

Virtual Reality Storytelling



Figure 1.

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Abstract

The Green Fairy 1.0 is a practice-led research project that explores practical strategies for effective storytelling in virtual reality. It consists on producing a shortfilm for Virtual Reality with techniques found in the roots of storytelling. For the production of this project, game development techniques have been complemented by traditional storytelling techniques from other platforms such as oral storytelling, cinema and theatre.

Up until recent years, VR (Virtual Reality) has been predominantly been used for games, simulations and military training. Since 2015 it began to grab the experimental interest of content creators wanting to tell stories in this medium. The production of this project took place at the end of 2015 and throughout 2016 without much support from existing Virtual Reality Storytelling work that has been released later in 2016. This meant taking an approach that focused on the craft of storytelling, more than the technology itself, therefore this research has its focus on keeping things simple and using VR to tell a story with a storyteller.

Storytelling techniques developed thus far for other storytelling platforms such as film, TV, radio, novels, theatre, etc do not necessarily apply for Virtual Reality. Forcing some of these techniques onto VR can create motion sickness, disorientation, missing the plotline amongst other issues. This research aims to introduce strategies and techniques that will support the community of content creators that are developing a language of storytelling for VR. The trial and error following the production of this project is documented throughout the exegesis.



Figure 2.

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke extending to the right.

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Chapter 1. Introduction

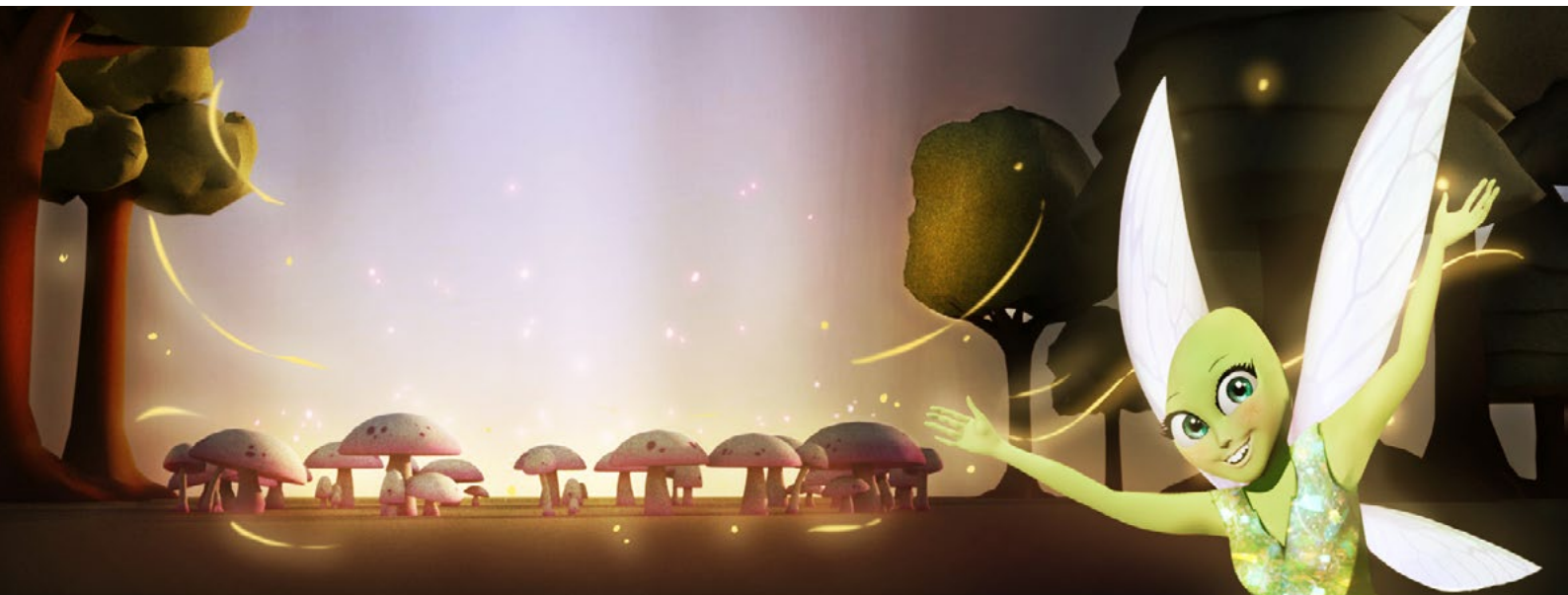


Figure 3.

Important notice before reading this exegesis.

This document has been formatted to read in some sections as a story, because the subject being explored is storytelling. The unconventional use of first person narrative throughout this particular academic document is intentional to remind the reader about the power of storytelling which in the case of this research, is oriented towards Virtual Reality as a platform for storytelling.



Figure 4.

1.1 Positioning the Researcher

My background lies fundamentally in storytelling. As a child, I would create comic books, which I would then take to school to share with friends. I created engaging characters and story-worlds in this medium. Years later, I studied filmmaking and animation. I thought that what I was producing were comic books, short-films & animations. But what I didn't realise, was that all along I was actually telling stories.

After studying film & television production and gaining 10 years of experience in its various fields, I became deeply interested in Motion Capture to create engaging performances for computer animation. Later I decided to enrol at AUT to explore Transmedia Storytelling through a Masters Degree.

With my focus on Transmedia, it allowed me to take a step back and visualise how to tell a story using different platforms. This led me to consider Virtual Reality as a potential avenue to complement a short-film idea I had brought with me to AUT. But as I took a few research papers during my Masters, I was able to re-frame the situation of what I wanted to achieve and that is when I saw Virtual Reality as a potential medium for storytelling.

I had already been familiar with storytelling in other fields, such as film, television, radio, theatre and more. I had not come across stories being told in Virtual Reality, other than the work produced by Oculus Story Studio [Rusli 2015] which was unavailable for consumers back in January 2016. Henceforth, I became interested in doing some research into how to tell stories in Virtual Reality with the tools and information I had available documented throughout this exegesis.

1.2 Research Introduction

This inquiry investigates the potential of using Virtual Reality as a storytelling tool. It explores the best practices and aims to formulate a series of rules of engagement when designing interactive experiences that specifically involve the art of storytelling. My approach for this project was to use computer animation understanding that 3D elements were compatible with the game development software required to output a story into a Virtual Reality headset. The aim of this research has been to discover the central element that would engage audiences in a Virtual Reality Story Experience.

This research is focused on using Virtual Reality as a delivery platform to make these stories come alive as never before. As of 2012, through the first development kit from Oculus Rift [Oculus VR 2014], developers have been able to access Virtual Reality headsets to explore the possibilities of what 360° field of view can offer to storytelling. These tools set a new challenge for content creators to design interactive story experiences. The spectator has full freedom to look around in 360° and is not constricted or constrained to a frame view when engaging in a story experience.

Storytelling goes back a long way, even before cinema, theatre and written records. Let's think about the prehistoric gatherings around a fire, where a storyteller would ignite the imagination of its listeners. Through the simple use of words, body language and facial expressions, the storyteller had the magic touch to reach the hearts of listeners and teach them a thing or two. The storyteller would summon visuals through intricate descriptions that transported listeners to distant locations, where the story took place. Those stories were made to last.

Move forward through time and oral storytelling took different shapes and forms into cave paintings, hieroglyphs, frescoes, murals, mosaics, poems, songs, novels, theatre performances, musicals and movies. Today, Virtual Reality is presented as the last medium according to VR filmmaker, Chris Milk. He says "We talk about virtual reality as "the last medium." It's the first medium that has actually interfaced on a truly human level with our human senses — two of them right now, eyes and ears. Ultimately, what we're talking about is a medium that disappears, because there is no rectangle on the wall, and there is no page you're holding in

1.3 Research Question

The aim of this exegesis is to document the steps taken in producing © 'The Green Fairy' project which in turn, after a lot of trial and error brought some coherence into developing a language of storytelling for Virtual Reality. I decided to focus on exploring the evolution of storytelling, leaving the technology of Virtual Reality as secondary, which later found its place in the realm of storytelling, rather than the other way around.

I set a challenge for myself to pursue this type of project. I was coming from the angle of figuring out 'How to make movies in VR', rather than 'How to use VR to tell a story'. The moment I started to look at storytelling mediums other than cinema, I was able to observe parallels into how elements of theatre gave birth to cinema and now how Virtual Reality has the potential of modelling itself as a storytelling tool for modern audiences.

This observation led me to approach my first experiment by translating a 2D linear animatic, into an interactive story experience. This exegesis documents the failed attempts and how I reconciled into 'The Storyteller' approach in the end.

This research explores methods to create a language of storytelling for VR that disrupts conventional linear storytelling techniques from cinema and aligns them with theatre and oral storytelling.

Research question:

Which key element in the universal language of storytelling defines a practical and effective approach to tell stories in Virtual Reality?

Chapter 2. The Experiential Age



Figure 5.

2.1 The Power of Storytelling

"Stories are crucial to our sense of well-being, to identity, to memory, and to our future. There is a power to stories that can often be experienced as one listens sometimes even more so when one is telling them but it is hard to put into words just what that power is and how it operates. There is a skill to storytelling. Underneath that skill is the inherent magic and wisdom of the story itself and of its crafting over generations of telling and being heard. This power is not to be underestimated, especially by those of us in the age of electronic information, computers and technical expertise, or else we will lose something irreplaceable." [McKenna, 2005, p. 195]

2.2 From Cinema to Virtual Reality - Learning to Use a New Set of Tools.

The future generation of storytellers who may wish to use VR as a platform to tell their stories, may potentially come in their majority from a background of filmmaking. This paper focuses in staying true to the promise of True Virtual Reality, rather than giving much credit to 360° video, which I consider a different platform and medium in itself.

360° video differs from true Virtual Reality, because in 360° video, the user can only look around by rotating their head; while in true Virtual Reality the user can actually move, stand up, crouch and look around the virtual environment.

Producing Virtual Reality content involves programmers and game-developers with a background in 3D computer graphics. The average filmmaker, without much experience or confidence in game development and programming may have a hard time wanting to adapt to these new tools, and may lean towards producing a 360° video instead.

2.3 The Experiential Age

"We're entering the 'Experiential Age.' Information Age paradigms will no longer be dominant." [Bye, 2016]

According to Phil Johnston, Co-Founder at VIRT [Johnston, 2014, para. 2], in his article 'Virtual Reality – The Dawn of the Experiential Age'; "around 50,000 years ago we were painting on cave walls, and about 9,000 years ago we started experimenting with symbolic writing, leading to the Age of Writing roughly 5,000 years ago. When Gutenberg created the movable type printing press 575 years ago, he helped shift the world to the Age of Print. Next was the Industrial Age, about 250 years ago, which introduced various communications technologies such as photography, Morse code, the typewriter, television, and the telephone. About 50 years ago we shifted to the Information Age with the advent of the internet, email, and mobile phone technologies."

From the book "The Story Factor", Annette Simmons quotes that "people don't want more information. They are up to their eyeballs in information. They want faith, faith in you, your goals, your success in the story you tell. It is the faith that moves mountains, not facts. Facts do not give birth to faith. Faith needs a story to sustain it, a meaningful story that inspires." Inspiring faith in others is best communicated through storytelling.

2.4 Storytelling Definition

According to 'Using Storytelling in Education' [Tingöy, 2017, para. 22], the definition of storytelling is 'a means of expressing experiences, emotions and ideas in different forms of transfer.' I would argue that if we are said to be entering the Experiential Age, because of the abrupt disruption in communications technologies through Virtual Reality; storytelling will continue to play a major role in this new age. Human beings have been telling stories thus far relying on channels such as words, pictures and videos as platforms to share their experiences with each other. Empowering people with tools such as Virtual Reality will change the way we express our experiences with each other. It brings us back to the fire gatherings of ancient times, but with the ability of being interconnected remotely and exchange these experiences.

2.5 Why VR Movies now?

Once upon a time, Trotsky (1879 - 1940), a Soviet Politician, made a comparison between Churches and the potential of cinema. Quoting from the book 'The Politics of the Soviet Cinema', Trotsky claims that [Taylor, 2008, page. 66] "In daily life of capitalistic towns, the cinema has become just such an integral part of life as the bath, the beer-house, the Church and other indispensable institutions, commendable and otherwise. The passion for the cinema is rooted in the desire for distraction, the desire to see something new and improbable, to laugh and to cry, not at your own, but at other people's misfortunes.

The cinema satisfies these demands in a very direct, visual, picturesque and vital way, requiring nothing from the audience; it does not even require them to be literate."

As suggested by Trotsky, cinema satisfied the demands of audiences in the early 1900s in a very direct and visual way. The art of filmmaking was refined throughout the century, as discussed in the book 'Theatre to Cinema' : "new stylistic options for telling stories evolved in the period 1912-13. There was a change in the kinds of stories that could be told. Developments in staging and acting style as well as other aspects of film technique constituted part of a development of longer, more complex plots which was attendant upon the transition to features" [Brewster, Jacobs 1997, page. 19]. Henceforth, there was a growing demand for the spectacle which grew from Charlie Chaplin's solo performances as early as 1914 [Hayes, 2005, page. xx], to the spectacular 'Sword and Sandal' / Peplum films of the 50s [Dyer, Vincendeau, 1992, page. 163], which featured thousands of extras performing as background actors and elaborate movie sets.

As Blockbuster films began to break box office records in the 1970s with films such as Jaws (1975) or Star Wars (1977), there was a new demand from the masses to experience the next level of storytelling, later on supported and complemented by the power of computer animation and visual effects. According to Mark D. Pepper from Utah Valley University: "Superhero movies are popular; however, they are much more than just popular." [Pepper, 2015, para. 7]. Pepper continues "Moviegoers love the repetitive but increasingly intensified adventures of superhero films" [Pepper, 2015, para. 18].

Pepper continues to suggest that "Since 2008's Iron Man, Marvel Studios has released an increasingly successful run of movies, culling from seventy-five years' worth of material. " [Pepper, 2015, para. 2]. It is important to take notice of the feature films dominating the box office in recent years (2015 – 2017). Superhero genre movies offer a picturesque, thrilling, explosive action-packed Visual Effects spectacle that satisfies the theatrical cinema experience demands of movie goers for the ultimate level of experience, oftentimes to the extent of having a poor story and more focus on the spectacle.

I believe there has been a growing demand from moviegoers for more explosion and spectacle in the most recent blockbuster experiences, currently satisfied by superhero movies. Therefore I come to conclude that audiences want to experience the next level of entertainment, and combined with the growing mindset of entitlement in our millennial generation, Virtual Reality as a medium may be able to satisfy this demand.

Chapter 3. Stepping Inside the Movie



Figure 6.

3.1 From Cinema to Virtual Reality

If Virtual Reality is set to become the next platform for storytelling beyond cinema in the Experiential Age, VR content creators may first need think about the best practices of how to tell stories in VR. Content creators need to learn first, how to harness the power of storytelling for these wearable technologies and develop a language for immersive storytelling.

Tony Danova from Business Insider states that "There is a massive audience of gamers on both traditional consoles and mobile devices, and these people will be the first to opt for virtual reality headsets." [Danova, 2015]. This means that the speculated landscape for the consumer adoption of Virtual Reality headsets, initially had consumers in mind who regularly played computer games. The vision Virtual Reality offered with the Oculus Rift's Kickstarter Campaign in 2012, was the promise of being able to step inside the videogame. Therefore, content creators approached VR with a game creation mindset which was not an ideal approach for end products that were meant to tell a story.

Video games already offer their own game narrative and empower the spectator through a game controller to explore the story and unlock different locations. These video games run in real time, which means that each move the player does with the controller, immediately updates on the video game platform giving feedback to the player on their movement. Content creators would aim to combine the video game technology (which supports Virtual Reality hardware) with that of storytelling coming from a filmmaking angle. This is challenging, because they are both very different mediums. Videogames run in real time, and the players have the power of choice for their actions, while films are pre-recorded and edited before being viewed.

How can filmmakers attempt to tell a story using a video game platform? Their first hurdle often revolves around the question of 'Who is the Spectator?' The first series of 360° videos available through the internet put the VR spectator in a character's perspective. Ranging from Chris Milk's 'Clouds Over Sidra' [Torisu, 2016], where a young girl talks directly to the camera at the spectator, to the Google Spotlight's 'HELP' [Google ATAP, 2015] where the spectator is encouraged to escape with the protagonists in the story.

These filmmakers, may have been asking themselves whether the spectator is a character in the story and whether they can move around the storyworld, but I claim that it doesn't work, because that approach makes the VR Experience into a game. I argue that the spectator should be able to sit back and enjoy the show, not have to take a role in the story, rather be told a story: it is story-telling, not a game. I mean this because I'm looking specifically into telling a linear story using Virtual Reality, not a multi-ending story such as the "Choose Your Own Adventure" books [Chooseco LLC, 2017] or Telltale games [Telltale, 2017].

I would argue that the solution to tell a story in Virtual Reality is quite simple. Content creators should stop trying to make a movie, or make a game and instead focus on telling a story. To achieve this, the VR content creator must take advantage of the virtual environment as an empty canvas to place characters, props and locations that can manifest an audio-visual story.

Once the spectator is placed in this virtual environment, we can introduce the storyteller agent, who will in turn tell a story to its audience and serve as a guide through the narrative. This means that the spectator is engaging with a storytelling agent that works as a vessel for the author/writer/director of the story to reach its audience; and in this case, it's accessed through the goggles the audience wears to experience the story.

3.2 The Last Medium

Virtual Reality is quoted by Chris Milk to be the last medium. [Johnson, 2015, para. 1]. It encompasses everything there is with what other platforms already offer on their own, from audio, to visuals, to full immersion.

Exploring different mediums besides cinema is a fundamental step in generating new ways of telling stories, and how to best adapt, retell and create a new language for storytelling that fits the Virtual Reality format. Some techniques to translate a traditional linear story in a cinematic format directly to VR can be producing a six panel storyboard attempting to tell the story with a stationary camera position. This technique is employed by the average 360° video content creator as seen in 360° video libraries such as YouTube 360° and Jaunt VR.

On the other hand, a different approach could be to “think in VR” and take into account everything that the technology can offer to be able to tell the story. The problem with this is that it becomes too abstract and the research can deviate from its purpose. The researcher may begin to focus too much on the question of ‘Who is the Spectator?’ rather than the matter at hand which is to tell a story.

3.3 Ubiquitous Virtuality

Humans have a long history of embracing new mediums. But it takes a long time to understand their nuances. It’s not like VR has appeared out of the blue to disrupt and force its way into our day-to-day gadgets to be adopted. Through ubiquitous computing, according to Stefan Poslad in his book titled ‘Ubiquitous Computing’:- “people live, work, and play in a seamless computer-enabled environment, interleaved into the world. Ubiquitous computing postulates a world where people are surrounded by computing devices and computing infrastructure that supports us in everything we do.” [Poslad, 2009].

We have already been living in a virtual reality, which we have been accessing through different types of interfaces, from the computer and using the mouse as a virtual agent to be able to interact with this digital space. When we look at our smartphones, we become so immersed in virtual conversations with each other, that we forget we are standing at a bus stop or at an office using these devices. Our ability to make a phone call and feel the engagement with the person at the other end, teleports us inadvertently in our minds to be there with that other person immediately.

According Mark Zuckerberg [Heath, 2017] wearable glasses will replace what we do with the phone. This is complemented with Mark Zuckerberg’s predictions that the wearable glasses for augmented reality applications will also enable a Virtual Reality mode, providing an occlusion for full immersion into virtual environments; compressing today’s (2016 - 2017) clunky headsets into light wearable glasses for pervasive disposition.

I agree with Zuckerberg’s vision, and I would add that our own personalised digital avatars will play a major role in this development. Virtual Reality requires the user to be embodied in some sort of virtual avatar, therefore we’ll be seeing our friends through the goggles as their custom made virtual avatar, overlaid with filters and beauty corrections in VR and augmented in AR.



Figure 7.

3.4 Analysis of the problems VR faces today

As a content creator pioneering in uncharted territory, you're bound to be challenged. As I began to approach the production of my project: "The Green Fairy" (1.0), I was questioned by many people and had naysayers make comments such as: "It's a solitary environment" or, "only one person can experience these stories at the same time " or, " how are you going to distribute it, if not many people have headsets?"

Virtual Reality is not the first medium for storytelling that faced these types of challenges; For example, cinema was a medium that, in contrast to theatre, required expensive equipment that was not easily accessible. To be able to experience the early experimental non-narrative films, audiences were required to not just have access to a film projector, but also a large empty wall or canvas for images to be projected on. The same applies to television as a medium, when it first reached consumers, television was not something everyone had. TV sets would be expensive and exclusive. Fast forward 50 years and the average spectator has access to their own private mini-TV in their pockets with smartphones.

For a premium experience in Virtual Reality, the average consumer currently requires expensive VR goggles, a desktop computer and sensors. This is not ideal for early adoption of the technology in the consumer market, but it's important to take into consideration how other devices such as the television and the computer, nowadays fit in our pockets. With the amount of investment in the Virtual Reality hardware market in recent years (2015 - 2017), we may see compression in size and weight allowing for a wider adoption of the technology.

It's also important to remember that this is not the first time that we use goggles to enhance our experience of a story. When Opera goggles were introduced to theatres, its aim was to bring audiences closer to the action and to the performers in the story. Also in the Victorian era, stereoscopes were widely used at homes much like mobile phones today.

Chapter 4. Approach



Figure 8.

4.1 Identifying The Problems Of VR For Storytelling

Storytelling techniques developed for the past century which may have seamlessly translated from cinema to television, do not necessarily apply in VR. In Virtual Reality, everything changes. The rules are entirely different, there is no frame, and the spectator is inside the "movie" and has the ability of interacting with characters in real time. This changes everything and the answers may lie in going back in time to unearth the roots of storytelling.

The following chapter outlines the steps taken in the research project exploring Virtual Reality as a storytelling medium with the intention to engage a spectator in a virtual environment. My aim was for audiences to sit back and enjoy the show, maintaining a sense of gaze-based interactivity, rather than having to use a game controller or being overwhelmed by the technology.

In order to identify what challenges existed in VR Storytelling, I decided to first try and translate a traditional linear story suited for a TV show or short film, and see how it would work in VR. Going head in, straight to the challenge I was ready to fail and make mistakes, but with the mindset that I would have to take a step back from time to time and assess the situation.

The first iteration of the project consisted of an animatic which was comprised by a series of drawings (storyboards), voice over audio, music and sound effects. A 7 minute piece with a beginning, middle and end about a Green Fairy who lights up the traffic lights.

The animatic starts with a voice over narration introducing the storyworld and characters to the audience. Once the narrator introduces the main character: 'The Green Fairy', it steps away and leaves the rest of the story to unfold in 3rd person.

4.2 Linear format to VR Format

See appendix for reference on the locations, story and characters.

My first approach to translate the story into VR, was to create a 3D environment where I could place my characters and block them out with the actions that they took in the story-world. The setting required included three different locations:

The Street - Where the traffic jam takes place.

The Fairy Markets - Deep inside the forest.

The Traffic Lights - Where the fairies live.

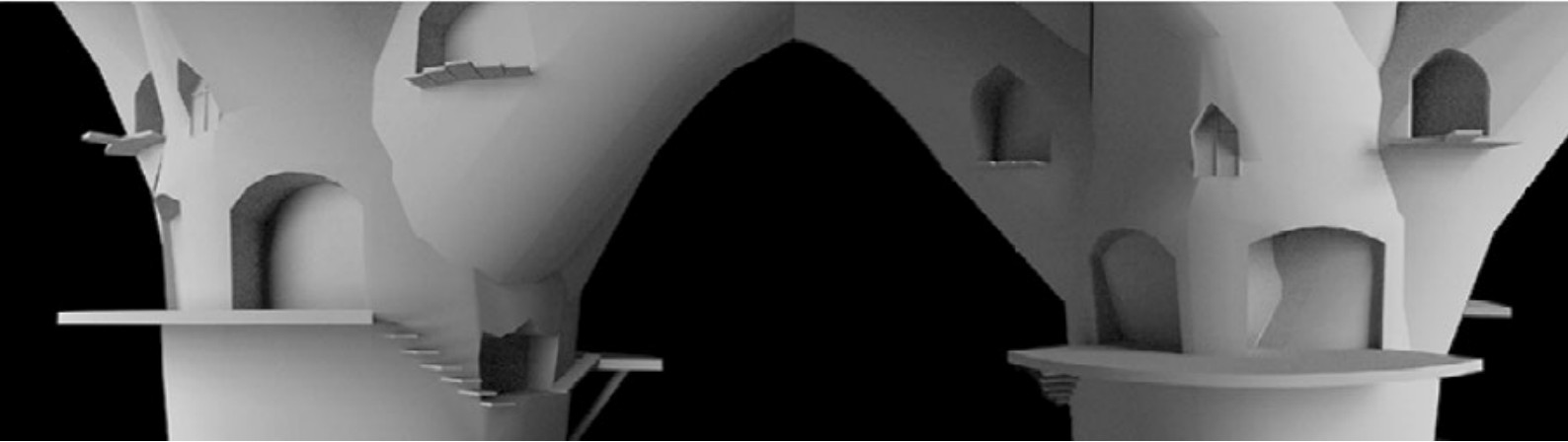


Figure 9.

4.3 Problem 1. MOMENTUM – HOW DO YOU CUT?

(1) Using a 3D modelling program, I created a basic layout of the entire pedestrian crossing with its adjacent park, filled with trees that led to the Fairy Markets.

(2) Then I created the characters in their most basic form, so that I would be able to shuffle them around in the 3D environment.

(3) Now that I had my characters and environment, I decided to go ahead and play out the story in real-time as it happened in the 2D animatic. I did this by moving the characters around from A to B as the action unfolded.

(4) Here is where I noticed something odd. The duration that it took for the Green Fairy to get from one location to the next was too long. The story lost momentum as the Green Fairy travelled all the way from her home at the traffic lights, then fly all the way into the forest to interact with the characters in that location.

(5) Later once the scene at the Fairy Markets was resolved, the Green Fairy would fly all the way back into the traffic light. This took too long and it made the story uninteresting and this is when I realized that it became more like a video-game, rather than an actual story, and it all revolved around momentum.

(6) I was glad that I took this approach to be able to identify the first problem: Momentum.

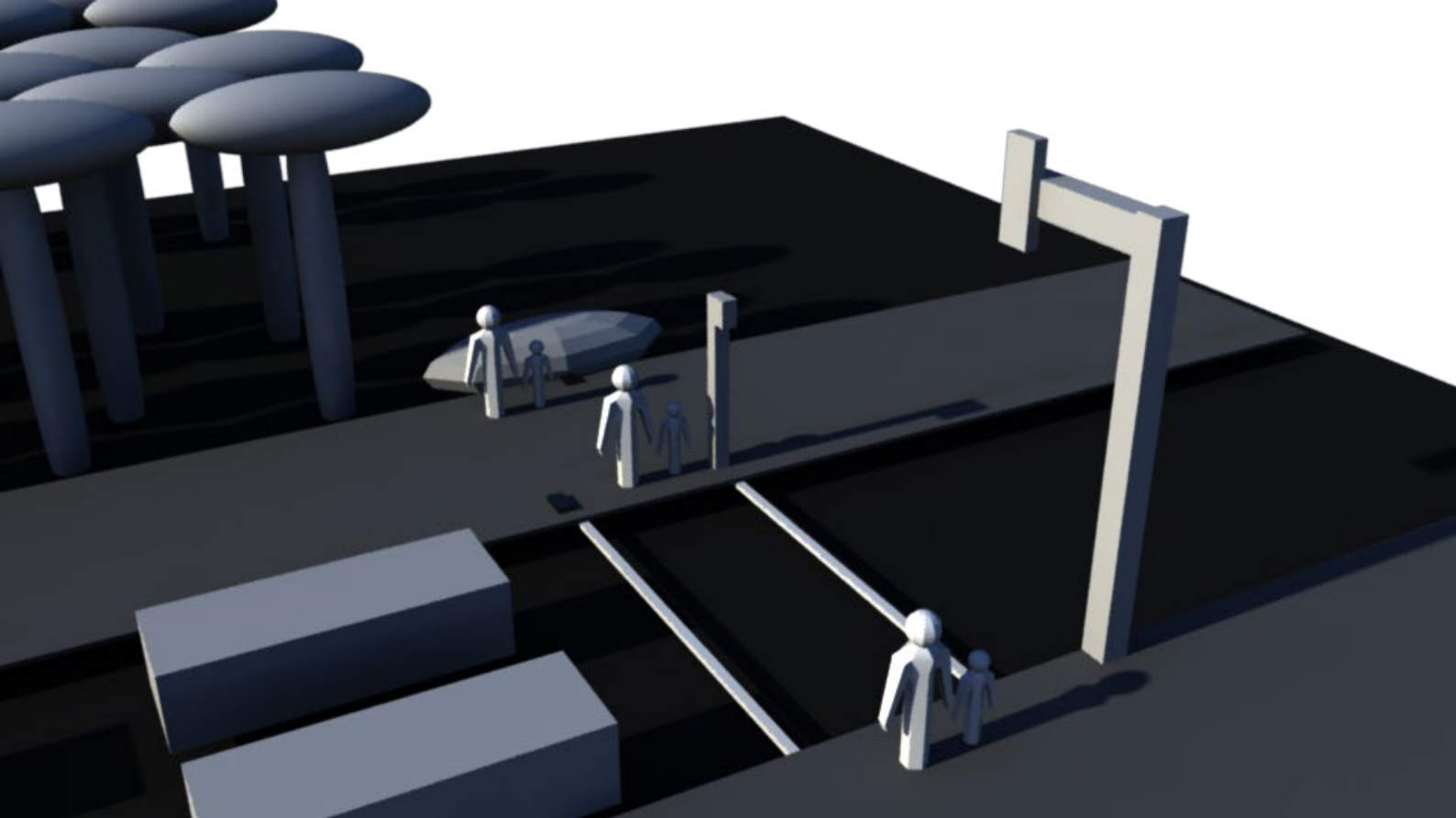


Figure 10.

(7) My next task was to find a way to shorten time, to keep the momentum that allows for the traditional rules of storytelling to be maintained.

When writing scripts for cinema, one must 'enter' the scene as late as possible and 'leave' as soon as possible [Burnett, 2017]. This means that we (storytellers) should introduce a situation/scene to the audience late as possible. As an example, we should not show the characters driving all the way to the location, getting out of their car, walking upstairs and opening the door before interacting with the rest of the characters in the second location where the action would take place.

Instead, it is suggested that a scene is described visually with the car arriving and then 'cut' directly to the meeting room as the character opens the door and meets the rest of the characters. In our case with the Green Fairy, the unnecessary use of time killing the momentum of the story, is following the character all the way in her travel from point (A) to point (B).

My main problem here is that I was seeing things from the perspective of making a movie in VR and my pre-existing view of things involved the question – How do I cut? How do I edit? I was not aware about having to change my mindset about telling a story, not making a movie.

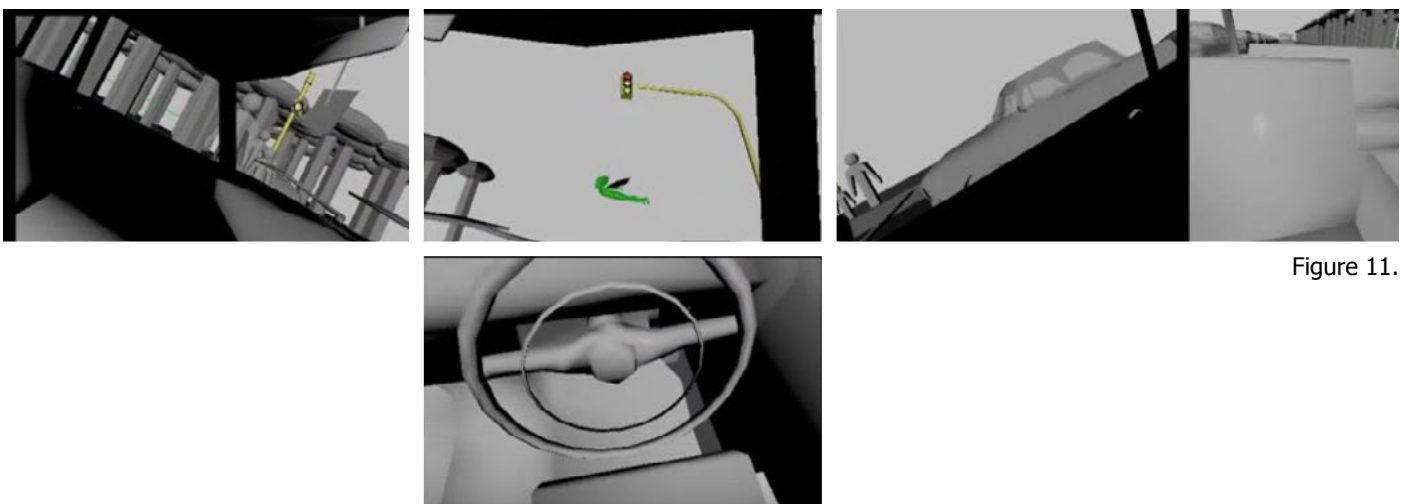


Figure 11.

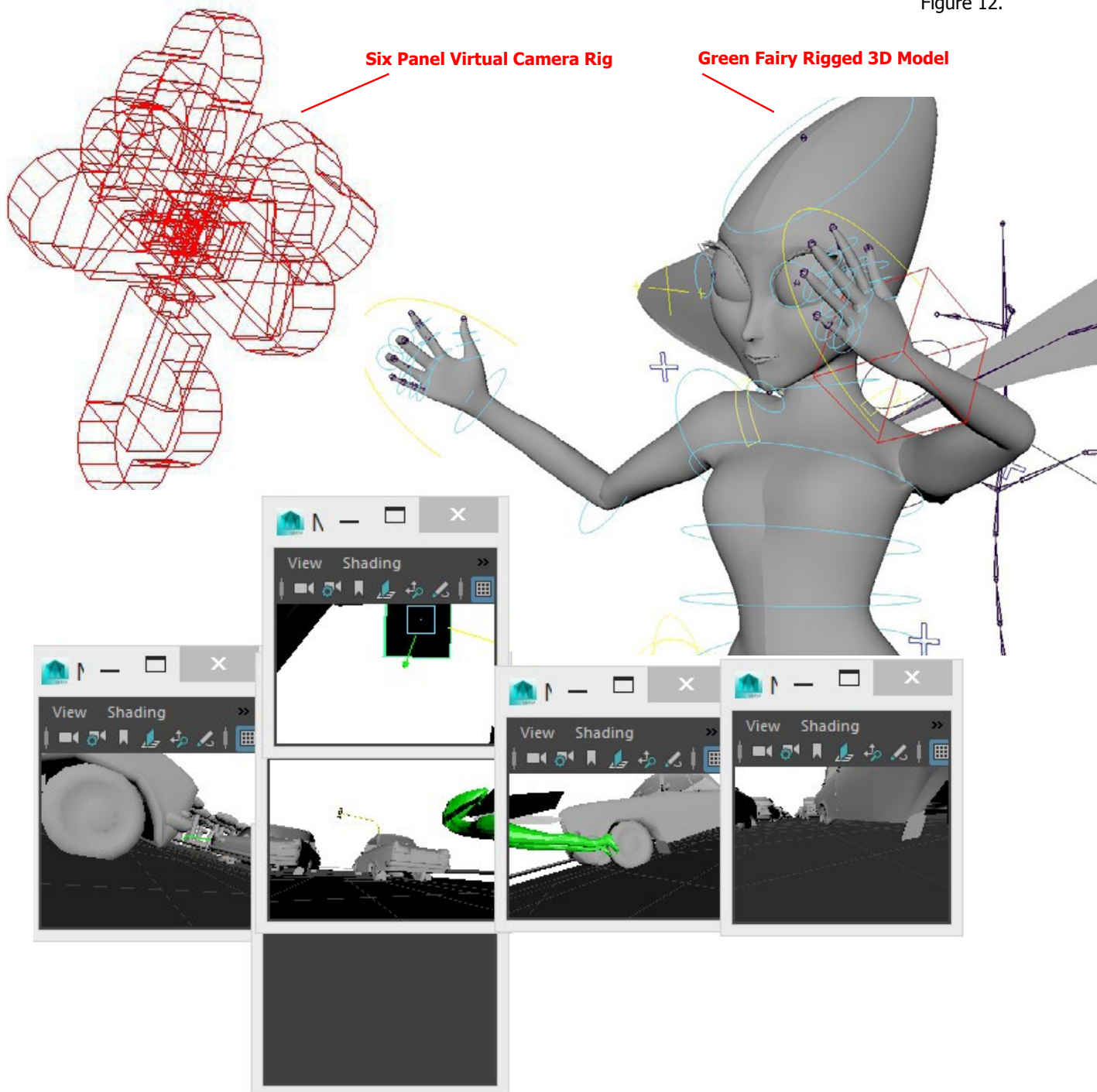
4.4 Problem 2. WHERE IS THE SPECTATOR IN RELATION TO THE STORY?

(1) The moment I began to move the characters around in the 3D environment, I had to start thinking about who the spectator was. Having to pose the characters, facing $\frac{3}{4}$ or to their back to the spectator were some of the calls that had me question this. Here is when I began to gain awareness and slowly changing my paradigm from movie-making into creating a 'live-performance'.

(2) I then placed a virtual camera in the scene, so that the spectator following the plot of the story driven by the Green Fairy, would be able to at least get a grasp of what the story was about.

(3) I was trying to take the spectator into a VR rollercoaster that would require them to follow the character from behind the whole way through, as the Green Fairy would fly from scene to scene in real time. This was not a story, it was a game.

Figure 12.



4.5 Problem 3. TELLING THE STORY LIKE A GAME

- (1) I realised that when I moved the 360° camera in virtual space for the spectator, I was taking away their input from locomotion, which is one of the reasons for simulator sickness: visual movement without any cues and or input from the user.
- (2) I then observed how video games give control to the player to move around at will within a 3D environment.
- (3) This led me to create a different type of layout with the content I had already created.
- (4) Red Zones: were physical regions where the action of the story took place. A handful of locations where major plot points in the story took place. I imagined this as an area that once the spectator reached it would trigger the animation of the performance required to bring that specific scene to life. The reason why these were labelled Red Zones, was because the spectator would STOP for a moment and experience the scene in stationary mode, like the red light of a traffic light.
- (5) Green Zones: Then I came up with the Green Zones idea, empowering the spectator with locomotion as they moved their location in the 3D environment from one Red Zone location to another.

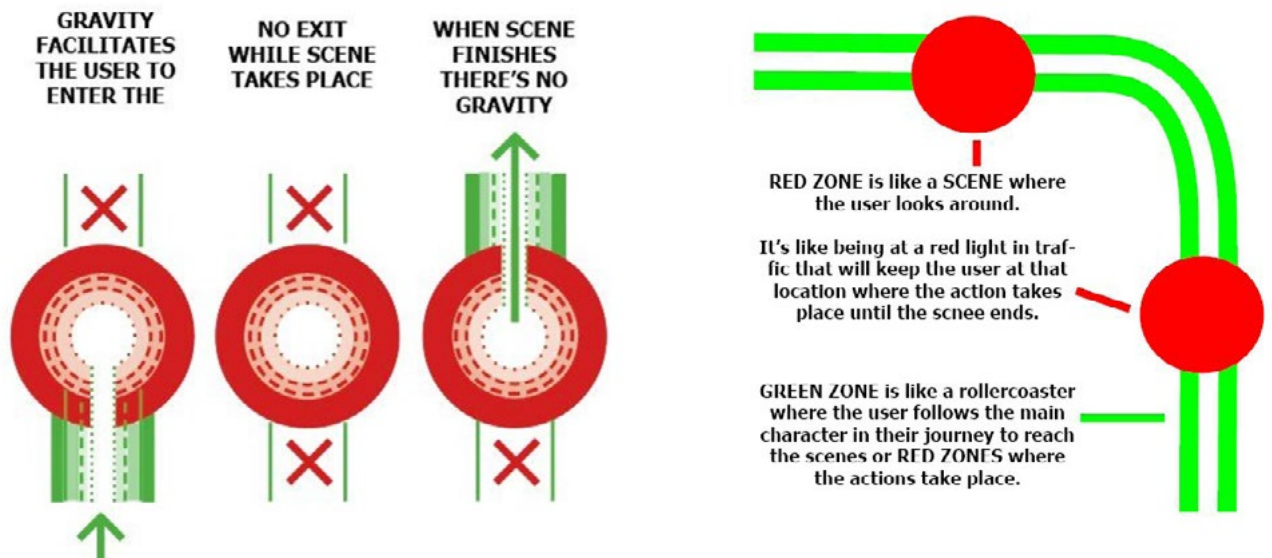
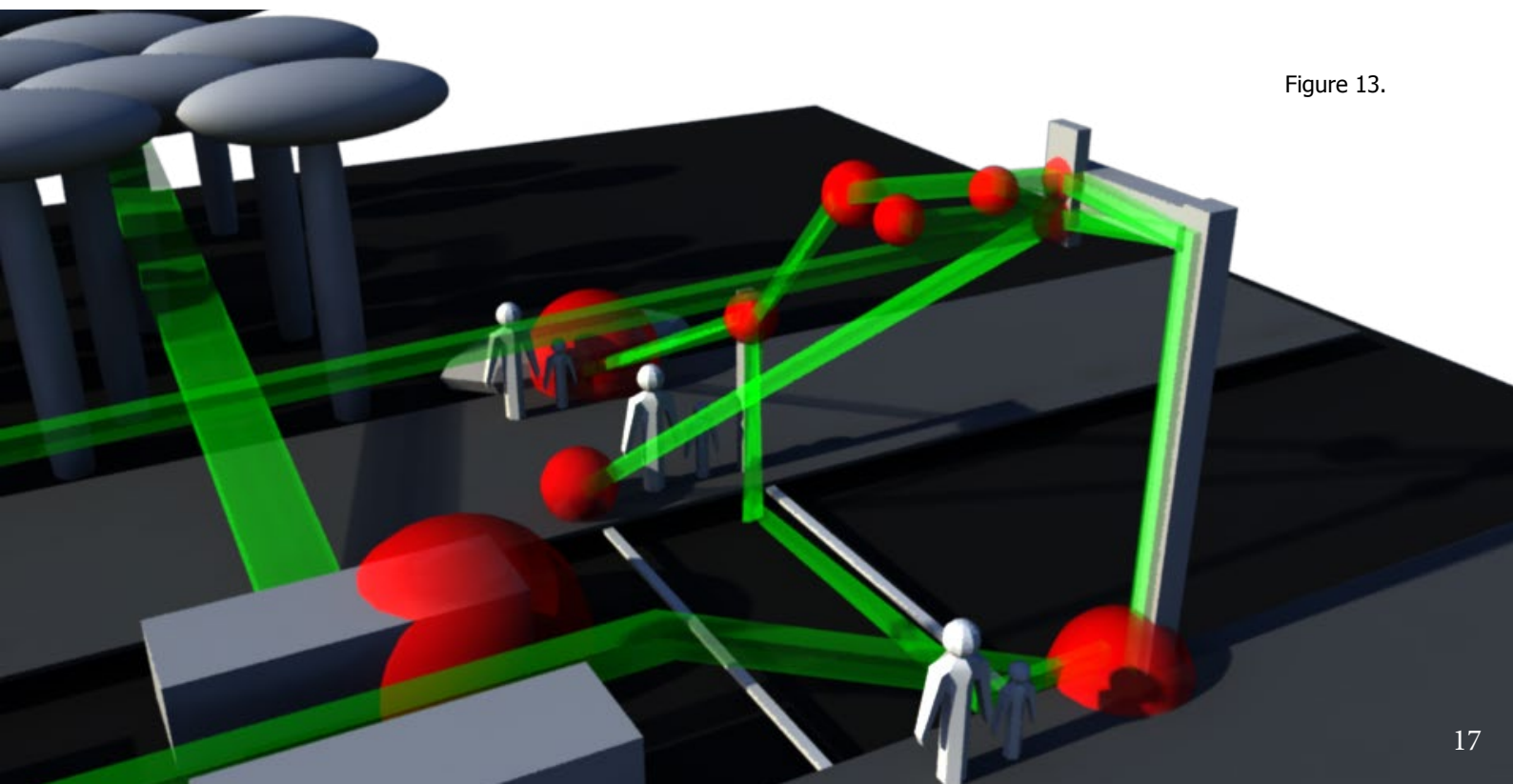


Figure 13.



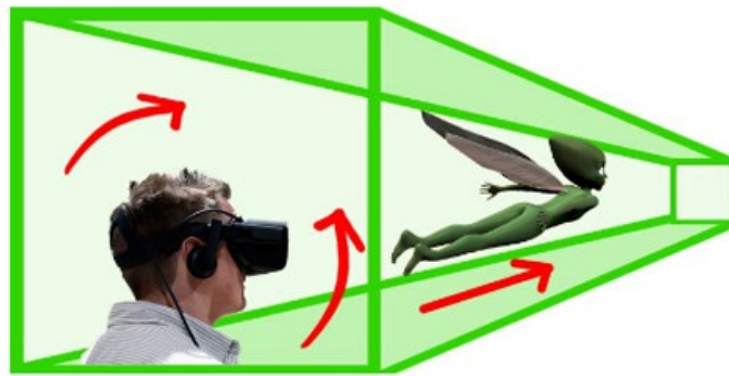


Figure 14.

The user can move higher or lower as they travel through the "tunnel" but as soon as they reach a boundary "wall" inside the tunnel, the user will bounce back into track continuing on the path until reaching a RED ZONE destination.

(6) Then things got more complicated, because giving the spectator the power to decide when to go from one scene to the next, meant that the path that I had given them to travel would need to be constrained. At that point, I introduced a concept called 'story gravity'.

(7) Story Gravity in Green Zones made it more difficult for the spectator to access areas out of bounds, from the invisible tunnels that set them a path to travel from one location to the next. When they travelled through the path I needed them to go through, they would navigate in the 3D environment a lot smoother and faster. This was supported by having the Green Fairy travel through that specific path, which gave the spectator a trail to follow.

(8) Story Gravity in Red Zones, meant that once the spectator reached a scene where the action would unfold, locomotion would be locked and fully constrained from exiting the scene until it ended. The problem with this, is that I was forcing the spectator to experience the story, while I gave them all this freedom at the same time in the Green Zones. There was something not quite right. I was missing the point, if storytelling was my focus.

(9) My last problem with this attempt, was to choose a piece of hardware that would allow the spectator to control their movement in the game. At first I thought I'd give them a game controller, which consumer VR headsets included such as the Xbox controller.

(10) But I was against the idea of making this a game. I wanted to tell a story, therefore I decided to go hands-free and instead use their head movement to move in the desired direction.

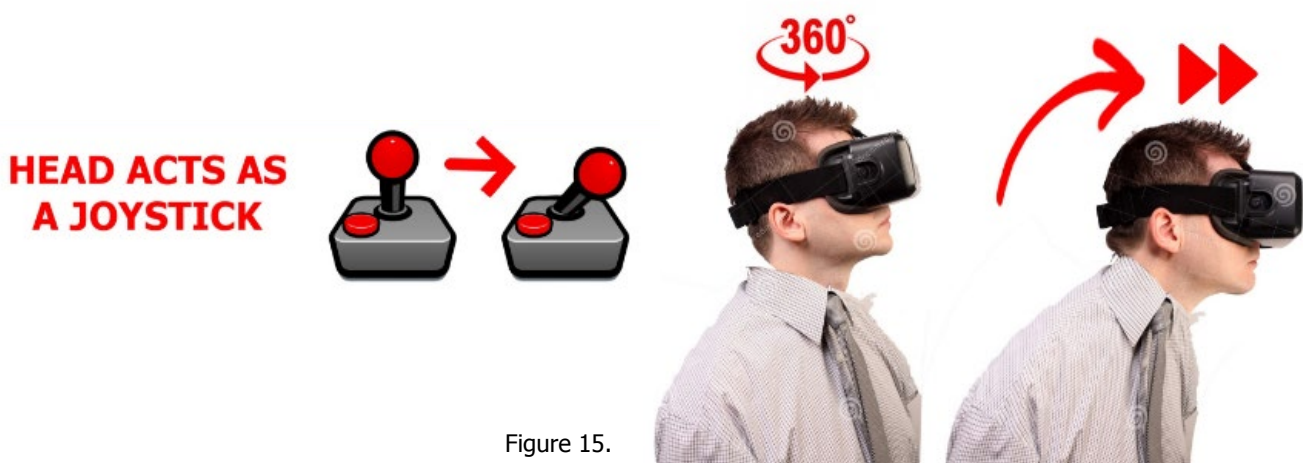


Figure 15.

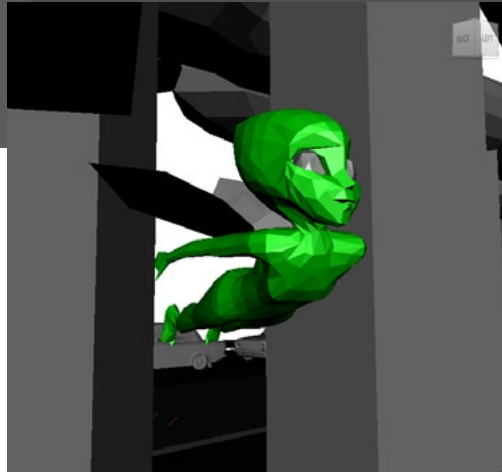
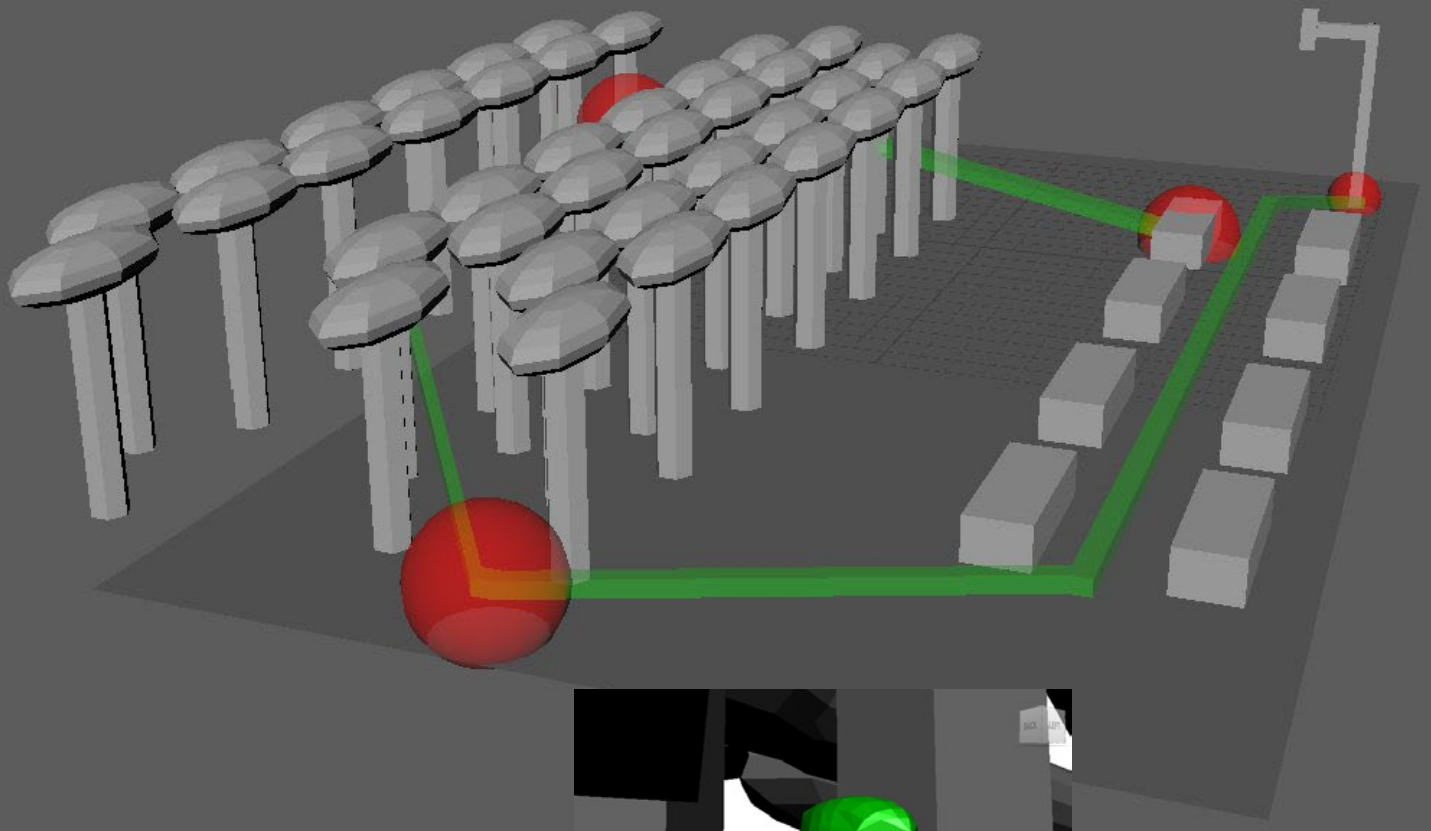


Figure 16.

4.6 Problem 4. WHO IS THE SPECTATOR?

The last issue on my plate was to figure out who the spectator was in this VR Experience. Is the spectator a character in the story? And if it is, is it a human? Or is it a fairy? Would I change their height because fairies are smaller than humans? And if I do this, why? Is there a logical reason?

The problem here is that I didn't know who my spectator was. I needed to keep digging deeper to better understand the role of the spectator/spectator.

To figure this out, I made the following changes:

- (1) When the spectator puts the VR headset on, the first thing they see, is the interior of a car. They look around and realize that they are sitting in the driver's seat. Through the windscreen, the spectator can see a traffic light in the distance (where the fairies live) from their current position.
- (2) Using the car, I thought I'd empower the spectator to be able to move its current position forward teaching them how to move in virtual space before starting the story.
- (3) Once the spectator, moves their head forward, to move the car forward, they reach a stop at the traffic lights through 'Story Gravity' and the car stops.

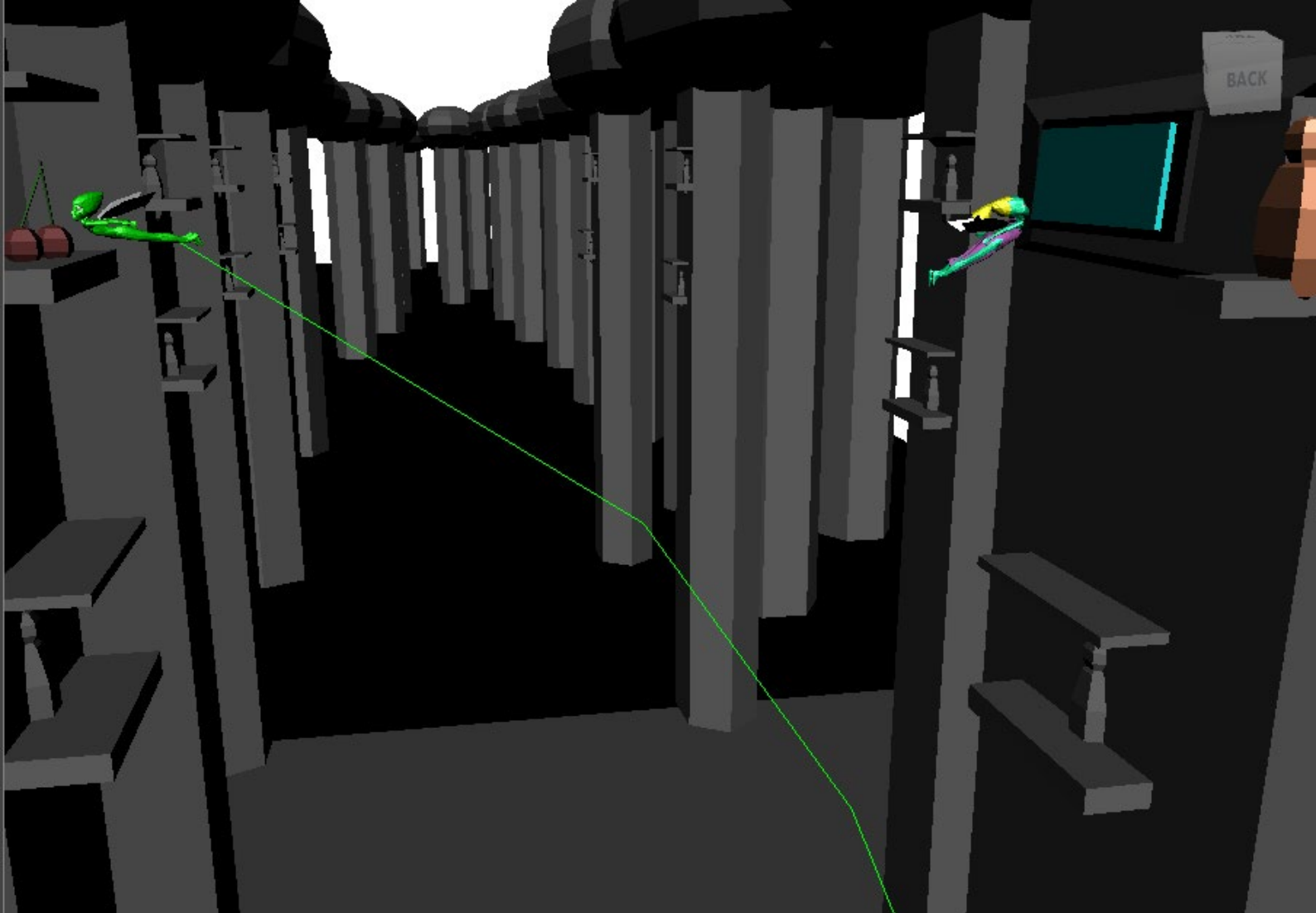


Figure 17.

(4) Moments later, our protagonist: The Green Fairy, pops out of the traffic light from above and bursts onto the windscreen of the car. The aim here, was to grab the spectator's attention in case they didn't see the fairy. From this moment onwards, I started to use the fairy as a beacon to follow and guide for the spectator through the experience.

(5) The Green Fairy rushes into the forest, towards the trees adjacent to the pedestrian crossing, leaving a trail of light behind.

(6) The spectator then has agency to follow the fairy through the light-path she has left behind. As the spectator moves their head forward (again like a joystick), they eventually reach the first story location: The Fairy Markets.

(7) The moment the spectator steps out of the car, he/she begins to shrink in size and becomes some sort of fairy. The problem here is that it delays the time of travel from one location to another due to the new scale in the 3D environment.

(8) Finally, once the spectator reaches the first scene, where the Green Fairy interacts with another fairy: The scene waits for the spectator's presence before the character performs.

(9) At this point, I got the idea of triggering scenes when the spectator was ready to move them forward. In some way, reaching the Red Zones like these, gave me the idea which I would use later on, of triggering an invisible hotspot, without letting the spectator know that they had triggered it.

The spectator would travel from scene to scene until reaching the end of the story, but this made the piece over 20 minutes long, it lost all of its momentum and it felt too much like a game rather than a story.

4.7 Problem 5. STORYBOARDING in 360°

- (1) I had to also make sure that because the spectator had the power to look around in all 360° of freedom, that there would be something interesting at all times for them to look at in each and every direction.
- (2) This became extremely difficult and tedious because I required a 6 panel storyboard which was difficult to draw.
- (3) I took screenshots from the computer screen by laying out a 360° virtual camera that would shoot panels in all directions, then I would line them up in a way that I was able to see what was happening when I pressed play in the 3D program.

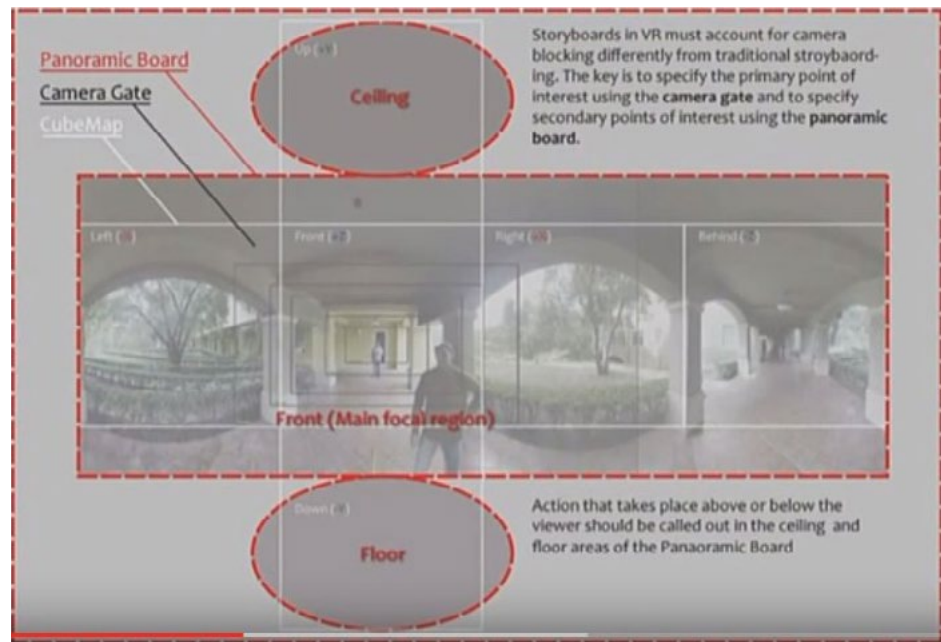


Figure 18.

I took into account DreamWorks VR [Herman, 2016] approach on storyboarding for VR, for their 'How to Train Your Dragon' VR experiment. Their approach was to make a game but also to tell a story. They discussed 3 types of regions to take into consideration:

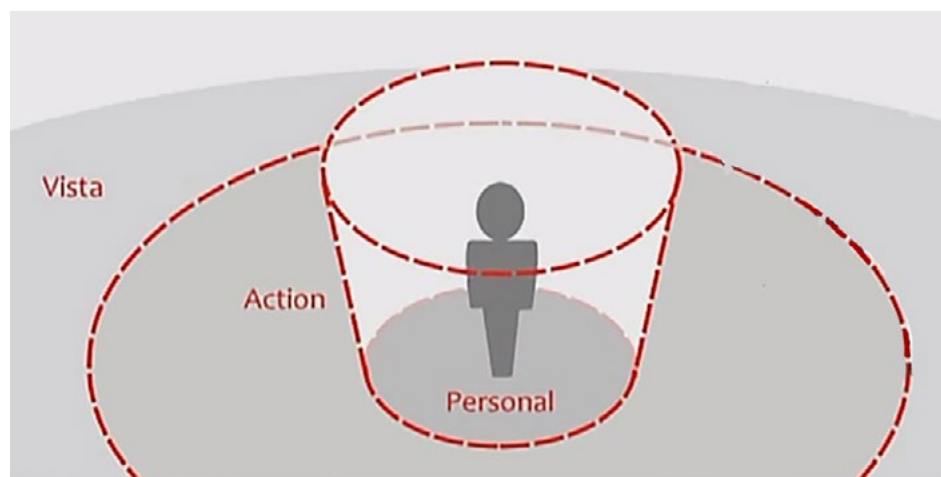


Figure 19.

Each of these regions created another challenge for me. It meant that in this pre-production process, I would have to not just storyboard, but also decide what elements the spectator would be close to in distance, and which elements were going to be out of reach for the spectator.

Chapter 5. Finding the Storyteller



Figure 20.



5.1 Stepping away from the technology

At this point, I was overwhelmed with the technology. I had already been bombarded by trying to keep up with the myriad of articles being published in Q1 2016 about Virtual Reality. I felt as though I was wearing a VR headset this whole time and couldn't see anything else other than feel the pressure of the buzz VR was creating overseas. There was a tremendous focus in VR games and a lot of the projects claiming to involve story in the United States were kept secret and waited in the side-lines. Some of these included 'Allumette' by Penrose Studios [Robertson, 2016] and 'Henry' by Oculus Story Studios [Robertson, 2016].

Figure 21.

With no answers and completely saturated with information, I decided to stop thinking about VR in general and instead direct my focus to storytelling. Fortunately, before I decided to fully immerse myself in Virtual Reality, I looked back at the previous work I had already completed in Transmedia Storytelling. I took a step back to review my Transmedia papers. Transmedia was all about telling one story using different platforms. This led me to analyse other platforms/mediums used for storytelling, ranging from ancient cave paintings through to Facebook timelines.

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According to Henry Jenkins, who coined the term Transmedia, the definition of transmedia storytelling is as follows 'Transmedia storytelling represents a process where integral elements of a fiction get dispersed systematically across multiple delivery channels for the purpose of creating a unified and coordinated entertainment experience. Ideally, each medium makes its own unique contribution to the unfolding of the story.' [Jenkins, 2017].

With Transmedia in mind, I began to focus on the delivery channels that where the experience lives. Thinking in Transmedia helped me detach myself from the actual platforms, with the ability to see beyond into what that platform is ultimately holding. This led me to analyse other platforms/mediums used for storytelling, ranging from ancient cave paintings through to Facebook timelines.

Back in the Stone Age, cavemen would paint beautiful scenes in cave walls that told a story. Venturing deeper into that cave, you'd find a group of people telling stories to each other.

5.2 Patterns through history

Ancient Egyptians would carve hieroglyphs in their temple walls, telling stories through complex designs full of mystery and ready to be deciphered. Venture deeper into the temple and you'd reach the Pharaoh's chamber, where performers would entertain ancient Egyptian royalty, with stories filled with rich performances and enchanting music creating a spectacle using the tools available back then.

The first pattern I drew here, was that the same way Cavemen told stories through their cave paintings that would guide you to reach inside the cave and meet the oral storyteller; Ancient Egyptians would also take you through a journey of storytelling deep into the Egyptian chambers to experience the show.

Nowadays, with platforms like Facebook, spectators scroll down through a Timeline and read short stories as posts, and when they get to a video, they stop and engage in a video experience. The same way, people were engaging with the walls of Ancient Egypt until engaging with live performers.

Even though this first theory had led me to create the Green Zones and Red Zones methodology, the approach ended up failing. This first iterative theory had me a little bit confused at first, until it morphed into something that would later on become very simple and solve all my problems.

My solution at this point was story tunnels and performance chambers. I thought that perhaps in VR, experiencing a story would be more like travelling through a river of time. Where there's a current that takes you through the story and when you reach the wider lakes, only then, you'll have time to look around and experience what that part of the story has to offer. After discarding this approach, I made sure I stepped away from the technology and but it got me thinking about how people may have told stories in the past.

Figure 22.



5.3 Meeting the storyteller at the Fairy Ring

Once upon a time, I had a big vision for my Green Fairy project. I was very ambitious in creating a whole storyworld for the Green Fairy, through the Transmedia research paper at AUT. Part of this storyworld included the magical fairy ring, where fairies would sit down on mushrooms and learn from a fairy teacher about their forgotten world.

I was originally inspired to use the concept of the fairy ring from the painting "The Fairy Ring" by Walter Jenks Morgan. [Nahum, 1997]. I had this painting pinned to my desk wall while I was doing my research on VR Storytelling, until something clicked.



Figure 23.



Figure 24.

I realized that perhaps the fairy ring could be a place where fairies could tell stories to each other. The fairy ring became instead more like a bonfire, where fairies would gather for story-time, this was it!

I had been so overwhelmed with the technology thus far, and the fairy ring, like the fire from the oral storytellers allowed me to return to the roots of storytelling. Then I thought my claim out loud and quoted to myself "if Virtual Reality is the latest tool/platform to tell a story, why don't we go back all the way to ancient times to meet the ancient storytellers."

5.4 Joseph Campbell and the First Storytellers

With the Fairy Ring in mind as a place to tell my story, I went back through my notes to learn more about the first storytellers. I continued to dig deeper through the articles I had collected overtime on Transmedia Storytelling.

I had attended a seminar by Jeff Gomez in 2014, where he would constantly make references to the ancient storytellers. From what I can recount, Jeff Gomez focused his talk on the question 'why we tell stories'. His claim, was that back in ancient times, the world was a dangerous place and we needed stories to feed our soul with inspiration and provide answers to our purpose in this world. That's when storytellers emerged and brought some light into the questions that people at the Stone Age may have had. The first storytellers, weren't the mammoth hunters or the ones fighting saber-tooth tigers, they were the "guys who'd be chewing plants". The ones who were developing insights and ponder over existence who would inspire people through stories.

The world was still very dangerous, even for storytellers, so they had to get good, says Jeff Gomez. If the storyteller was not doing his job telling a good story, they would be thrown off a cliff or be replaced, therefore storytelling evolved.

This quirky reference to the ancient storyteller from Jeff Gomez, stayed with me and it resonated again when I started studying Joseph Campbell's work in his series "The Power of Myth". Here he would talk about the 'First Storytellers'. [Campbell, Moyers, 1991]

5.5 The First Storytellers

Joseph Campbell claims that civilizations all over the world shared a common universal story and that all stories are trying to convey the same meaning. He goes on to draw parallels on stories from different cultures, from India, to Peru, to ancient Babylon about how these stories go back and have their roots in the underlying messages the first storytellers were trying to convey. Stories of the human spirit of survival, journey, death and resurrection.

The key point about these first storytellers that both Campbell and Gomez were trying to make, is that the Storytellers would sit down and engage with the hunters and gatherers around a fire and form a circle. They would gesture, use their voice and posture to communicate a story. The Storyteller would turn to different poses to embody or represent an animal. The Storyteller would howl like a wolf if he needed to, and would embody different characters finding to capture our suspense of disbelief.

Chapter 6. The Evolution of Storytelling



Figure 25.

My claim, is that the spectators would be teleported to different locations through the power of good storytelling and vivid descriptions of the scenes described.

6.1 Unearthing the Storyteller from other platforms.

I realized that the key to VR Storytelling, was simply to bring the storyteller back. And in my case to place him/her in the Fairy Ring to engage an audience in a story. But before I would make this as a definite claim, I still wanted to make sure that it was the storyteller that I had not been able to see beforehand and whether every good story relied on a storyteller. So I went on the lookout and hunt for the storyteller in different platforms.

6.2 Transitioning Platforms of Storytelling

VR Filmmaker Chris Milk implies that Virtual Reality is the evolution of storytelling by saying "VR is a logical future step, not too far removed from the old fashion tech – the book." Something very interesting Milk points out is "that when you read a book, as there is ink on a page, your brain reads these words and it says 'these two people are standing in a field'. Then there's a suspension of disbelief that your brain goes through to put you inside that story, whereas in VR you actually have to remind yourself not to believe, you exist within the world and existing within the world is something very powerful." [Brown, PBS, 2015]

6.3 The Power of Oral Storytelling – The First Stories

Thousands of years ago, the world was a dangerous place, there were many unanswered questions for the first hunter gatherer tribes. From the chants and rituals attempting to explain and give a *raison d'être* to the people in those tribes. Early bards would attempt to explain ancient mysteries, they would dance around the fire. They would trigger fear amongst their audience by hauling like a wolf and acting like a victim representing other characters. And once having the full attention of the gathered tribe; the storyteller was born to tell a story.

Modern day storytelling has a coherent shape and structure. Its complexity and form has taken thousands of years to take shape. Oral storytelling may have been raw in primitive times, but it managed to capture people's imagination back then without relying on complex tools and platforms such as television sets, books and game consoles. The first storytellers may have created an emotional engagement with their audience drawing upon a suspense of disbelief about their storyworlds, depending on how good their performance was.

6.4 Finding the First Platforms

The storyteller would venture into new villages and exchange experiences from his journeys. People wanted to hear stories because stories were lessons of life and hope in disguise. In Western culture, we hear a lot about Homer's epic poems, but if we dig deeper we can trace their roots to earlier civilizations. These stories were popular, because they inspired. For example the Iliad and the Odyssey epic poems would inspire men into battle by creating an image of the perfect hero and a role model to follow. The essence of these ancient Greek heroes and demi-gods like Hercules and Achilles, transcend to our modern times with the likes of Batman and Superman.

6.5 Bible Stories

With the rise of Christianity, biblical scriptures would be assembled into a collection of stories. The Bible is considered the best-selling book of all time, Christian missionaries would reach out to the hearts of different cultures and use storytelling as a tool of influence to communicate messages, teach morals and values.

6.6 The vessel

The epic poem of Beowulf, may be the oldest surviving poem in Old English, with its written manuscript dating back to 975 AD but its story dating back to 700 AD at the beginning of the Viking invasions of Britain. Taking this epic poem as an example, it endured oral storytelling for hundreds of years, taking different shapes and forms. Slightly modified every time it was told by the next generations of storytellers until the moment it reached written form through the hands of an anonymous Anglo-Saxon poet, referred to by scholars as the "Beowulf poet". [SparkNotes, 2007]

The moment this story was written down, it lost its dynamic fluidity and vulnerability to change with the passing of generations through oral storytelling. It can be argued that just like water, that is formless and can take any shape of form, the platform it fills, in this case the vessel of the written manuscript defines its shape and form for generations to come.

It is my personal interpretation observing how stories told through oral storytelling are like water, and the platforms they sit on, such as books, manuscripts or videos as the vessels that give them shape.

6.7 Meeting the First Storytelling Agents

The same way, it can be interpreted how stories can be compared to water being held inside a vessel as the platforms they live in; there is a third agent involved. The author acts as the water-bearer, like mythological Aquarius figure holding the vessel (platform) containing its story.

Different authors, translators and scholars across West, Central and South Asia and North Africa collected stories into what today we know as The Tales from the Thousand and One Nights. "We find the story of the woman Scheherazade, one in a long line of women brought to a king who sleeps with them for only one night and then has them executed. But Scheherazade is not only beautiful, she is enchanting. She begins by telling the king a story. The king is bored and depressed. He is without imagination, and so he is cruel and inhuman, but at once he is caught in the magical power of the story. And for a thousand and one nights it is Scheherazade who holds the king captive and gives him back a life worth living, with meaning. She tells him stories that make him laugh and cry, think and reflect...He is entertained, educated, sensitized and made human. In fact, he falls in love with the storyteller and realizes that he wants her as his queen. She has worked magic on him: ancient, wise, understanding magic." [McKenna, 2005].

The character of Scheherazade plays a very interesting role. She's not only a character in the overarching story of the 'Thousand and One Nights', but she also acts as an agent and vessel for the authors, translators and scholars who put all these stories together in the first place. Even though, she does not engage directly with the reader, breaking the fourth wall as we will observe in later literature; Scheherazade is one of the first characters in literature that allows the author to represent itself within the storyworld and interact with its characters through prose.

Fast forward to the 1600s, we see storytelling taking other shapes and forms being expressed through different platforms. From the first Western novel: Don Quixote by Miguel de Cervantes in Spain, stories were started to be depicted as books.

This is when the line began to blur for me when finding a language of storytelling for Virtual Reality. As soon as stories are perceived as a platform rather than a story, we begin to lose touch with what we are researching. This brings me to my initial problem when working on this research, which was wanting to make a “movie” for Virtual Reality. In turn as repeatedly mentioned throughout this document, what I had to come back to from time to time is realising that a movie is just the vessel for the story, and what I really needed to figure out was how to tell a story.

William Shakespeare was a contemporary of Cervantes, and his platform for storytelling was theatre. His many works are about life, love, death, revenge, grief, jealousy, murder, magic and mystery. He wrote the blockbuster plays of his day – some of his most famous are Macbeth, Romeo and Juliet, and Hamlet. Shakespeare’s plays would break the fourth wall in the ritual of storytelling and create an interactive dynamic with its audience.

According to Jordan Schroeder from his thesis: “Breaking the Fourth Wall”, quotes the following statement:

“The Bard himself, William Shakespeare, dabbled in breaking the fourth wall as well. Though he’s famous for his many different beautiful soliloquies and asides, which are theatrical devices used to convey the thoughts of characters, one of his most famous speeches serves to break the fourth wall between performers and audience.

At the very end of A Midsummer Night’s Dream, Puck addresses the audience directly, suggesting that if they’ve been offended by what they’ve seen, they merely pretend that they were dreaming. While this may seem like conciliation by a playwright nervous about his work’s reception, he’s also using the technique of breaking the fourth wall to cast doubt upon the events of the play. Were they a dream? Does their significance change if they were? What’s the connection between entering a theater and suspending one’s disbelief for a few hours and laying down in bed and dreaming for a few hours? How does a dream work? Breaking the fourth wall adds a complexity and nuance to the work, and may serve to increase engagement with the narrative not only while it’s occurring, but after patrons have left the theater. It may even allow us to create more of a personal connection to Puck, who we’ve seen capering about throughout the play, but who we are now having a direct interaction with for the first time.”
[Schroeder, 2016]

6.8 The Platform and The Story

Alexander Dumas wrote popular novels of adventure ranging from ‘The Three Musketeers’ to ‘The Count of Monte Cristo’. These novels have been adapted and translated into multiple storytelling platforms both in cinema, comics and animated shows. Hence the story is like fluid water that can take many shapes and forms, whether it’s told in a book or a play or a feature film, these platforms are only vessels that without these stories are just empty and hollow jars.

6.9 Books

In a book, the storyteller’s presence is more obvious, in the sense that the moment the reader begins to read a story and scenes are vividly described, the reader builds a voice in their mind. Therefore I conclude that this voice is an inner repetition echoing our own reading the story out. What is interesting here, is that the storyteller is present throughout the entire book, authors write with their readers in mind describing actions and images in their stories.

This means that all along, when we set our minds to read a book, we may sometimes forget that in reality we are not reading a book, we are reading the description of what a storyteller is describing. We are taking a journey with a storyteller hand in hand.



Figure 26.

6.10 Live-action Movies

In the 'Lord of the Rings' movies, the character Galadriel opens the film with the following prologue:

Galadriel: "The world is changed... I feel it in the water... I feel it in the Earth... I smell it in the air... Much that once was is lost. For none now live who remember it... It began with the forging of the great rings..."

The voiceover takes us to a different place, it transports audiences to the storyworld and location of Middle Earth. After the voiceover is finished, Galadriel "The Storyteller" steps back and lets the moving images take over. What is interesting to note, is that Galadriel continues to step in from time to time throughout the film, to interweave the story and remind us of her presence as an overarching storyteller.

It could be argued that the leading hand of the storyteller in cinema has become so invisible these days that audiences have forgotten about its presence. Rather, with its advanced language of storytelling, the storyteller remains omnipresent, but if you look closely, it's still there. Even as simple as a subtitle such as "Paris, France 1789" appearing at the bottom of the screen at the beginning of a new scene, describing the name of a location.



Figure 27.



Figure 28.



Figure 29.

6.11 Animated Movies

In the 1992 Disney Film Aladdin, the Storyteller introduces the movie; opening with a song, that immediately sets the scene and tells the audience about the storyworld:

Peddler/Merchant: "Oh, I come from a land, from a faraway place... Where the caravan camels roam... Where it's flat and immense... And the heat is intense... It's barbaric, but hey, it's home!"

As soon as the song ends, the mysterious storyteller looks directly at the camera breaking the fourth wall. This storyteller character engages with the audience in a playful manner, bringing mystery to the magic lamp and wrapping up the scene throwing magic dust up into the sky. At the end of this segment, the storyteller steps out "visually" from the scene. The camera pans down and the magic dust becomes the stars of a dark night. The storyteller continues to describe the scene. Here, the voiceover continues and introduces the villain of the film: Jafar; slowly stepping away and letting the characters take over.

We can call this the vessel of the storyteller. Even though the real storytellers would be the filmmakers, the screen writers and directors; in order to engage with the audience, the art of storytelling is embodied into this character as a vessel to engage with the audience directly.

Creating the illusion of interactivity: As the storyteller, the peddler/merchant character welcomes the audience into his Arabian neighbourhood. This is when I take note about creating an illusion of awareness of the audience. The piece to camera in this scene is taken to the extreme, to a point where the "camera" is its own character in a way and turns away in disinterest to what the merchant character is talking about. This is both comedic and intentional for the storyteller to make his point of how important this lamp is. But making the camera move, twice, begs the question of who is the storyteller if it's to turn its attention away.

In a way, this peddler scene it's the world's first virtual reality story experience in pre-recorded form, but completely fabricated. It captures the true essence of what Virtual reality storytelling is all about. And it also plays with the idea of interacting with a storyteller that one day could be driven within the virtual environment and interact with its audience through artificial intelligence.

Figure 30.



Figure 31.





Figure 32.

6.12 Sit back and enjoy the show

There is a scene in the 1992 'Aladdin' film where the Genie tells Aladdin to sit back and enjoy the show. Here, our hero sits back as the Genie magically transforms the stage around him, making use of all 360° of space around Aladdin as the spectator. Then I thought if VR is a simply a tool to make anything happen, then why isn't the spectator more like Aladdin in this scene, where they can sit back and let the storyteller agent take over and drive the show?

This particular scene from the film helped me visualize how this could work by empowering the storyteller agent to direct the spectator to look around and surprise him/her. To be cheeky and quirky and have fun with the spectator. It's not just performing a story, but also engaging eye to eye in an unforgettable experience that if I could one day recreate, it would be making it into a spectacular display.

Figures 33 - 38.



6.13 The Green Fairy Animatic

By seeing all these storytellers (directors, writers, producers,) descending into the storyworld and using their characters as vessels to engage directly with the audience in real-time and first hand as they experience the story, I had the biggest breakthrough.

Here is where I did a "happy mistake". When I first made the Green Fairy Animatic, the video opened with a voiceover of saying "Have you ever wondered why fairies lived in traffic lights?". The unnamed voiceover then goes about to introduce our protagonist The Green Fairy.

What I didn't realize, was that I as a storyteller didn't really give the voice a thought through place in the storyworld, the same way Disney did with Aladdin with the merchant at the beginning. But after unearthing the storyteller from different mediums and understanding its value, I realized that all along, in my subconscious, the voice of the storyteller introducing the storyworld and the characters was the Green Fairy herself! It was even voiced by the same person.

This led me to conclude that if I as the storyteller embodied myself into the Green Fairy character and storyteller, I could filter into the moment the spectator engaged with the story. I could reach out to the spectator directly and be able to interact with them, lead them into an adventure and use virtual reality as a tool, rather than being overwhelmed with the technology.

Chapter 7. Conclusion



Figure 39.

7.1 Conclusion

This practice-led investigation has led me to assemble the concepts and best practices explored through the production of a VR Story Experience. This research focuses on stripping away the layers that support the language of storytelling in various mediums and instead focus in the foundations that oral storytelling once offered.

A story is initially formless and lives like water nurturing our souls with tales of encouragement and hope. A story is formless until it sits in a vessel that gives it shape, in this case the platforms we use such as film, TV, books and Virtual Reality. The most important message to pass on to content creators is not to be overwhelmed or get obsessed with the vessel holding the water; rather focus on the story, the medium is secondary.

The biggest breakthrough I had in this research was understanding that there was an agent standing in between the audience and the author of the story. This agent has the power to directly engage with the spectator and provides the author an avenue to interact with its audience.

As the author of the Green Fairy story, I feel fortunate to have a magical character at my disposition, enhanced with the technological capabilities Virtual Reality and interactive technologies offer to immerse my audiences in the storyworld. The story comes together the moment the audience accepts the storytelling agent's invitation to step into the storyworld. The audience develops a sense of trust with the storyteller that that creates a bond.

Once the bond is made, the audience sits back and enjoys the show. Not having to worry about game controllers or joysticks to advance the story. This is not a "Choose Your Own Adventure" book, this is a story.

The moment the storyteller starts interacting with other characters in the storyworld, and the audience accepts that we solve VR Storytelling. In The Green Fairy 1.0, the fairy interacts with other characters ignoring the audience from time to time, and every now and then acknowledging back maintaining that trust and engagement. Therefore, the "Storyteller" is my answer to finding the key element in the universal language of storytelling that defines a practical and effective approach to tell stories in Virtual Reality.

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APPENDICES

Appendix A. Creating a Storyworld



Figure 40.



Figure 41.

8.1 Storyworld / Setting

The story of 'The Green Fairy' revolves around a network of fairies that secretly live in our city traffic lights. They all remain hidden from society, afraid of being seen by the humans, as well as the fairy catchers that live amongst them.

The main protagonist, The Green Fairy and her team, leave their traffic light on a regular basis to defend the streets from evildoers using their magic as well as getting up to mischief along the way.

8.2 Protagonist

The Green Fairy

The Green Fairy, with her courageous and risk-taking measures has a real problem with staying out of trouble. Her optimistic view on various challenges makes her a strong, positive leader. One able to withstand the many dangers that come her way.

The Green Fairy is very cheeky and gets easily distracted. She has trouble being on time to almost anything. But at the end of the day, she is always forgiven due to her charming, warm and positive attitude that brightens up everyone's lives.



Figure 42.

8.3 Logline

A Virtual Reality story experience which follows the adventures of The Green Fairy, who secretly lives inside of the traffic lights.



Figure 43.

8.4 Synopsis

In a magical forest hidden deep within the woods, a group of fairies gather around a fairy ring to share stories with one another. A bubbly young fairy, The Green Fairy shrinks the viewer down and invites them to join the group.

She explains to the group how she learnt a valuable lesson about distractions and begins the story of how it all came about.

She tells the tale of how she became distracted at the fairy markets, talking with her friend Cassandra, ultimately making her late for work.

When returning to her home at the traffic lights, she is confronted by her sister The Red Fairy who scolds her for her lateness, only to find that she too has become distracted from work as well.

After the realisation that they both have messed up, apologies are made and the two sisters move forward, learning from their mistakes.

Addressing the group, the green fairy thanks everyone for coming and encourages them to look forward to the next story to come.

Figure 44.



8.5 Secondary Characters

The Red Fairy

The Red Fairy knows when to stop. She often hesitates when making decisions and always leans towards the safest option. Unlike her sister, she tries to avoid getting into dangerous situations.

She loves technology and likes to learn how things work. She is intelligent, patient and calm, but when upset or impatient, she finds it very hard to control her emotions.



Figure 45.

Cassandra

Cassandra is seen as the popular fairy of the group. Obsessed with fashion, her outfits always match, and she never leaves home without a pair of sun-glasses.

She is rich, privileged and a little bit oblivious when it comes to money. But underneath all her social insecurities is a warm and kind hearted fairy, that truly cares about her friends.



Figure 46.

8.6 Locations

The Traffic Lights

Both Green and Red live within an old traffic light on Conical Avenue, consisting of three chambers - red, orange and green.

The fairies have decorated the rooms with objects they have collected from their adventures together.

Both the red and green chambers act as the fairies bedrooms and the orange chamber as a foyer. The contrast in the fairies' rooms really emphasises the difference in their personalities.



Figure 47.

The Fairy Ring

The magical fairy ring is a special place hidden within the forest, that the fairies gather to share stories with one another. The Green Fairy is especially fond of story time and a lot of the stories shared are from her own adventures.

Bright pink and gleaming with magic, the mushrooms within the ring are used by the fairies as seats offering a comfortable space to listen and be entertained by one another.



Figure 48.

Figure 49.

The Fairy Markets

Fruit stalls, armouries, technology stalls and chemists; the Fairy Markets acts as a plaza for all things fairies. Whether it be to meet up with friends or just to grab fruit for dinner, the Fairy Markets is the place to go.

The fairies build their stalls as best as they can trying to replicate that of the humans. Using materials that are easily accessible to them, like mushrooms, logs and leaves they create various stands and displays to showcase their wares.



Render Style

The world of The Green Fairy all revolves around colour. From the low poly models, to the textures, to lighting, the priority has been to bring out the vibrance within each scene giving the user something that they can truly engage with.

My approach with this project has been to use bright, warm and rich colours, which in turn makes the audience feel a sense of familiarity of what they would experience in other family friendly cartoon entertainment when they experience the VR film.



Figure 50.

8.7 Decision Making

The Green Fairy represents being courageous and her sister the Red Fairy represents being considerate.

In the adventures proposed in this storyworld, the Green Fairy will take risks and crash as she attempts to solve the problem stated in the story. The Red Fairy is always avoiding taking any risks and thinking everything twice. She takes the safest option and is overly considerate.

It's only when they both collaborate that they solve the problems in the adventures.

CONSIDERATE

COURAGEOUS



Figure 51.

