

Designing Visuals for a Story Rich Game

Project: Liekko and the Stolen Moon

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ABSTRACT

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Ever since the 1980s, narrative has become an increasingly important aspect of game design. The novelty of controlling a character can wear off, but the age old medium of storytelling continues to compel video gamers.

The purpose of this Bachelor's thesis was to support Liekko and the Stolen Moon, a story rich 2D game in development. The goal was to examine the most important aspects of visual design in story rich games, how visual design differs in story rich games and action games, and afterwards apply the knowledge gathered to help create the assets for the game.

The information for the thesis was gathered by studying contemporary story rich games, online publications and related literature. The focus was on multiple aspects of visuals found within story rich games. The differences between story rich and action games were discussed from the viewpoint of visual design.

Conclusions were made based on the findings and the knowledge was applied to improve the design of Liekko and the Stolen Moon. The research had a clear impact on the design of the game, but also shed light on the development of the story rich genre as a whole.

CONTENTS

1	INTRODUCTION	5
2	STORY RICH GAMES	7
2.1	An ode to storytelling.....	7
2.2	Key features	10
2.2.1	Dialogue system	11
2.2.2	Exploration	12
2.2.3	Cut-scenes and scripted events	13
2.2.4	Puzzles, quick-time events and mini games.....	14
3	VISUAL DESIGN IN STORY RICH GAMES	17
3.1	Key visuals in story rich games	17
3.1.1	Display of text and dialogue	17
3.1.2	Environmental storytelling	20
3.1.3	Characters.....	22
3.2	Comparisons	23
3.2.1	Character design	24
3.2.2	Environmental design	29
4	LIEKKO AND THE STOLEN MOON.....	37
5	CONCLUSION	45
	REFERENCES	46
	APPENDICES.....	48
	Appendix 1. Liekko and the Stolen Moon prototype video	48

ABBREVIATIONS AND TERMS

2D	Two dimensional (referring to graphics)
Action game	A video game which emphasizes player motor-skill and gameplay
Avatar	A graphical representation of the user, or more so the character they control
Colour picker	A tool in digital software which allows the user to select colours off of images
Gameplay	The way players interact with a game
Lore	The knowledge and history available about a fantasy universe
Ludology	The study of games
Multiplayer game	A game of several players as independent opponents or teams
Narratology	The study of narrative
NPC	A non-playable character
Platformer	A video game in which the player character jumps and climbs between suspended platforms and avoids obstacles
RPG	A role-playing video game. The player controls the actions of a character or multiple characters in a fictional, well-defined world.
Steam	The largest digital distribution platform for desktop games
Story rich game	A video game in which the focus is on storytelling instead of gameplay
Telegraphing	Foreshadowing an event that will occur shortly, e.g. a couple of frames of animation to show to player an enemy is about to attack
Visual novel	An interactive text based story supported by static or sprite-based visuals
Walking simulator	A video game in which the gameplay is focused on exploration and unravelling a narrative by observing the environment

1 INTRODUCTION

Different types of games have been played throughout the history of mankind, and are one of the oldest forms of social interaction, dating back over 5000 years. Games have a longer history than writing – but it was only in the late 20th century that they gained a digital form and started to take a new shape. While analogue and digital games share many similarities, it can certainly be said that digital games have taken over our lives in a very special manner. (Kuorikoski 2018, 9-8.)

The first video games in the 70s – text-based interactive fiction games – were indeed focused on stories, unlike their immediate graphic-based successors. Gameplay was of the essence, until game developers started to experiment with storytelling in the 1980s. Nowadays, with dozens of different video game genres, the games focusing on storytelling are often called ‘story rich games’. As seen in figure 1, the number of games tagged ‘story rich’ on Steam is increasing by the year. The reasons for this could be multiple. The benefit of a strong narrative has been seen in the sales figures of modern games for years (Bateman 2007, 104), and consumers rate experiencing the story as a major reason why they enjoy games.

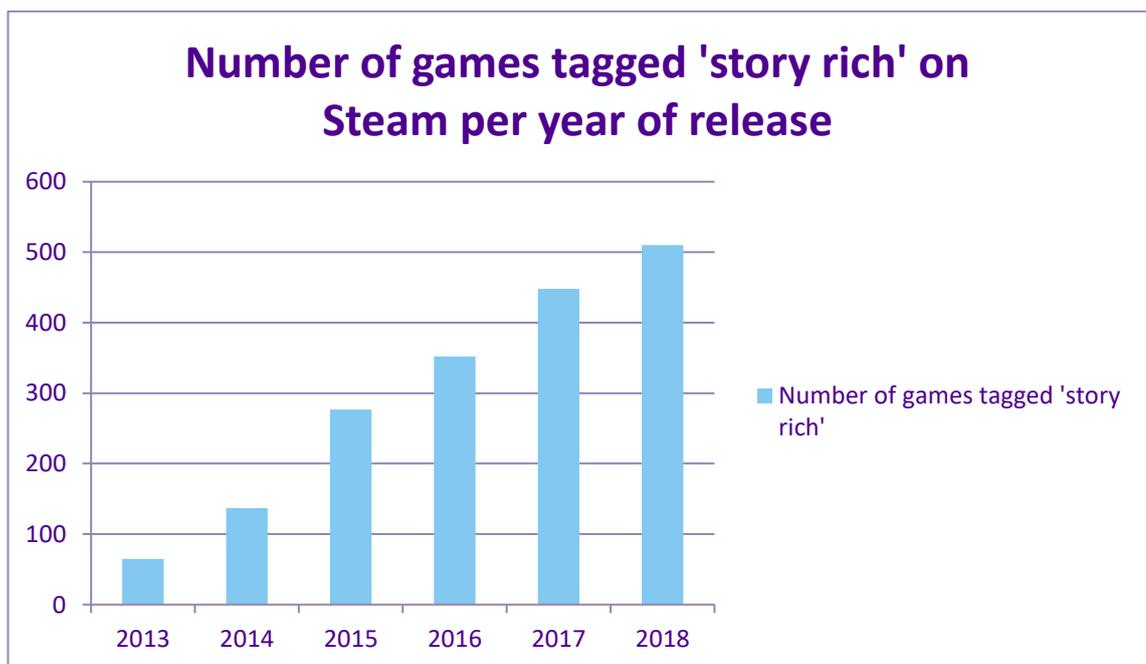


FIGURE 1. Number of games tagged ‘story rich’ per year of release on Steam

This thesis starts off with an exploration of the history and definition of story rich games, then continuing to elucidate the different features they contain, and how those features are used as tools for the narrative. The thesis will then go through the key visual elements that can be found within story rich games, and then use comparative analysis to further detail how the visual design in story rich games is different from that of action games.

The comparative analysis is especially helpful in finding the most important elements that graphics in story rich games are characterized by. The knowledge gathered will be used to help in the creation of a 2D game called Liekko and the Stolen moon - a story rich game in development.

2 STORY RICH GAMES

According to Kuorikoski (2018, 23), the definition of a game can be approached in at least two different ways; from the viewpoint of narratology or ludology. From the viewpoint of narratology, games are stories and can be approached like books or movies, while ludology views them as a collection of rules and systems. Just as much as both viewpoints are truthful, there are games that fall easily under either viewpoint, or somewhere in between. It is difficult to call Pacman (Namco 1980) a story, and it is debatable whether visual novels can be called games at all.

If we look for the very core of a video game, we find its need to create an engagement with the player (Lobanov 2018). We can define story rich games by the way the majority of that engagement is created, which, in story rich games is through storytelling methods. Kuorikoski (2018, 91.) points out that there is a conflict between interaction and narration; the more a game puts focus on storytelling, the less it can provide interaction and mechanics. This is why story rich games can be separated as an item from RPGs or other genres of games with strong storylines within them.

2.1 An ode to storytelling

Storytelling has indeed connected human beings throughout history, so it is not much of a surprise that video games are being explored as a means of telling a tale (Klug & Lebowitz 2011, 1.). However, considering the popularity of multi-player games like Fortnite (Epic Games 2017) and Counter-Strike (Valve 2000) that contain little to no storytelling, it is easy to forget the significance of a narrative in video games and their history (Prizeman 2018). Already in the late 1980s, games like Final Fantasy (Square Enix 1987) paved the way for narrative driven games, justifying aspects of gameplay with a compelling narrative and character dynamics. Even before that, in a time of lesser graphics, storytelling would mean that your imagination was able to fill in the holes left by the lacking visuals. (Buckler 2012)

The first graphic-based games that can be called story rich were graphical adventure games from the late 80s to early 2000s. These games were focused on exploration, gathering items and puzzle solving, while combat and action challenges were absent. A notable mention from the era is game series *Myst* (Bordebund, Red Orb Entertainment, Ubisoft, Cyan Worlds 1993-2005), which held the record for computer game sales for seven years, and featured graphics and storytelling unlike anything seen before. The games of this era are the foundation of the story rich genre; though these adventure games saw a steep decline after the early 2000s. It was not until a decade later that the genre would take off again.

Video games are the most interactive medium of storytelling, which makes them special as such. 'Choose your own adventure' - books or movies like *Bandersnatch* (Netflix 2018) only allow you to make choices that lead the story to different outcomes, but you cannot explore the world around you, or have control over most of the movements or actions of the character. In video games, the player takes on an active role within the story. Instead of being told of the unfolding events, the player experiences the events through their avatar, which leads to a bigger personal investment. (Clevenger 2012)

A good example of a game that only offers the player the novelty of control is *Tetris* (Pažitnov 1984) (picture 1). There is no deeper meaning behind the falling blocks, and no narrative voice to guide the player through the game. These kinds of mechanic-oriented games do not need much else than a sense of failure and success to keep players engaged, as survival is one of the stronger instincts in sentient beings. Game developers can expect that players will do whatever it takes to keep the game experience from ending. (Pink 2017)



PICTURE 1. In Tetris, the player can only rotate and move the appearing pieces (Giant Bomb 2019)

On the other end of the spectrum from Tetris, there are games like *Night in the Woods* (Finji 2017), in which only small bits of gameplay are inserted every now and then to support the story. There is no game over, and the main game mechanics are exploring the town and talking to NPCs. The game was nominated for over twenty awards, received five, and was overall reviewed extremely well by video game publications (table 1), which really says something about the reception for story rich games these days.

TABLE 1. Review scores for *Night in the Woods*

Publication	Score
Polygon	7.5/10
GameSpot	9.0/10
PC Gamer (US)	8.2/10
Game Informer	8.8/10
IGN	8.7/10

In conclusion, the purpose of playing a video game has shifted from winning to completing over time. According to consumers, this is a desired change too. Experiencing the story is among the top three reasons why players enjoy single player games (figure 2). (Ceros 2017)

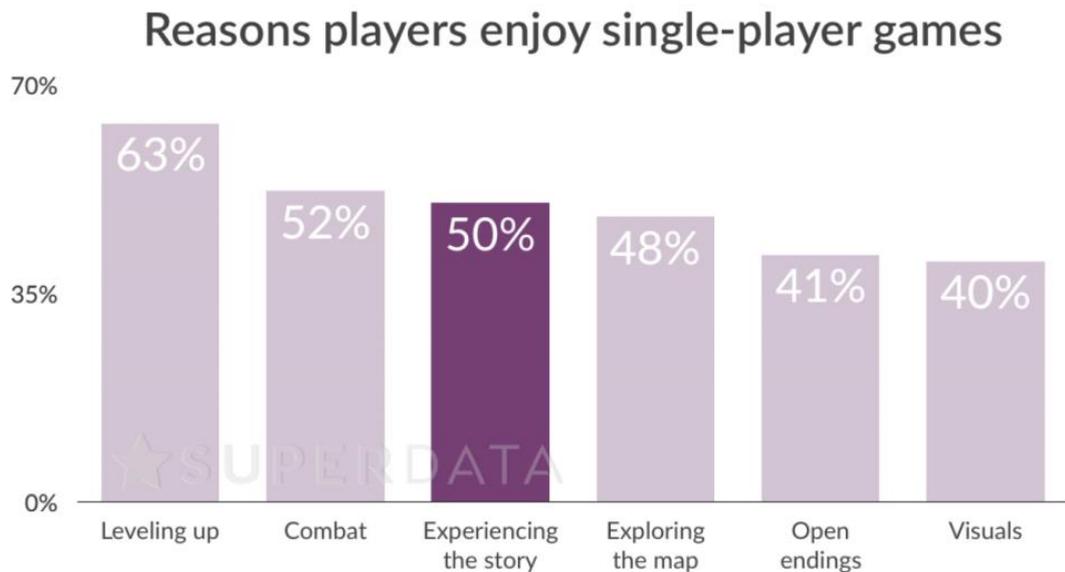


FIGURE 2. Reasons players enjoy single player games (SuperData Research 2018)

As seen in figure 2, the top two reasons players enjoy single player games are levelling up and combat. The avatar needs to stay alive for the game experience to keep going, so it makes sense that players enjoy making their avatars stronger, and combatting the enemies that try to kill them. According to Pink (2017), when players are offered a story to connect with, they may even make choices that benefit non-playable characters, over receiving clear, mechanical rewards. It can be concluded from this that a connection with a story provides the player with deeper motivations than just the gratification of levelling up. (Pink 2017)

2.2 Key features

This section will go through the key features found in story rich games. One cannot really expect to find a dialogue system or explorative elements in purely mechanic-oriented games, and while games like RPGs can definitely have quite a bit of storytelling, they usually also contain gameplay-related features (levelling up, combat, quests) that are held to more importance when thinking about the provided experience.

While the features listed here are not exclusive to story rich games, each of them has an important place within them in terms of narration according to the research conducted. Some story rich games might also only have a few of the features listed here, depending on what kind of narrative choices have been made.

2.2.1 Dialogue system

Dialogue (and monologue) is what the characters in the game say, which is an undeniably important part of any story with characters. The methods of delivering dialogue are multiple, from voice acting, to text boxes, to speech bubbles (picture 2).



PICTURE 2. In Oxenfree (Night School Studio 2016), the dialogue choices are presented with speech bubbles (Player One 2017)

Text-only engines are not as widely used as they used to be, but they are a cost-effective and versatile solution, making them a popular choice especially within the indie game industry. Their strength lies in flexibility with script editing, and having room for some customization, such as allowing the player to name their own character, and having the name appear in dialogue. (Bateman 2007, 284.)

Between text-only engines and voice acting, there are also some in-between solutions. Even if a game uses a text-only engine for gameplay, they might still record voice acting for cut scenes, to allow for a more cinematic effect (Bateman 2007, 284). Furthermore, in games with branching storylines or narrative, the choices of dialogue are usually always presented in text form, even if the lines themselves are voice acted.

2.2.2 Exploration

Exploration is the way the player examines the game world and learns more about it, and it can have different definitions in different games. It could mean exploring characters and their dynamics, exploring dialogue, exploring the story, or just exploring places and scenes. The freedom to explore creates an illusion of control, and being able to miss things makes paying attention worthwhile (picture 3). (Benson 2018)



PICTURE 3. Night in the Woods. This possum only appears if the player both spends time with a character called Germ, and visits a bridge at the end of the game (Dark Station 2017)

Exploration and *experiencing* can be used as storytelling methods just as much as an obvious narrative voice, which makes being able to explore the game world an undeniably important tool of storytelling. (Kuorikoski 2018, 134.) As much as a character in a book would make observations about the world around him, so can the player via their avatar. In story rich games, there are

often points of interest in the game world with which the player can interact, and trigger a line of information from the avatar. The points of interest can be visible all the time (picture 4), or only when the player is near enough.



PICTURE 4. The Walking Dead: A New Frontier (Telltale Games 2016) shows the player points of interest within the scene (New Game Network 2017)

Calm moments of exploration also give the player a chance to take in environmental storytelling. Looking at picture 4, even someone who has never played the game can make some conclusions based on the environment and how it is designed. And for the player, examining the environment deepens their connection with the game world. This way, not everything needs to be said; it can also be shown.

2.2.3 Cut-scenes and scripted events

Traditional narrative structures can prove problematic to apply to games because of their interactive nature. The scriptwriter cannot decide how long a player will spend on each stage of the game, which can affect storytelling in negative ways. Using cut-scenes between gameplay is a common practice, because they can be structured in favour of the narrative beforehand. This allows for video games to include cinematic elements, and to give the scriptwriter more power over storytelling. (Kuorikoski 2018, 106-107.)

Though related to cut-scenes, scripted events only take control away from the player for a short while, and they are more ingrained in the game world instead of being a separate, video-like element. For example, a scripted event could be showing the player something important in the scene with a camera pan. (Bateman 2007, 56.) A scripted event often supports gameplay, e.g. shows the player the placement of guards when stealth is required, but it can also be used to highlight something that is important for the narrative (picture 5).



PICTURE 5. A scripted event in *Night in the Woods*. Player movement is restricted, and the camera pans to the left to showcase an ominous event

2.2.4 Puzzles, quick-time events and mini games

Even though story rich games have a focus on storytelling, they still often have some overall mechanical elements beyond exploration and dialogue (puzzles and/or quick time events) or more confined gameplay events (mini games). According to Kuorikoski (2018, 121), problem solving creates an illusion that the player is responsible for the events that unravel, even in games where the story is completely linear with no branching elements.

A puzzle element in a game might be something as simple as the player needing to place something heavy on top of a switch for a door to stay open, or a more complex and multi-layered problem. They are supposed to make the play-

er feel like their wit and skill can achieve an outcome, and act as a different level of gameplay. (Davies 2015) A Walking simulator can easily feel more interactive when there are mysteries or problems to solve, and unlocking more narrative through a puzzle is surely more satisfying than just stumbling upon it (picture 6).



PICTURE 6. In the Vanishing of Ethan Carter (The Astronauts 2014), the player must use environmental hints to deduce the correct chain of events in order to reveal what happened (New Game Network 2014)

A quick-time event – or a QTE - is a scripted moment similar to a cut-scene, with the exception that some player interaction is required. They usually involve a sequence of inputs which the player must do correctly in order to succeed – otherwise they will have to try again. Quick-time events allow the gameplay to look very cinematic, but they are often criticized for the lack of value they hold; the players just need to learn the sequence in order to pass the event, which can even get frustrating if the sequence is very long. (Kuorikoski 2018, 121.) Heavy Rain (Quantic Dream 2010) is infamous for its heavy usage of quick-time events, since failing them even affected the outcome of the story. However, storytelling-wise QTEs can be very useful, since their content can be entirely laid out by directors and scriptwriters.

A mini game is a self-contained game within a video game. The content and gameplay of a mini game is often significantly different from the game it is contained in. Mini games may serve a function, or be a purely additional and optional feature. An example of a functional mini game could be the hacking mini

game in Bioshock (Irrational Games 2007), in which the player has to arrange a set of pipe pieces to connect them. When successful, the player may gain access to a new area, unlock a safe, or disable a security device. An example of an optional mini game could be Demon Tower in Night in the Woods (picture 7). It is an action game you can play on the main character's (Mae's) laptop – if you want to. It doesn't unlock anything special, but it adds depth to the story, since it is a game Mae used to love playing before moving away from her home town.



PICTURE 7. Playing Demon Tower is completely optional, but an action game within a story rich game can feel refreshing (Game Pressure 2017)

When used skillfully, mini games may even help the player relate to their avatar better. The mini games might get easier and easier to solve due to newfound abilities, or they might be very difficult, if your avatar has no idea what they are doing either. A prime example of this can be found in Night in the Woods, where the player is thrown into a mini game where they have to press the right buttons in order to play a song on the bass. It is ridiculously hard if you have never played the game before, but the whole point is that the player avatar has never played the song either, so obviously she will make mistakes. It might feel like the player is just set to fail on purpose – but in reality it deepens the connection with the main character.

3 VISUAL DESIGN IN STORY RICH GAMES

The graphics of a game are – understandably - its most visible selling point. They are easy to showcase both in video and still form, and serve as a first impression of what the game is going to be like. The visuals of a game are an elaborate entanglement of art, stylistic choices, function and performance. (Kuorikoski 2018, 165.)

The first function of visual design in games was to support gameplay, and serve as an environment for interaction. As technology advanced, and narratives started to hold more importance, the portrayal of the game world and its characters became a significant aspect of game design. (Kuorikoski 2018, 165.) This section will introduce the visual elements in story rich games that support delivering the narrative.

3.1 Key visuals in story rich games

3.1.1 Display of text and dialogue

Completely text based interactive fiction games were some of the first games that could be called story rich. In these games, the events of the game were conveyed to the player solely through text. (Kuorikoski 2018, 189.) Even in contemporary games with graphics and voice acting, the presentation of text plays a significant, yet maybe commonly overlooked role. Oftentimes the player will find pieces of text (notes, letters, diaries, etc.) in the game world that provide them with more lore. In story rich games with branching storylines, the choices the player can make are usually presented in text form (picture 8), in addition to players often choosing to keep subtitles on.



PICTURE 8. Life is Strange: Before the Storm (Square Enix 2017). This is what making important decisions looks like (gamepressure.com)

Of course, the appearance of text plays an even bigger role in games where the dialogue is presented solely in text-form. The usual choices for presenting dialogue are either a text box or a speech bubble. The text can be treated as a completely functional element that displays the dialogue to the player, or as a chance to convey character personalities through different stylistic choices. For example, in To the Moon (Freebird Games 2011) the look of the dialogue stays the same throughout the game, whereas in Undertale (Toby Fox 2015) it varies from character to character (picture 9).



PICTURE 9. Screenshots of To the Moon (upper half) and Undertale (lower half) (Moby Games 2011, Moby Games 2016, Game Cave UK 2016)

The choice of font not only affects the design and personality of the game, but also its accessibility. Players with vision impairments, dyslexia or colour blindness may have complaints about font and text stylization choices that are not contrasted enough, are too small to read comfortably, or are in a serif, or otherwise hard-to-read font. (Game accessibility guidelines 2017)

Even though white text on a dark background can somewhat compromise legibility, it still seems to be a very popular choice in games. The reason for this might be that for the text to be black, its background needs to be a suitable contrast of white or other colour. (Tubik Studio 2016) Having a white or otherwise bright text box could be distracting to look at, especially if the game environment is otherwise darkly coloured. There are exceptions to this rule however; brightly coloured *Wandersong* (Greg Lobanov 2018) makes good use of its white speech bubbles with black text, and within the vivid game world, they do not seem off at all (picture 10). All in all, it is a design choice among many.



PICTURE 10. *Wandersong* uses white speech bubbles (True Trophies 2019)

Contrary to dialogue, additional bits of lore or story related text are often black text on lighter background. The items the text is found on often mimic real-world surfaces, such as paper, so it makes sense in the context. The text does not necessarily need to be as legible as dialogue, and for the sake of realism, the fonts used often either look handwritten – or the text actually *has* been handwritten (picture 11).



PICTURE 11. Dialogue vs. Sketch book notes in Night in the Woods (Nindie Spotlight 2018, The Fantasy Gamer 2017)

As a conclusion, the appearance of text and dialogue can come down to personal stylistic preferences, but accessibility should not be left out of the equation. It is also a chance to give the characters more personality, and to give more depth to the world that has been designed.

3.1.2 Environmental storytelling

The most primary function of a game environment is guiding player movement. Early on, game environments merely served as a space for the game to happen in – and due to technical limitations, this was often the only option as well. As technology advanced, more believable and detailed game worlds could be created, and they started to serve more purpose than just being an interactive space. Actually, more detailed levels even guide the player better. It is easier to form a mental map, when the level areas are more distinct from each other. (Bycer 2018) A trendsetter in both environmental storytelling and distinct environments was game series *Myst*, in which the player explored the game environment in order to solve puzzles and reveal more of the story.

Environmental storytelling serves both mechanical and narrative purposes. Humans make observations of real world environment all the time, and the same applies to game environments. Details and design of the environment can communicate a great deal of different things, such as the purpose of the space,

what kinds of people inhabit it, or which types of events have taken place there. (Smith & Worch 2010)

Used for a mechanical purpose, environmental storytelling can be used to help the player with solving a puzzle or to telegraph something that's about to happen. Players will likely avoid a blood-stained door – or at least take a moment to load their gun before they enter. (Smith & Worch 2010) As a narrative tool, environmental storytelling is a prime example of the 'show, don't tell' - technique. A good example of the power of environmental storytelling is *Gone Home* (Fullbright, Blitworks 2013), a game in which the player explores a house and its contents to find out what happened there. The first ten minutes of the game are completely silent in terms of monologue and dialogue, the entire premise is set through taking in the environment (picture 12).



PICTURE 12. In *Gone Home*, the player discovers the story by exploring the environment (New Game Network 2013)

The sound design within the environment can support the visuals or enforce an aspect of them. Whether the floor sounds creaky or not can tell a lot about the state of the house the player is walking in, or a dynamic piece of music can emphasize the importance of a certain area. For example, *Hyper Light Drifter* (Heart Machine 2016) is an action game in which the story is conveyed fully through visuals and sounds, and without the carefully designed dynamic music and sound effects the visual storytelling would be much less effective (picture 13).

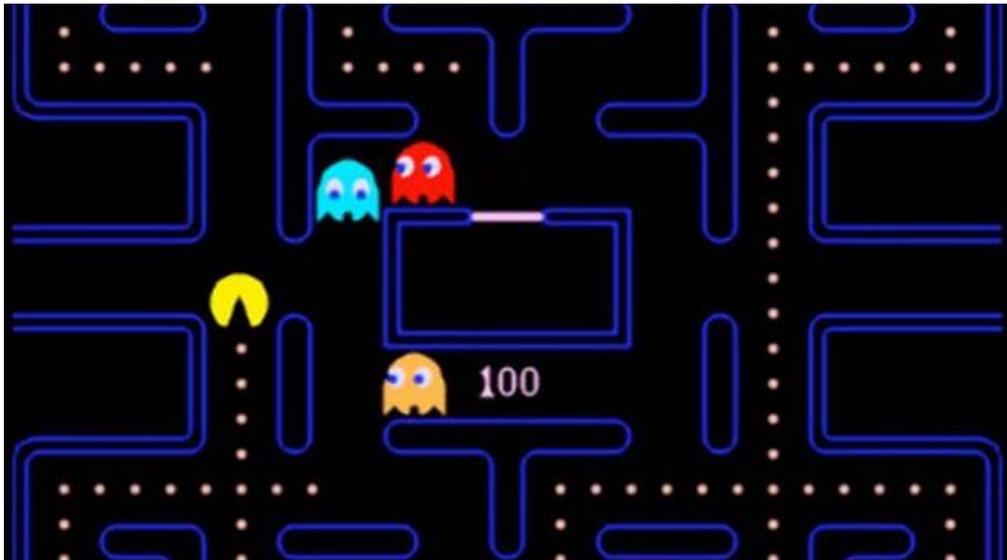


PICTURE 13. When the player arrives to this screen in Hyper Light Drifter, the music dynamically reaches a clear peak to emphasize the sight of a frozen giant (Pavbca 2016)

The design of environments can enforce world building, give the player context and hints, guide them in the right direction, and most importantly - tell a story. Environments can be more than just a playground for interaction; they are a narrative element themselves.

3.1.3 Characters

The history of game characters begins with arcade games. Unlike many games of their time, Nintendo's Donkey Kong and Pac-man (picture 14) had playable characters, which, according to Kuorikoski (2018, 180), is the main reason behind their huge success. Playing as a character instead of an inanimate object allows for players to relate to what they are doing. As far as telling a story goes, having relatable characters is an absolute key, and these early visualizations of heroes and enemies paved the way for character design in video games. (Kuorikoski 2018, 180)



PICTURE 14. Pac-Man may not be human, but still a character (Geek.com 2015)

Even the aforementioned arcade games with crude visuals and no narrative can convey a story, as human minds are wired to find meaning and patterns even when there are none. The round shape of Pac-Man feels safe, whereas the ghosts with their spikey hems are clearly a threat. The design of both playable and non-playable characters has a significant impact on how the player views them and feels about them, making character design an important part of the visual design process. (Kuorikoski 2018, 182-183.)

3.2 Comparisons

This section will compare contemporary 2D action games and 2D games that are story rich. This is to find out how a strong narrative affects the visual design of games. The story rich games compared are Wandersong, Night in the Woods, Rainswept (Frostwood Interactive 2019) and Unforeseen Incidents (Backwoods entertainment 2018). The action games compared are Shovel Knight (Yacht Club Games 2017), Cuphead (Studio MDHR Entertainment Inc. 2017), Micro Mages (Morphcat Games 2019) and Forager (HopFrog 2019).

The games chosen can all be played on a desktop computer. The action games chosen all have the tag 'action' on Steam, and the story rich games the tag 'story rich'. In addition to these conditions, it was carefully considered, whether the tag was true for that particular game, as game developers can choose the tags

themselves. For the action games, the condition was to have most of the game-play consist of platforming, combat, or a combination of the two. For story rich games the condition was that they would have a focus on exploration and dialogue; the two features that could be called the core of story rich games, according to the research conducted. All games chosen are also 2D, since that was the style of choice for the project which accompanies this thesis.

3.2.1 Character design

In action games, it makes sense for the character to appear quite small on the screen, as it is useful for the player to see plenty of the character's surroundings in order to decide where to go, and how to get there (Lobanov 2018). In picture 15, there are screenshots of two story rich games on the top row, and two platformers on the bottom row. There is quite a difference to the sizes of the characters, which is coherent with Lobanov's point, and was also consistent throughout the rest of the games compared in this section.



PICTURE 15. Differences in character size in story rich games and platformers. From top left: Wandersong, Night in the Woods, Micro Mages, Shovel Knight (Wccftch 2018, The Young Folks 2018, OnRPG 2019, Pathfinding 2014)

While Wandersong and Night in the Woods both have platforming elements within them, the main focus remains on the story. The faces of the characters are clearly visible in these games, and their sizing on the screen is significantly

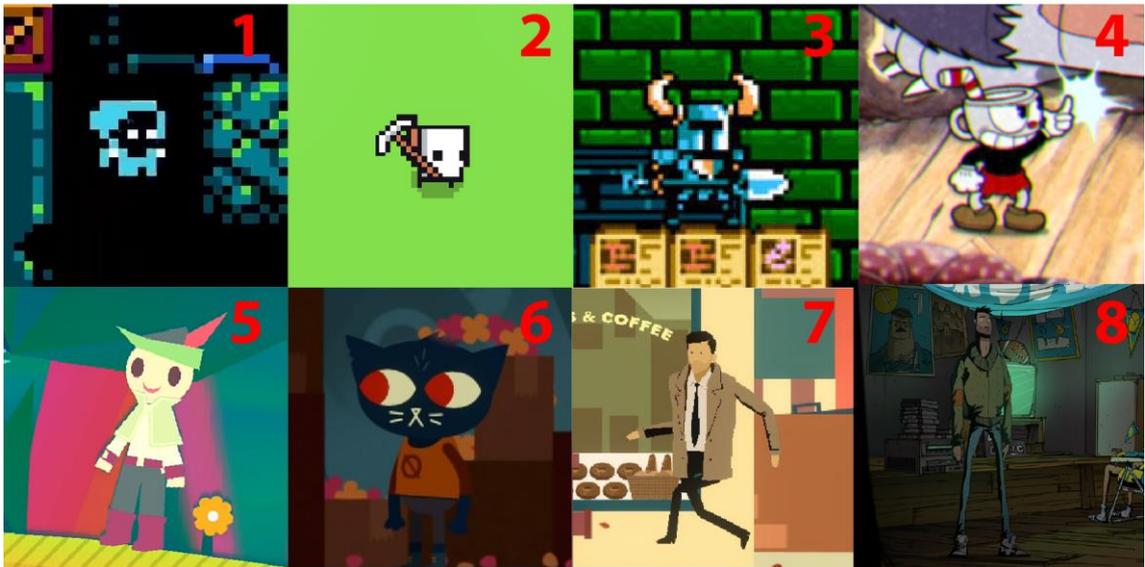
bigger than in the examples below. However, when a mechanic-oriented game does have storytelling elements, such as dialogue, the face of the character can be revealed in a more detailed picture (picture 16).



PICTURE 16. Celeste is a very gameplay focused platformer, but the characters are given an expressive face within the dialogue box when they talk to each other (New Game Network 2018)

It can be concluded, that the faces of characters are an important feature, especially in terms of storytelling. Of course bigger, more detailed characters also leave more room for expressive animations and other ways to convey information to the player. The type of clothes the characters wear, what items they carry, how they move and any scars or other marks they bear can indeed contribute to the storytelling and world building.

Examining picture 17 (action games on top row, story rich on bottom), we can see that in action games the size of the character's head takes up at least one third, if not most of their body. In story rich games the size varies more, and the character's body seems to have some more focus in terms of design. In story rich games, both the character's faces and clothing have more detail to them, whereas in most of the action games, facial features are minimal, or completely hidden. Clothing-wise, most story rich games seem to enrobe their characters in a bit more than just a shirt, pants and shoes (or, nothing, if we look at Forager).



PICTURE 17. 1. Micro Mages, 2. Forager, 3. Shovel Knight, 4. Cuphead, 5. Wandersong, 6. Night in the Woods, 7. Rainswept, 8. Unforeseen Incidents (OnRPG 2019, IGDB 2019, Moby Games 2017, Moby Games 2017, Wccfttech 2018, The Young Folks 2018, Adventure Games 2019, Moby Games 2018)

Though stylistically very different, the most similarities in terms of character design can be drawn between Night in the Woods and Cuphead. Both have big, expressive eyes, are clothed in quite a simple manner and even their bodily proportions are alike. Both characters are also non-human. However, there is a difference in the size they appear on the screen during the game, as discussed before, and the playable character in Night in the Woods has four more colours in its palette.

The more complex the design, the more information the player gets; and in theory, more complexity should also mean more colours used. A colour picker was used on the playable character of each game, to see how many different colours could be distinguished in the design. Not the most scientific method, surely, but the results should not be very far from the truth (picture 18).



PICTURE 18. The colours used in each main character within the compared games

It can be seen from this colour study that story rich games, on average, have about twice as many colours used than action games. This definitely has something to do with the mechanics in these games – fast paced action requires for the character to be easily distinguishable from its environment, or gameplay would get confusing real fast. A tighter colour palette can definitely help with that. Story rich games have a tendency to mimic real life more; it makes sense that more colours can produce more complex characters and environments alike.

It seems that bodily proportions are a bit closer to realism in story rich games. Of course the characters are still stylized, but their limbs are clearly visible, and resemble the proportions of real-life humans more. This might have something to do with the animation styles and gameplay-elements that are commonly used in each genre.

In action games, the gameplay often consists of a combination of platforming and combat. Especially with combat related animation, a lot can be achieved with the animation of weapons, projectiles, and how enemies react when they get hit. Actions like jumping or dashing are also often emphasized with effects (picture 19).



PICTURE 19. Animated effects from Shovel Knight and Cuphead (Polygon 2014, XCageGame 2017)

In story rich games the main mechanics often involve walking around and talking to NPCs, so no such effects *can* really be implemented. The main animations the player will see are the walking animation or other action related animations (such as jumping) and a talking animation – if there is one. So, it might make sense to have more realistically proportioned characters, if all the player is going to see is the character doing normal, everyday things.

Stylistically, within these compared games, most of the action games have opted for pixel art. Pixel graphics were widely in use through the 70s and 80s because of technical limitations, and only later became a choice of art style among many. While choosing this art style can surely be a nod towards retro games, it is also a form of cartooning digitally, and as a style, doesn't spell everything out for the viewer. It is a minimalist and evocative style which does not age visually. (Byford 2014) The reduced amount of detail and a more limited colour palette might be the reason for its popularity within the action game genre; the style allows the gameplay to shine, as it does not draw too much attention away from it and leaves some room for interpretation.

However, the other games compared draw visual inspiration from the world of cartoons, comics and illustration. Cuphead is surely an outlier as an action

game with its 1930s American cartoon style. Unforeseen incidents has a style reminiscent of a comic, Rainswept and Wandersong could be reimagined as cartoons, and the visuals in Night in the Woods could be taken from the pages of a children's book. Perhaps it makes sense that these games are mimicking the visual styles of other mediums of storytelling.

In conclusion, many differences can be drawn between the character design in action games and in story rich games; at least within this compared bunch. There will always be exceptions to the rule, especially within games that are not so clearly defined by their genre. The aforementioned Celeste combines storytelling and action in a very clever way, and while the character is just a few dozen pixels during gameplay, the expressive portrait and talking animations during dialogue really give it a special flavour.

3.2.2 Environmental design

One could say that environments within story rich games and action games serve very different purposes. In action games, the environment is a setting created specifically for skilful jumps, leaps and dashes to get from point A to point B, and for combat to take place. The scenes are filled with what the genre is known for – action. In story rich games, the pace is not usually nearly as high, and taking in the scene is a big part of the experience.

The environments in Micro Mages and Shovel Knight are largely defined by what most of their action consists of, which is platforming. It has been made very easy to see what can be jumped on, and what is just background (picture 20). This has been achieved by giving quite a high contrast between a ground element and a background element. Other things you can see on the ground in Micro Mages are things you can interact with.



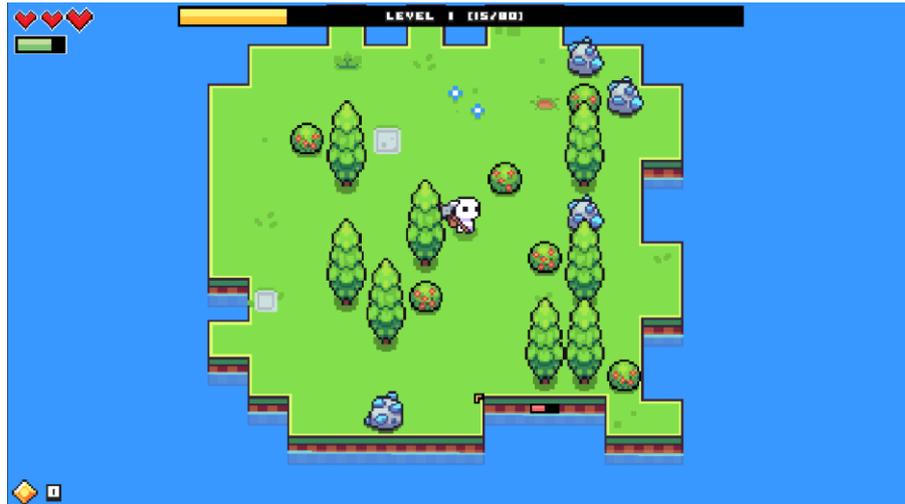
PICTURE 20. Screenshot of Micro Mages (OnRPG 2019)

In Shovel Knight, the environment has three layers (picture 21). When the player is moving around the screen, everything stays still until they reach the edge of it; at which point, the sky stays still while the rest of the screen moves away, and a new environment emerges. In that sense, there is some more depth created than in Micro Mages.



PICTURE 21. The environment in Shovel Knight has three layers (Yacht Club Games 2017)

Forager is a bit different from the other games compared, as it is in a top-down view. This comes with limitations of its own in terms of environment (e.g. no sky can be shown), but it does share similarities with Micro Mages and Shovel Knight. Everything the player can step on is clearly defined with only a few details, and everything else on screen can be interacted with (picture 22).



PICTURE 22. The player can hack down everything on the platform they stand on (Tech Raptor 2019)

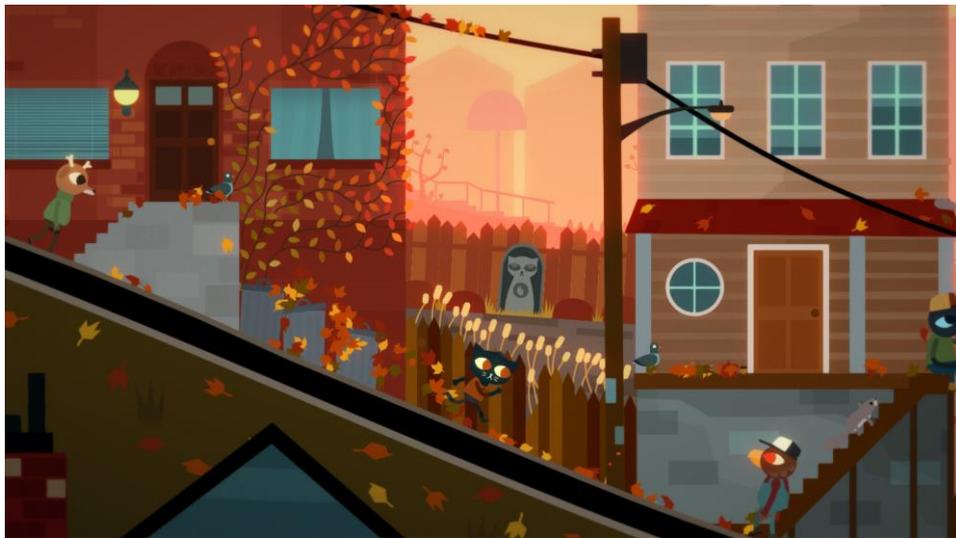
Cuphead definitely has the most detailed environments out of the bunch. No two stages look the same, and everything is very elaborate and expressive. The environments all make sense within the fictional world and there is a great amount of detail put into them, but they are still just meant to be a playground for action (picture 23). Each stage is clearly confined – you cannot leave it until you are done fighting (or lose), and after that is done, you cannot hang around to just explore it. Not that the player would even want to, since the entire point of the game is the action. The gameplay is brutal to learn, so the fun visuals are more of a motivation to keep going.



PICTURE 23. The environments in Cuphead are very detailed (Moby Games 2017)

The overall view of environment in action games is this; they are mostly just meant to contain the action. The designs of Shovel Knight, Micro Mages and Forager are all somewhat simplified. The environment guides and challenges player movement, and even though they resemble real world environments and frame the premise, they are not overtly detailed. Everything 'extra' you can see on the screen are things to interact with; crates to break, bugs to crush, chests to open, platforms to jump on. The visuals of each game remain true to their worlds, but they are just there to frame the gameplay. Cuphead surely stands out, and is maybe an exception to the rule especially with the amount of detail. The game being very fast paced, it does make one wonder if the player ever has a chance to take in all the detail poured into it.

If we take a look at the environmental design in story rich games, they have both similarities and differences to action games. What the player can walk or jump on is still defined (though not quite as on the nose), but the biggest difference is the amount of environmental storytelling and detail; not everything on the screen has a function. This of course has to do with the gameplay, which in story rich games leans on exploration (picture 24).



PICTURE 24. A screenshot from Night in the Woods. Most of the houses cannot be entered, nor characters talked to, but they are still there to make the city believable and fun to explore (Night in the Woods 2017)

In this particular screenshot of *Night in the Woods*, there are five layers to the graphics. It helps create depth in a 2D world, and makes it seem like there is more to the town than what the player gets to see in the game (picture 25).



PICTURE 25. Layered graphics create a feeling of depth (*Night in the Woods* 2017)

An experiment was made to remove the fourth layer – which was comprised of silhouettes against the sky - in order to see if it added to the graphics. Removing it instantly made the world feel flatter, which one might not expect, as it seems to be such a minimal part of the overall design (picture 26).



PICTURE 26. Removing a layer of graphics made the city feel a lot flatter (*Night in the Woods* 2017)

Wandersong definitely shares many similarities with Night in the Woods, both in terms of gameplay and environmental design. They both have platforming elements within them, but the platforms the player can jump on are not always as clearly defined as in action game platformers (picture 27). In Night in the Woods the player can jump on electrical wires and rooftops, and in Wandersong, the scenes are laid out so that the player can ascend or descend by jumping or falling through. The graphics of Wandersong are also similarly layered, creating an illusion of depth.



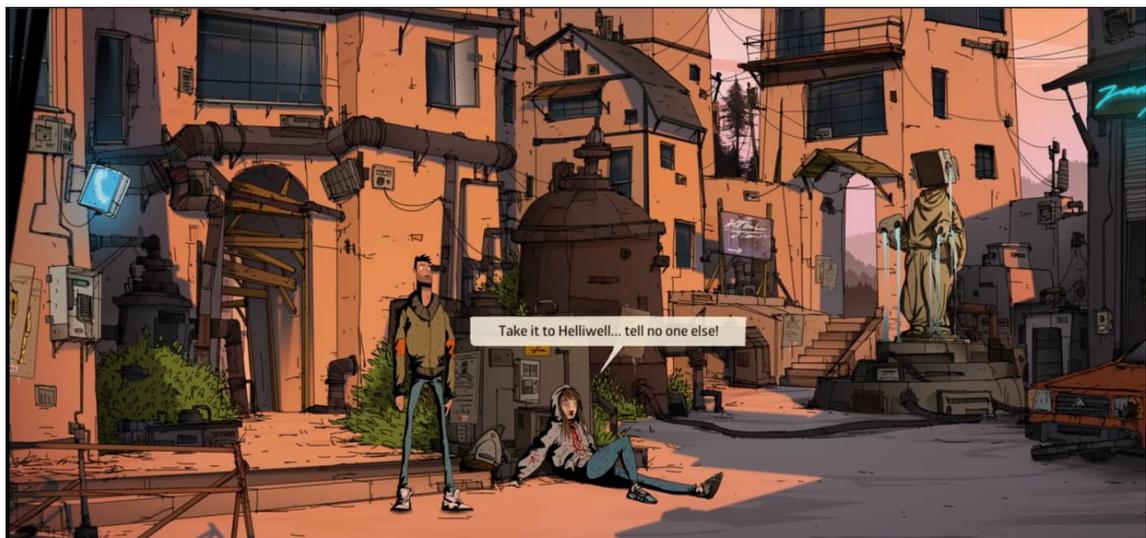
PICTURE 27. Platforming in Night in the Woods and Wandersong (Night in the Woods 2017, Wanderbots 2018)

Unforeseen Incidents is a point-and-click game, and Rainswept has some similarities to that kind of interaction. In Rainswept you see points of interest when you arrive at them, but the player gets to click and choose what to do with it. The visual style in Rainswept definitely shares some similarities to Night in the Woods and Wandersong, though no platforming elements can be found here. However, the non-shaded and vividly coloured style gives off the same vibe. Everything is in a strictly frontal perspective (picture 28).



PICTURE 28. The player arrives at a crime scene in Rainswept (Wolftooth 2019)

Unforeseen Incidents stands out from this bunch with its many details and dynamic perspectives. For a point-and-click game, it makes sense to have lots of detail, since the player is supposed to click on things that seem relevant or interesting (picture 29).



PICTURE 29. Unforeseen Incidents has a ton of detail (wolftooth 2018)

The graphics of story rich games do not need to be overly complex to get their point across. The worlds of Rainswept, Wandersong and Night in the Woods are believable and rich, because the right design choices have been made. The scenes have plenty of elements that cannot be interacted with and there is a

variety – not every tree, household item or building looks the same. The places seem lived-in and real. The depth is created through layering that's not as obvious as in platformers. Unforeseen Incidents has the most detailed graphical style out of the bunch, and because of its interaction input, it makes sense too. The details definitely do not hurt – but creating them must take a lot more time, which is not always a possibility.

4 LIEKKO AND THE STOLEN MOON

The creation of Liekko and the Stolen Moon first began in the spring of 2018. The project was at first supposed to be just that - a project. I wanted to make it on my spare time, and possibly get some credit points out of it. However, as the idea grew and started to take shape, it became clear that it would require a tremendous amount of time and effort, at which point, I decided to make it my thesis subject. The research I have conducted over this spring has changed the initial ideas I had for the visuals a lot. It is rewarding to see that all this work has paid off.

Perhaps the biggest inspiration for Liekko and the Stolen Moon has been *Night in the Woods* and a related game called *Lost Constellation*. The minimal yet lively vector style and quirky stories resonated with me, and the art-style felt achievable to mimic for a beginner (picture 30). I always liked to read, and these types of games felt relaxing to me; like a story you get to participate in. I wanted to achieve something similar.

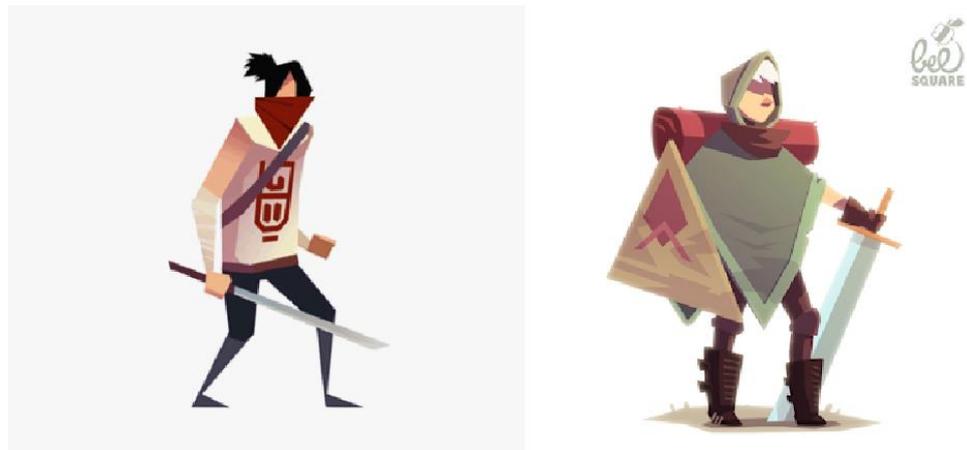


PICTURE 30. The visuals of *Lost Constellation* are simple and effective (Medium 2016)

Liekko and the Stolen Moon takes place in a Finnish village, in a fictional timeline, drawing inspiration from Finnish folklore. Supernatural things are a part of everyday life; things like rocks or gates may speak to you directly, and god-beings are very much real and respected. The events of the game transpire during a single winter night.

Liekkko, our protagonist, arrives back to her home village after being gone for a longer period of time. She quickly notices something seems off, and decides to go find her sister, Salme, so they can talk. It turns out the moon has disappeared from the sky, and the village council has decided to sacrifice Salme at sunrise in order to get it back. Salme has oddly agreed to the act and accepted her fate, but Liekkko feels differently, and intends to save her. Her mission is to find the moon herself before dawn.

When I initially started to put down ideas for the visuals, my inspirations for character design were quite anonymous-looking (picture 31). I thought something like these references would be fairly simple to recreate in a vector style, and I found the look appealing overall.



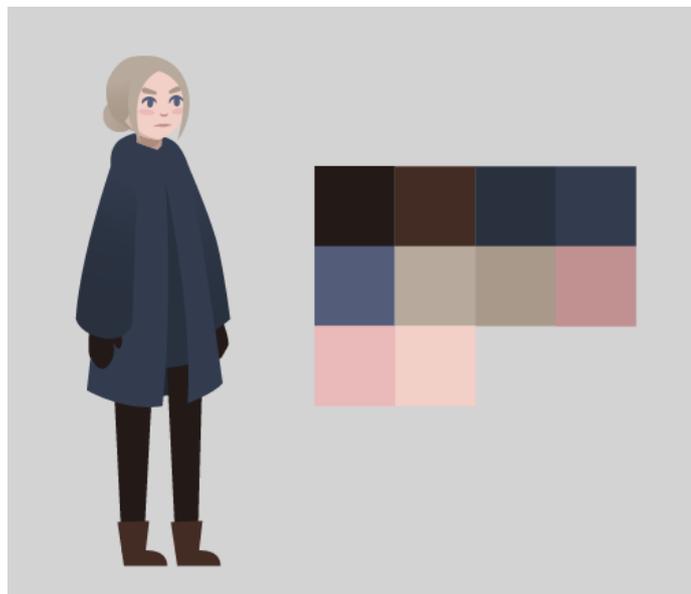
PICTURE 31. My first references for character design (Dan Santandrea 2014, Pablo Delgado 2015)

However, my research revealed that character's faces are an important feature in story rich games. Both of the characters in picture 31 have weapons, which could indicate that they were designed with action games in mind. So, in the end, not such a good reference point after all. In picture 32 we can see how much the initial ideas for Liekkko and Salme changed throughout the process.



PICTURE 32. Early concepts of Liekko and Salme vs. their final versions

I really wanted Liekko's personality to come through in her new design. She is determined, practical and outspoken. Her facial expression is not quite angry, but not very friendly either, and her hair is up so it is not in her way. Her original, colorized design was comprised of six colors (which you'll see later in this section), and the new design of ten (picture 33).



PICTURE 33. Liekko and her color palette

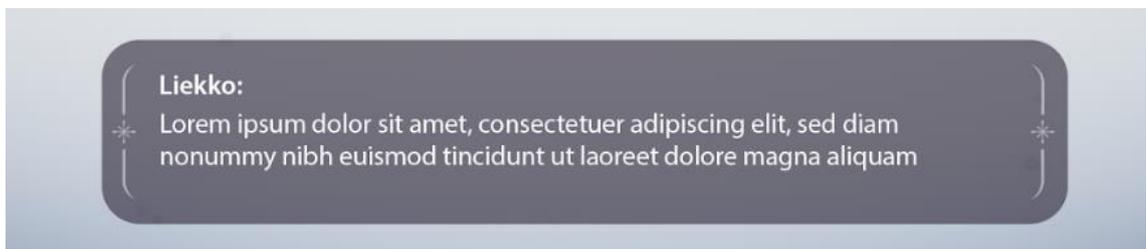
The same principles were applied to the design of the rest of the characters. I would say the characters hold a lot more personality and relatability with these

new design choices, than the ones I would have made before the research (picture 34).



Picture 34. The whole cast of characters

For delivering the dialogue in the game, I chose a text box. Speech bubbles would have been a primary choice just to add some personality, but they are much harder to implement. A text box is an easier choice, because it can look the same every time, it is only the contents that change. In my research I found that white text is often the primary choice for games, and I decided to go with that as well. The game happens during nighttime, so a light text box might not have worked at all with the environment (picture 35). The text box has some transparency to it like in *To the Moon*, to make it fit the environment easier.



PICTURE 35. The text box design

The choice of typeface ended up ended up being 'Ogirema'. It is a sans serif typeface, which is I found in my research to be good for readability, but it has a bit more stylization than some commonly used sans-serif typefaces; such as Montserrat, Open Sans, or Arial. The ends of some letters are slightly tapered, and some letters with arcs, such as 'a' or 'h' have a bit of a calligraphy feel to

them with how the weight shifts. I thought these little details made the typeface look a bit more organic, which fit nicer in the world than a more modern-looking font (picture 36).

This is a SAMPLE.
This is a SAMPLE.
This is a SAMPLE.

PICTURE 36. The typeface chosen for the game

The early concept for environment was very simplistic and was comprised of three layers; the one the character walks on, the background, and the sky. Not much else was in the early plan than trees and snow; I thought not much more might even be necessary (picture 37).



PICTURE 37. Early concept for environment in *Liekko and the Stolen Moon*. Here you can also see Liekko's original design colorized

According to the research I made on environmental design, my original idea was far too simple for a story rich game. This is why I ended up making plenty more assets than just one type of tree (picture 38).



PICTURE 38. Outdoor assets for the game

While the environment mimics Finland in winter, within the fictional universe it is not strange at all to have a tree of a purple hue with glowing runes on it (seen top-right in picture 38). The tree could have well been just a normal tree among others, but it is that strange hue that makes it stand out from the environment and makes the player think it holds a special meaning even before learning about it.

The environment ended up having more layers as well, and each layer has more details than in the initial idea. There is also a silhouette of a forest at the very back, which gives the environment some extra depth (picture 39).



PICTURE 39. Screenshot of the game environment

Now, even though the player can only explore the plane Liekko is on, it feels like the village has more to it. There are houses you cannot visit, with torches lit in their yards, just to let the player know there is life in the village outside of what they can interact with.

You can see in picture 40, how the early concept for the huts changed into something much more detailed. In the new design, you can see the wooden planks, there is snow and frost on top of the windows and doors, and the snow on the roof looks piled up and fluffy, more like it would look in real life.



PICTURE 40. The huts in the game are much more detailed now

The research taught me a couple of precious things. First of all, the visuals do not need to be artistically perfect to work. In fact, a very simple, even ‘obscure’ style can work well, when it is supported by a strong story. The imagination of the player can do half of the work for you – you just need to create a believable frame for it. Realizing this was very relieving at an early stage, when I would have otherwise gotten stuck and tweaked away at an asset for far too long. It was more important to have the assets done and implemented than to have them fulfill my unrealistic expectations. Second of all, despite the previous point, it is important that the game world is believable and whole. I took extra care to make sure every asset would seem like it truly belonged to the game world.

Beyond visual design, my understanding of story rich games and their history has grown tremendously, and helped in other aspects of game design as well. Even though I was the visual designer in this project, I was also the person with whom the project first started with. Every bit of gameplay is as much mine as it is the scriptwriter’s and the programmer’s, and vice versa.

At its current state, *Liekko and the Stolen Moon* is a prototype. The script, the assets and designs for puzzles are done – all that is left is putting the game together. The game consists of three acts, and the prototype shows about a half of the first act (appendix 1). There is still a lot of fine tuning to do in terms of gameplay and the dialogue system, but we have planned a release for September 2019. The game is to be distributed through itch.io, and will be free to download.

5 CONCLUSION

Despite having fairly recently made a comeback, story rich games already have a newfound wide appreciation and following. It has certainly been proven that video games do not need to rely on gameplay to compel consumers. Exploration and dialogue can be all it takes to drive the player forward; and more than that, they can be used in very clever ways to deliver a story.

The graphics in story rich games are characterized by their attention to detail and continuity in both characters and environments. Mimicking the real world, or building a believable one encourages the player to interact with it and to believe in it, and having identifiable and distinctive characters improves relatability. These factors were taken to heart while creating the visuals for *Liekko and the Stolen Moon*.

It is clear that applying a narrative to video games changed the industry forever, and will continue to do so. The story rich genre only needed some new innovations and trendsetters to get started after its slump, and one can only eagerly anticipate which direction the genre takes next.

REFERENCES

Bateman, C. 2007. Game Writing: Narrative Skills for Videogames. Boston: Charles River Media.

Benson, S. 2018. Nuke Possum Springs: A Night in the Woods Postmortem. [Video]. GDC. Released on 5.4.2018. <https://www.youtube.com/watch?v=Xzhe45Q8780>

Buckler, M. 2012. A History of the Videogame Narrative. The Amherst Student. Released on 31.10.2012. Read on 15.3.2019. <https://amherststudent.amherst.edu/article/2012/10/31/history-videogame-narrative.html>

Bycer, J. 2018. An Exploration into environmental storytelling. Game Wisdom. Released on 28.2.2018. Read on 7.5.2019. <http://game-wisdom.com/critical/exploration-environmental-storytelling>

Byford, S. 2014. Pixel art games aren't retro, they're the future. The Verge. Released on 3.6.2014. Read on 2.6.2019. <https://www.theverge.com/2014/7/3/5865849/pixel-art-is-here-to-stay>

Clevenger, E. 2012. Video games have more storytelling potential than any other medium. Venture Beat. Released on 13.8.2012. Read on 20.3.2019. <https://venturebeat.com/community/2012/08/13/ico-and-the-power-of-video-games/>

Davies, M. 2015. A Good Puzzle Game Is Hard To Build. The aesthetics of puzzle game design. Rock Paper Shotgun. Released on 22.1.2015. Read on 8.5.2019. <https://www.rockpapershotgun.com/2015/01/22/how-to-make-a-puzzle-game/>

Game Accessibility Guidelines. 2013-2017. Vision. Read on 26.4.2019. <http://gameaccessibilityguidelines.com/basic/>

Healy, M. 2017. How the Rise of Narrative Design is revolutionizing the Craft of Video Game Storytelling. Ceros Originals. Released on 26.1.2017. Read on 15.3.2019. <https://www.ceros.com/originals/narrative-design-video-game/>

Klug, C. Lebowitz, J. 2011. Interactive Storytelling for Video Games. A Player-Centered Approach for Creating Memorable Characters and Stories. Oxford: Elsevier Inc.

Kuorikoski, J. 2018. Pelitaitteen Manifesti. Helsinki: Gaudeamus.

Lobanov, G. 2018. Wandersong: A Game About Feelings. [Video]. Released on 16.11.2018. <https://www.youtube.com/watch?v=8Y1nnKzULRM&t=33s>

Pink, H. 2017. Snap to Character: Building Strong Player Attachment Through Narrative. [Video]. GDC. San Francisco. Released on 6.3.2019.

<https://www.youtube.com/watch?v=YyQfP1GjdJ8&index=2&list=PL2e4mYbwSTbYD6zfuWTwz2nTfvKOZBWMe>

Prizeman, A. 2018. An ode to storytelling: Narrative driven games. Released on 10.10.2018. Read on 6.3.2019. <https://universityobserver.ie/an-ode-to-storytelling-narrative-driven-games/>

Smith, H. Worch, M. 2010. What Happened Here? Environmental Storytelling. Worch.com. Read on 27.4.2019. <https://bit.ly/2LtkbaK>

Tubik Studio. 2016. Dark Side of UI. Benefits of Dark Background. Released on 6.6.2016. Read on 6.5.2019. <https://uxplanet.org/dark-side-of-ui-benefits-of-dark-background-12f560bf7165>

APPENDICES

Appendix 1. Liekko and the Stolen Moon prototype video

<https://bit.ly/2Z7mp1t>