessed 1 Nov. 2022].

3. Disney (n.d.). Alice in Wonderland. https://disneyland.disney.go.com/attractions/disneyland/alice-in-wonderland/[Accessed 1 Nov. 2022]..

4. Feltham, J. (2022). Best VR Games Of All-Time: 25 Titles To Play Now. [online] Available at: https://uploadvr.com/best-vr-games/ [Accessed 12 Nov. 2022].

5. Samuelson, D. and Yegoiants, W. (2001). The American amusement park. St. Paul, Mn: Mbi Pub. Co.

6. vizm. (2021. The Secret of Retropolis VR FULL WALKTHROUGH [NO COMMENTARY] 1080P 60FPS. [online] Available at: https://www.youtube.com/watch?v=55XxVxD9z0o&ab_channel=Vizm [Accessed 12 Nov. 2022].

7.VRChat. (n.d.). VRChat. [online] Available at: https://hello.vrchat.com/.

8. Weinreich, P. and Saunderson, W. (2005). Analysing Identity. Routledge.

9. www.thesaurus.com. (n.d.). Synonyms of park | Thesaurus.com. [online] Available at: https://www.thesaurus.com/browse/park [Accessed 1 Dec. 2022].

List of Figure:

Figure (1) VRChat (n.d.). Available at: https://hello.vrchat.com/.

Figure (2) Alexander, J. (2017). VRChat is a bizarre phenomenon that has Twitch and YouTube obsessed. Available at: Anon, (n.d.). Available at: https://www.polygon.com/2017/12/22/16805452/vrchat-steam-vive-oculus-twitch-youtube. .

Figure (3)Walters, J. (n.d.). Summer Funland Review. Available at: https://www.bonusstage.co.uk/archives/161127.

Figure (4) Barker, S. (2017). The Invisible Hours Review (PS4). Available at: https://www.pushsquare.com/reviews/ps4/the_invisible_hours.

Figure (5) Hong, W. (n.d.). Questionnaire Screenshot 1.

Figure (6) Hong, W. (n.d.). Questionnaire Screenshot 2.

Figure (7) Hong, W. (n.d.). Delusional Playground Screenshot.

Figure (8) Monet, C. (n.d.). Water Lilies. Available at: https://www.wikiart.org/en/claude-monet/water-lilies-1926-1.

Figure (9) Square Enix (n.d.). Available at: https://finalfantasy.fandom.com/wiki/
The_Black_Shroud.

Figure (10)Hong, W. (n.d.). Delusional Forest Screenshot.

Figure (11)Hong, W. (n.d.). Delusional Park Screenshot.

Appendix-Questionnaire:

File Link: https://drive.google.com/file/d/1vZvlwgvz1V1MNIK35QUlzGLQOs2boebK/view?
usp=share_link
(Not able to fully generated in English)

Acknowledgements:

were inspired me, the artist Hatano Wataru, and the game Final Fantasy XIV.

Finally, thanks for all my family members, my mom, my dad, my grandfather, my cousin, and my family members and my psychologist who had passed but still continue support my heart with their warm sentences. In the final thesis and project, I had faced a lot of problems, including sickness, tired, and all different kinds of technique problems and writing problems. However, I want to appreciate everyone, including myself, who help me to make through all the difficulties.