GETTING LOST IN THE WOODS

A master project in design by Steffen Fløan Øie
Bergen Academy of Art and Design
Spring 2016

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ACKNOWLEDGMENTS
(This part is important)

This thesis, all my work and everything I've done is dedicated to the people who raised my mom, my wonderful grandma and grandad, who both passed away while I was working on this project.

You guys were the very best people.

1.0 PREFACE

Video games and game design have been a lifelong passion for me. Playing games and deconstructing them, trying to get at the underlying principles so that I could understand how they worked has been a part of my life for a long time.

Some people seem to lose their excitement for games as they grow up, but I never did. I kept that initial excitement and slowly started adding to it by studying the work and thoughts that go into making them.

For me, the creative challenges in game design feels like the perfect place to stake a claim. It feels like a space where we're only now beginning to see the edges of what is possible.

For the theme of my project I've chosen *loneliness and solitude*, partly because I have a personal interest there, but more importantly because I believe that we humans seek all kinds of experience and that I can make a game that taps into our occasional and undeniable need to disconnect (Hall, 2013).

To do this I wanted to take advantage of the design patterns of entertainment game design to create engagement in service of instigating reflection, but I also wanted to take what I've learned from design and apply it to the process of getting there.

I believe that there is a stigma surrounding loneliness and the need for solitude and that attempting to disarm it is a worthy endeavor. I also feel strongly that shining a light on loneliness and solitude will help some people better understand their own loneliness and need to sometimes be alone.

Game development is a multi-faceted field and many of its constituent parts fall outside the scope of design. Now, I chose to prototype this game because I believe that creating a theoretical and wholly speculative product is by far the less interesting version of this project.

However, that meant that I had to do some work that falls outside the purview of design. I've skewed this thesis away from those part as this is a master project in *design*. In short, I did a lot of programming, but you won't hear about it here.

That being said, this project is a whole and should be viewed and understood as such.

2.0 KEY QUESTION

How can design help create a game that encourages reflections on loneliness and solitude?

3.0 THEME

Loneliness and solitude, the theme of my project, are the two emotional states humans experience when they are in some way disconnected from others.

The distinction between the two is marked by the presence or lack of discomfort in response to solitariness. Loneliness is a disconnection that comes with a want to be more connected, solitude is being comfortably, even blissfully, disconnected (Marano, 2003).

4.0 GOALS

4.1 Project Goals

- Encourage the target group to reflect on Loneliness and solitude.
- Explore how design can be used to encourage behaviours in-game and stimulate thoughts outside the game.
- Explore how visual communication can function in concert with narrative and game mechanics.

4.2 Personal Goals

- Gain a better understanding of the role of visual communication in game development.
- Further explore how the technology involved in game development can enhance and/or impede visual communication.

5.0 TARGET GROUP

I define the target group for this project as:

people who have grown up to become busy young adults lacking the time to sit down and play games.

I have selected this group because I believe that many of them are faced with relatively new-found responsibilities, unfamiliar social situations and pressures as they transition into a more complicated and demanding lifestyle. This can leave them disconnected and, lacking experience, without the necessary emotional tools to properly deal with their isolation.

In my experience, as a lifelong game player and more recently game developer, this group is an underserved segment that lacks the time to engage with more conceptually and emotionally resonant games and that have been relegated to the casual entertainment of arcade games on the mobile phone.

In 2008 John T. Cacioppo, noted professor of psychology, psychiatry and behavioural neuroscience at the university of chicago, with the help of editor/author William Patrick, described the three factors of loneliness:

- Genetically based need for social inclusion
- Ability to self-regulate the emotions associated with feeling isolated
- Mental representations and expectations of as well as reasoning about others

I can't really do anything about people's genetics, but I can attempt to strengthen their ability to self-regulate their emotional responses and manage their reasoning and expectations about others.

To do this I want to create a safe but engaging interaction with a story and a setting that is centered around being alone. I want to give the players the opportunity to take out and handle their emotions and thoughts about this heavily stigmatized subject until the sharp edges have been sanded down.

For the introverts among the group I also hope that this will let them realize that "it's okay to want to disconnect" (Rankin, 2015).

6.0 CONSTRAINTS

I will produce a sequence of prototypes, each building on the experiences gathered from the previous iteration. The final product will be an experimental prototype and not a finalized game.

To answer the key question I will produce and show a final product (designed to attain the goals stated above) and an accompanying text (explaining my research, process and design choices).

I will not tackle the general ethics of game design and gamification in this project. I will, however, make an effort to address the specific ethical and moral challenges that arise during my project.

7.0 GLOSSARY

Game design is a highly specialized field and it has a lot of concepts and terms that are important to the understanding and discussion of games and the process of designing games. In my experience not many people are familiar with these terms. I have chosen to air on the side of caution and include a list of definitions to help with the reading of this thesis.

Many of the definitions below are sourced from game scholar Jesper Juuls *A dictionary of video game theory* from 2005 - mainly because almost every other text discussing these terms referred to back to this source. I have included the original sources (as cited in A dictionary of video game theory), both in this glossary as well as in the bibliography.

ARCADE GAME
An easy-to-learn game targeted at and/or played by people without extensive video game experience. Often simple action, puzzle, card or strategy games (Thomas, Orland, & Steinberg, 2007, pg. 19).

CASUAL GAME
A game that can be played in short sessions, lacks finality and is replayable ad nauseam (Portnow, 2009).

CHOOSE-YOUR-OWN-ADVENTURE
See "Gamebook"

GAMEBOOK
The word gamebook was original used to describe a work of printed fiction that let the reader make choices while reading, navigating a branching plot (Katz, 1998).

When discussing games the term is used to describe a mechanic that follow this pattern, letting the player interact with a text-based interface, making choices that affect the flow of the game's narrative.

GAMEPLAY
"A game's gameplay is the degree and nature of the interactivity that the game includes, i.e., how the player is able to interact with the game-world and how that game-world reacts to the choices the player makes." (Rouse 2001, xviii)

Gameplay can be said to be conceptually separable from narrative and graphics. (Half-Real, chapter 5.)

GAMEPLAY LOOP
Also known as a "compulsion loop".

A habitual, designed chain of activities that will be repeated to gain a neurochemical reward: a feeling of pleasure and/or a relief from pain (Kim, 2014).

GAMEPLAY MECHANIC
Also referred to simply as "mechanics".

"Game mechanics are rule based systems / simulations that facilitate and encourage a user to explore and learn the properties of their possibility space through the use of feedback mechanisms." (Lost Garden, 2006)

The interaction model of a game can be said to be comprised of functionally separable, but connected, gameplay mechanics. Some gameplay mechanics can be conceptually split into collections of smaller gameplay mechanics.

GUI
Acronym of Graphical User Interface, sometimes used interchagable with the term UI (User Interface).

INTERACTIVE FICTION
"a text-based computer simulation, often a challenging and puzzling one, and a kind of literary art." (Montford, 2006)

PERMADEATH
the permanent death of a defeated character, after which the player of the game cannot continue with the same character (Parfitt, 2015).

8.0 RESEARCH

8.1 Overview

Firstly, I needed to find the best way to reach the target group. How would I design and potentially deliver a game to a group of people that explicitly do not have time to sit down and play a game? The answers, a smartphone game, arose quickly from those very sharply defined restrictions and a look at current gaming statistics and trends. More on this in section 8.2.2.

Secondly, I needed to gather information on how to go about eliciting the constellation of emotions that comprise loneliness and solitude. Though closely related, these two mental states sit at each end of a spectrum that stretches from positive to negative. I needed to put them both into play, striking a balance between the two in the visual design, interaction design and narrative.

This was by far the most complex challenge and can be said to make up the largest part of my project. My answers are best summarized in the end product and any attempt to recap them here would be painfully reductionist. However, the research that underpin my choices are laid out in section 8.2, compiled into a design strategy in section 9 and explored through experimentation documented in section 10.

Thirdly, I needed a way to make the experience stay with the target group, a design mechanism that left a lasting imprint, drawing them back into the theme. To achieve this effect I decided to leverage the established conditioned-response-relationship that the target group has with smartphone notifications and set up a periodic model of play that uses motivated repetition for its didactic potential. This is further explained in section 8.2.4.

8.2 Methodology

Though the herding of cats that is the design research phase must (by necessity, it seems) be a gloriously and revelatory mess, the process is hard to disentangle and describe. That being said, I have endeavoured to lay it out in this section in a coherent fashion, though I must be excused the occasional forward cross-reference or summary repetition.

In the interest of making this thesis more stratified, and thus more accessible, I will outline the research phase here:

I started with a preliminary survey on the theme that led me to the settings space, the ocean and the forest. From there I looked at user statistics and determined that the smartphone would be the ideal delivery surface.

Insights from my informal interviews led me to structure the game progression, mechanically and narratively, as an exploratory journey. The interviews also started me towards developing a visual style that moved from figurative towards abstract to instill defamiliarization, triggering feelings of isolation and stimulate reflection by removing the target group's prejudicial perspectives.

Though my attempts at gaining knowledge about the target group by crafting personas ended up being rather ineffective, it led me to observe the target group, leading to the realization that I could use the notification system and the target group's relationship to it to enforce periodic play and incite thematic retention and reflection.

My analysis of the visual, interactive and narrative aspects of a number of relevant games surfaced interesting design patterns employed to invoke solitude and loneliness and maintain player motivation. These patterns include:

- Using relative scale to prompt the player to feel small and isolated
- Desaturated palettes in combination with gradients and a stylized visual language to encourage defamiliarization
- Minimalistic graphical interface design
- Text interfaces to create room for literary poetics, further divorcing the player from reality
- The use of overworld maps to function as a visual metaphor and provide the UI and game mechanics to communicate a journey.
- The use of responsibility as a motivating narrative factor, lending associations to isolation
- A focus on exploration-driven motivational gameplay coupled with a disconcerting and alienating withholding of information and explanation

From there my preparatory visual exploration and interactive experimentation provided me with results that supported many of my earlier finding. I also gained the understanding that designing for empathy with a main character would serve me well when trying to elicit the kind of emotional responses I wanted.

8.2.1 Survey

I knew that I wanted to make a game about loneliness and solitude and I wanted to know more about what kind of thoughts people had about these emotional states. I didn't know exactly what I was looking for so I created a survey that required long-form answers instead of checkboxes and scales, wanting to minimize bias.

I conducted this survey before I had found my target group and so I cast a wide net, recruiting a biology-student, some stay-at-home moms, a city engineer and a variety of other participants.

The survey contained only 3 questions:

1. How much time do you spend alone?
2. What makes you feel alone?
3. How does it feel to be alone?

Unsurprisingly perhaps, people don't seem to spend a lot of time alone.

Some of the most popular answers to question number 2 were isolation, exclusion, silence, responsibility, lack of belonging, feeling small and open environments.

People also wrote a lot about places where they would feel alone, in particular space, the forest and the ocean.

Summary - Survey

Based on the results of this initial survey I concluded that exploring the physical spaces of the forest, the ocean and space would be a good starting point to create a game world that led the player towards reflection on solitude and loneliness.

8.2.2 Statistics

To figure out the best way to deliver the experience to the target group I looked at gaming statistics and hardware platform trends.

I looked at a lot of numbers and I got my first break when I found a report on gaming trends. The article cites an Entertainment Software Association report from 2015 and after looking through the stats a couple of times my mind stuck on two stats:

- "56% of people own a smartphone"
- "80% of the time spent on mobile phones is spent inside games or apps"

Next I looked at the latest quarterly digest from the Interactive Software Federation of Europe (IFSE) and found some other interesting numbers:

The median reach of "any gaming (any format/device)" for the age group 15-34 in the UK, France, Spain and Germany sits at 64%. (Ipsos MediaCT, 2014)

By cross-referencing that number with the median percentage reach of gaming on smartphones in the age-group 6-64 (for the same countries) we get 16%. This indicates that about 16% of Europeans play games on their smartphones.

This information, and the fact that mobile surpassed desktop in number of global users in 2014 (Bosomworth, 2015) led me to smartphones as a mode of delivery.

Additionally, my target group consists of people that have little to no time to actually sit down to play. If I was going to reach them I would have to do it on the one surface that follows them around wherever they go.

Summary - Statistics

Looking at user statistic and gaming trends led me to the realization that the game medium with the highest degree of market diffusion within the target group is the smartphone. This also lets me subvert the problem of reaching a target group that is constantly moving by tapping into a mode of delivery that they bring with them.

8.2.3 Informal interviews

In preperation for this project I had identified and cultivated contact with some people that would prove to be invaluable. These informal interviews have lead to many of the breakthrough insights that has shaped this project.

**Henrik Mowatt Haugland**
Game designer – Henchman & Goon

For a time I rented a small work-space in the building that houses the Bergen Game Collective, a collection of small, local game developers that have banded together to afford renting a space that isn't a damp cellar.

One day, while on a break, I was talking to Henrik Mowatt Haugland, a games designer and an invaluable external resource, about how I wanted to make a game that stretched the classic choose-your-own-adventure genre (also called gamebooks) by introducing more engaging game mechanics.

I was frantically sketching a map and excitedly talking about making the game a branching journey, to mimic the narrative structure of a gamebook when Henrik pointed out that this would fit snuggly into my master project and that I already had a setting and a narrative that I could modify to suit my needs; my discarded initial idea for my bachelor project. (Discarded not because of any reservations about the quality of the idea, but rather because the project itself had changed and demanded another approach.)

TRAVEL TIMEOUTS

Initiating Travel between points on the map trigger a timeout (time based on distance between points). Player get notification upon arrival.

...or upon random encounter under way.
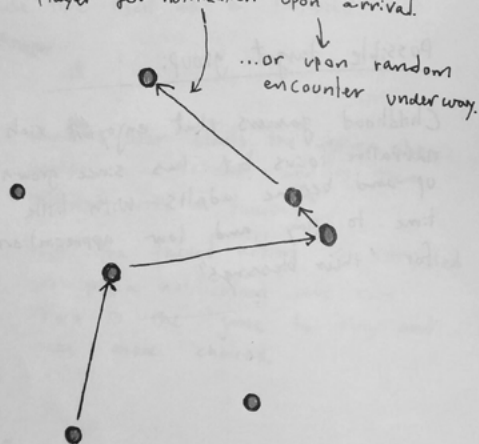
STORY ENGINE (AI DM)

The story engine wields influence over random encounters and the ability to swap out locations during a play-through. It does these things in order to layer a narrative progression on top of the world by introducing procedurally generated events.

By monitoring metrics like turns taken, locations explored, time play, time since start, and so on it shapes the game, metering out narrative progression based on a designed and user-tested set of rules.

I thought about this for several days, sketching, writing and looking at my research. Instead of jumping on what felt like a good idea I wanted to examine it for a while, turning it around, letting the idea rest and holding it up to the light once that initial pang of excitement had subsided.

The story was about an old man who needed to get to the end of the world. By laying that out as a journey on a map I could create a simple basic game structure where the player would lead the main character through a forest, across the ocean and into an eerie, cloudless desert draped in darkness and laid bare to the open expanse of space above.

The choice of main character, progression and setting also holds closely to the concept of the Monomyth, established by renowned American mythologist, writer, lecturer and luminary of narrative structure, Joseph Campbell, in his seminal work The Hero with a Thousand Faces, published in 1949.

Moreover, the story is heavily influenced by the heroic tales of old Germanic folklore, but instead of exploring the promise of youth and the start of a heroic destiny it focuses on the effects of a life spent fighting and the price paid at the end of the road.

Summary - Henrik Mowatt Haugland

Talking to Henrik, I found the narrative of my game. Based around the results of my survey, I would structure the progression of the game as a journey throughout the scenarios and settings that people associated with loneliness and solitude.

This would be a story about what happens at the end of the life of a traditional hero; the weight of consequence.

Cathrine Kramer
Part-time tutor – KHiB

After completing my first round of visual exploration, based on the results of the survey I conducted, and realizing that there was something unsettling about some of the stranger results to come out of the experiment, I sat down to talk to Cathrine Kramer, a part-time interaction design tutor at KHiB.

During the conversation, Cathrine and I realised that I could create a stylistic narrative that moved from figurative to abstract, shepherding the players into a feeling of defamiliarization.

Once the players were sufficiently defamiliarized with the experience, this would let them view the theme in the light of what they perceived instead of what they knew, spurring them to reflect. I would be able to interrupt the player's prejudicial and "automatic" perspective on the theme, drawing their attention towards their own perception of loneliness and solitude (Shklovskij 1998, pg. 16).

The introduction of visual cues leading the player towards feelings of isolation, based on defamiliarization (negative feelings), could be combined with the positive and motivation feedback of the gameplay (positive feelings) to create what has been described as a "rich and enduring experience" (Fokkinga, 2014).

Summary - Cathrine Kramer

During my conversations with Cathrine I realized that I could create a dynamic visual style that moved (with the narrative) from figurative towards abstract, fostering a sense of defamiliarized in the players, triggering feelings of alienation, isolation and solitude.

This defamiliarization would also serve as an entry-point into reflection on the theme by stripping away the players' prejudicial perspectives.

8.2.4 Personas & observation

To get further into the mind of the target group I crafted a couple of personas and set about writing some stories for them. I wanted to see what kind of situations they would fit into and maybe glean some insight that would let me design better for them.

After writing these stories I went over them, hoping to find some commonality, some connecting point of interception that I could use. I quickly realized that my personas were woefully underdeveloped and decided to add to them by actively observing people. The next break came from people-watching on the bus.

I was on my way to the office space that I have mentioned when I started seeing a pattern in my fellow travelers. Those of them that were not already deeply engaged with their smartphones would occasionally pull up their phones, unlock them, fiddle with them for a while and then put them back into their pockets.

Then it happened, I found myself doing that exact thing. I realized that I was responding, almost instinctively, to the comforting vibration of a notification, returning to an app that I used regularly to consume some new bit of content. I can't even begin to remember what it was, but I remember realizing that this is second nature now. It's something we just do.

I would design a game that used the notification systems that we've all adopted as an extension of our sensory array to pull people back in periodically, but reliably.

There are games that do this already, games that are successful in maintaining engagement by reminding the player that they should play. Many of these game could be (and are) criticized for they way they use notifications. Some say they nag and heckle the player, employing blatant psychological and emotional manipulations to reel them back in.

But what if a game demanded to be played in bursts, cutting off the player while promising more content in a cliffhanger-like fashion? Obviously a risky plan, but one that would render ethical issues of potential addiction dead in their tracks, resolved up front.

This would also let me meter out the content over a longer period, giving it more time to affect the players and enforce retention by way of repetition – a sound didactic method that often has it's efficacy compromised by the tedium of mindless repetition (Ford, 2011).

Summary - Personas & observation

Based on insights triggered by failing to craft useful personas and then instead observing the target group I decided to retain the engagement of the user by way of a periodic play model and the notification system. This would let the players engage over a longer period while not taking up too much of their time.

8.2.5 Visual analyses of games

For this I've selected some of the games that have historically been described as having an atmosphere of Loneliness and/or solitude about them (Roper, 2005) (Rankin, 2015) (Purewal, 2014) (Hansen, 2013).

Journey

Journey, a game from celebrated game designer Jenova Chen, moves from bright and vibrant palettes, through the bleak and subdued, to the dark and somber with a grace that I had only previously seen in Disney's color scripts.

On closer inspection Journey's world has an impressive level of texture and detail, but while playing the game they blend into simple, heavily stylized, almost graphical shapes of color and light, displaying a figurative minimalism that derives it visual simplicity from a deft use of optical blending.

Beyond the colors of Journey, the sense of scale is always present in the stylized stretches of geography and ancient structures. The scripted cinematic interludes seem to expertly use low camera angles and framing to emphasize the main character's smallness in the face of her/his surroundings.

Journey is basically devoid of any graphical user interface besides a handful of prompts that inform the player of the controls in the opening section of the game. It feels like the game's designer did everything they could not to let the interface interfere with the player's immersion.
Some of the takeaway here will definitely be the use of camera angles and perspective to place the character avatar in relation to the game world and communicate the feeling of being small.


2

Monument Valley

Under the art direction of Ken Wong, UsTwo seemingly created Monument Valley as an antithesis to the visually maximalist arcade games that dominated the mobile games market back in early 2013.

Comprised of a series of vertical puzzles, Monument Valley uses concise and balanced palettes to describe the geometric shapes that make up it's play space. Along the progression of the game the palettes shift from bright and vibrant colors to more a muted palette, reshaping the mood of the player to create the kind of melancholy atmosphere that is conducive to elicit feelings of isolation.

The low-poly 3D of this game, along with the static camera and flat lighting, gives the world of Monument Valley an almost graphical look. The lack of 3D-perspective tricks the human brain into seeing it, at times, as a small and fragile play-set, leaving the action within contextualized as accordingly small and removed from meaning.

The use of smooth gradient transitions blends the larger colors into an eerie haze, providing backdrops that kept me from experiencing the world of Monument Valley as entirely representative of reality.
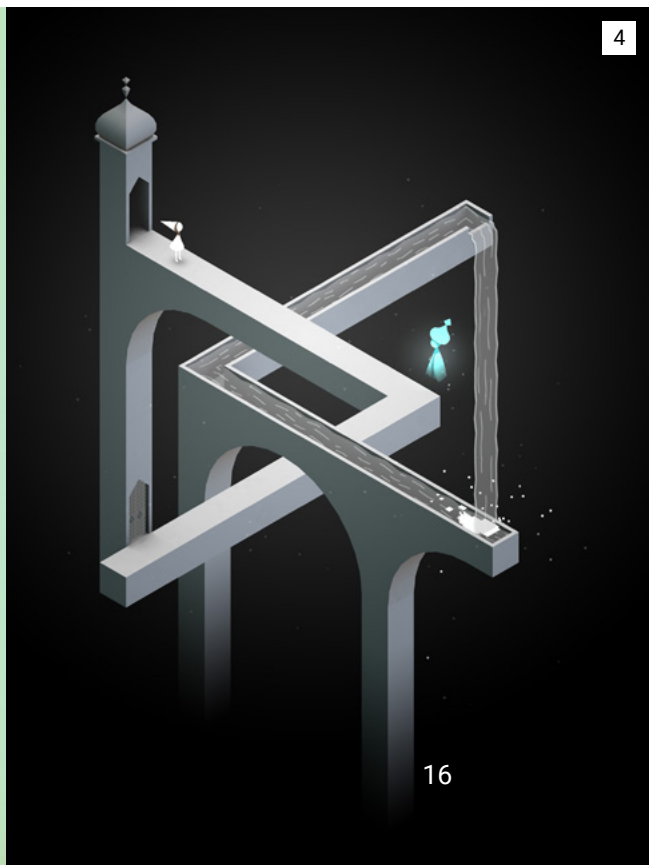
The graphical user interface in Monument Valley is, like it's world, clean, angular and simple – leaning towards minimalism with a few ornamental graphical elements.

The use of hazy gradients to blend shapes in Monument Valley left an impression on me and seems like a powerful visual tool that might help me create a world that has that ethereal feel needed to unbalance the players sense of belonging.

Ico & Shadow of the Colossus

These are actually two games, but I have decided to include them as a whole as Shadow of the Colossus is universally held to be the conceptual and visual continuation of Ico.

The interfaces of Ico and Shadow of the Colossus are nearly non-existent. They consist entirely of two health-bars, one for the main character and one for the current colossus. They also show up only during the battles, of which there are sixteen during the ten hour game.

In these games the main character is set against architecture and creatures that are orders of magnitudes larger that she/he is. Although the games can be said to have a naturalistic style to them, the sparse use of vegetation and complex shapes, paired with the large swaths of faded colors lend it a barren, pensive and gloomy feel.

6

Large open plains are contrasted with looming stone architecture, both of which can't help but leave the player with a feeling of insignificance on a nearly existential level.

The effective use of architecture to both indicate a melancholy sense of deterioration (hinting at the looming approach of death) and provide scale reference to the player avatar is something that I want to investigate further in my project.

Firewatch

This first-person adventure from video game studio Campo Santo relies on a visual language developed by noted graphic designer and illustrator Olly Moss. The layered representation of geographic distance by simple palettes in firewatch seems to hijack our intuitive understanding of atmospheric perspective and creates a world that is largely comprised of steps along spectrums of color.

Much of the isolation in Firewatch seems to come from the effect that nature has on people, but the ethereal play of light across the flat shapes indicating the great outdoors seem to lend it an otherworldliness and unfamiliarity that, paired with my previous research, could help explain the feeling of being utterly removed and alone.

The design of the interface in Firewatch is flat, unobtrusive and context-sensitive, meaning parts of it appear and disappear as needed, based on the situation and what they player is aiming her/his reticle at. The typography is done in a humanist sans serif, itself restrained and informative. The setting in Firewatch (and the others games above) show that the results of the survey that i conducted and the ideas for settings that I extracted from the answers are closely related to the theme of my project and have the potential to help create the tonality and emotional response that I want.

Below

In Below the player's avatar is a character that takes up a tiny space in the center of the screen. From the very first moment of this game, the player is made aware of the insignificance of their avatar and, by extension, they themself, in the world. To enhance this the game's developers have added a tilt-shift effect that makes the world of Below feel like a macro picture of some miniscule world.

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The game's main character arrives at a bleak beach and travels across an austere island before delving into the gloomy caves that make up the majority of the game. All along the desaturated colors of this game instills a feeling of melancholy remoteness.

The orthographic perspective gives the game a sharp and geometric visual language that is further accentuated by the brutalist architecture nested deep in the sometimes unrealistically spacious darkness of it's caverns. Almost everywhere the player explores the unknown depths below are hinted at by crevasses and chasms that are swallowed in black gradients as they blend into the darkness that surrounds the main character. Being a rogue-like role playing game (RPG), Below has the most comprehensive GUI among these games. Even so, the screen is free from GUI most of the time. When the player's avatar approaches an interactive element in the world, an icon appears above that element, marking it as interactive.

Interactions with elements will trigger simple graphical menus that are often positioned such that they seem to be apart of the game world rather that overlayed.

Below reminded me of the isolation that comes with darkness and the uncertainty that follows the inability to see clearly. Visual ambiguity could be used to create uncertainty and unfamiliarity, both disconnecting triggers that I've identified in my earlier research.

Summary - Visual analysis of games

Almost all of the games that I've analyzed here use the scale of the world, relative to the main character, as a way to stimulate feelings of being small in the player (by way of their identification or empathy with the avatar).

The portrayal of large-scale, often open, settings (mostly nature) supports my findings during my early survey (section 8.2).

The use of large, desaturated areas of color, combined with simple gradients when describing shapes seem to be central to creating the distancing effect that most of these games have in common. Even so, some of them seem to suggest that a steady movement away from more saturated and vibrant colors can help introduce this feeling gradually.

A stylistically simplified language of shapes is clearly preferable when creating the kind of atmosphere of solitariness that I want to achieve. This could be explained by the added range of visual options that become available once the style moves away from figurative naturalism.

When it comes to the graphical design language in the interface design, minimalism is uncontested in these games. It looks like the less the player notices the interface, the better, which suggests that immersion is paramount (not an unreasonable design strategy).

Lastly, on a more abstract level, these analyses seem to back up my previous hypothesis that adding some kind of defamiliarizing stylistic spin to the game will help me create the atmosphere of solitude and loneliness that I want in the final product.

8.2.6 Analyses of Interaction models

It is well beyond the scope of this project to include an exhaustive analysis of the entire interaction model of any one game, let alone the number of complete analyses that would be needed to compare and contrast effectively.

Instead I have chosen to analyse specific mechanics, clusters of mechanics and design decisions that might have some relevancy for my project. The decision to include or exclude some part of the games that I have analysed here was based on my own intuitive grasp of what would yield useful result and informed by the preceding research.

I've had to account for my chosen platform, the smartphone, and it's touch-based physical interface, and so many of the games that I have selected for analysis here are smartphone and/or tablet games and derive part of their relevancy from this fact.

Lifeline

Lifeline presents the player with a gamebook narrative by emulating a messaging application.

The player communicates with a stranded astronaut and helps her/him make decisions. Some actions will take the astronaut longer to perform and in the meantime the player must be content to wait for the astronaut to once again make contact, signaled by notifications.

By rooting the concept of timeouts in the story the game's designers have ensured ludonarrative cohesion, the conceptual resonance between game mechanics and narrative, and are playing to the strength of the medium (Dawn, 2014).

The interaction model in Lifeline is comprised of little more than the messaging interface. Outside of the layout and presentation of that interface, Lifeline is actually just an application of an age-old design pattern, the dialogue tree, a text-based interface that let's the player respond and pose question by choosing dialogue options from a list.

The skillful and deceptively simplistic use of the dialogue tree mechanic here is very effective at relaying the story, the main source of tonal impact, and the timeouts create an additional feeling of separation between interactions.

and the best I can figure is that it's a side effect of whatever's in the atmosphere.

Whatever I'm BREATHING.   23

Out There

Out There is a blend between a resource management game, in that a large part of in-game activity is based around gathering and managing resources, and a gamebook, having several layers of interaction based around the dialogue tree design pattern first used in early text-based games.

Out There has what is called permadeath. This means that there are no saves and that the games ends when a failure state is encountered and the player loses the game.

One of the most interesting parts of game design of Out There is it's use of a top-down map with a point-based navigation system, a design decision that mirrors the findings from my earlier interviews with Henrik Mowatt Haugland, the game designer from Henchman & Goon.

Another interesting game mechanic in Out There is the inventory system, resource gathering and use of certain resources as fuel to complete "moves" in order to progress through the game's map. The added sense of agency on the player's part in undeniable, as are the heightened stakes that result from this system in concert with it's permadeath mechanic.

The use of text-based interfaces for delivering narrative content in Out There further supports my own finding about the applicability of this game mechanic to my own project.

The use of a map to represent progression in Out There also backs up my research about the efficacy of that particular mechanic to supply the players with motivation while creating a sense of space, providing important context to other interactions and the narrative of the game.

Kentucky Route Zero, part 1

This is an episodic game, but I have chosen to base this analysis on the first episode alone, as the gameplay looks to be identical throughout the episodes.

The truck jerks toward the shoulder, nearly run off the road by a swarm of dragonflies. Their wings beat briefly in the headlights, and disappear into the night.

Kentucky Route Zero is a point-and-click adventure game, meaning that the player clicks (or taps, in the case of touch-based platforms) to move the main character avatar around, interact with or examine objects and non-player characters (NPCs).

What attracted me about this game was it's eerie and remote atmosphere and the way it uses the examination of scenes, by way of text boxes, to support its art direction with tonally resonant context and story, creating a feeling of being estranged and alone in a setting that feels oddly unfamiliar despite its normalcy.

Also interesting is the use of a map to represent progression and provide the player with a gameplay mechanic for navigation from scene to scene. These short interludes of navigation between scenes seem to lend the main character a certain weariness and gives the player a sense of the time spent and distance traveled by the main character, even though the transit is almost instantaneous for the player.

Some of the primary takeaway from Kentucky Route Zero is the role that its navigation system plays in telling the story and creating the atmosphere. This further shows that this gameplay mechanic can be (and has been) put to good use in a slower paced, atmosphere-focused game about solitude and loneliness.

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Summary - Analysis of Interaction models

From my analyses of these game I can say with some certainty that the use of text-based interfaces to deliver story content is a good alternative to the much more time consuming process of recording audio. This is also a good way to get away with the more poetic and metaphoric language often associated with literature and used to create a sense of atmosphere.

Furthermore, my analyses tell me that there is an abundance of examples of using map-based navigational interfaces to good effect in games with a heavy emotional and atmospheric slant.

Lastly, my analysis of Lifeline provides a good argument for the use of timeouts and the notification system the engage the user in periodic play. I knew that it would, seeing as this is where I first saw that mechanic employed outside of casual and "arcade" style games.

8.2.7 Analyses of narrative in games

I have selected these games based on the views of respected games critics' professional opinion of them as having effective storytelling that is tonally and thematically close to my project (Thrower, 2015) (Campbell, 2015).

Unsurprisingly, many of these are repeats from my visual analysis above.

lifeline

In Lifeline the player is cast as an accidental helper and a sounding board for the game's main character, Taylor, an astronaut that has crashed on a seemingly barren planet.

The player uses the game's simple text-based dialogue tree mechanic to provide Taylor with advice and help her/him (in a stroke of genius, the main character is never gendered in the game) survive and eventually get of the planet.

The framing concept for the story of Lifeline is that Taylor is communicating directly with the player – the game's interface is designed to mimic the look of a messaging application.

Who is this?	I read you.

Oh, thank God! It's so good to have human contact!

It's been hours!

Who are you?	What happened?

Our ship crashed on some moon. I have no idea where.

I managed to get to an escape pod, but I couldn't tell if anyone else made it into one.

The player chooses from a set of responses to Taylor's questions and she/he takes actions following the player's directions (for the most part). Through this interface the player is granted agency over the story and develops an emotional investment in Taylor rooted in the sense of responsibility that comes with giving advice.

Much of the sense of isolation in Lifeline comes from Taylor's descriptions of scenes and situations, but the use of timeouts, often as long as 45 minutes, really helps communicate the isolation by adding a sense of time to Taylor's experience.

Casting the player as a secondary party to the game's protagonist is an interesting choice that demands consideration.

Out There

In Out There the player is the only inhabitant and pilot of a space ship lost in space. Their goal is loosely states as "getting back to earth", but beyond this, the player is given little backstory or expositional motivation to go on.

Throughout the game the isolation and desperation that the the player experiences comes from the resource management aspect of the game.

Although the game's text-boxes deliver some sporadic pieces of story about the main character's state of mind, the most effective way the story of a lonely space traveler trying to get home is told is through the player's experience of trying to continue exploring, faced with dwindling resources and a long road ahead.

Exploration of planets adds to the experience by showcasing the emptiness of the universe that the player is traversing. This is done by showing lightly animated illustrations of scenes and letting the player take actions through a dialogue tree.

It is also important to restate that Lifeline has permadeath - There is no save system and losing the game means having to start over again. This gives the player's action weight, alluding to the fictive stakes: death in the vast emptiness of space.
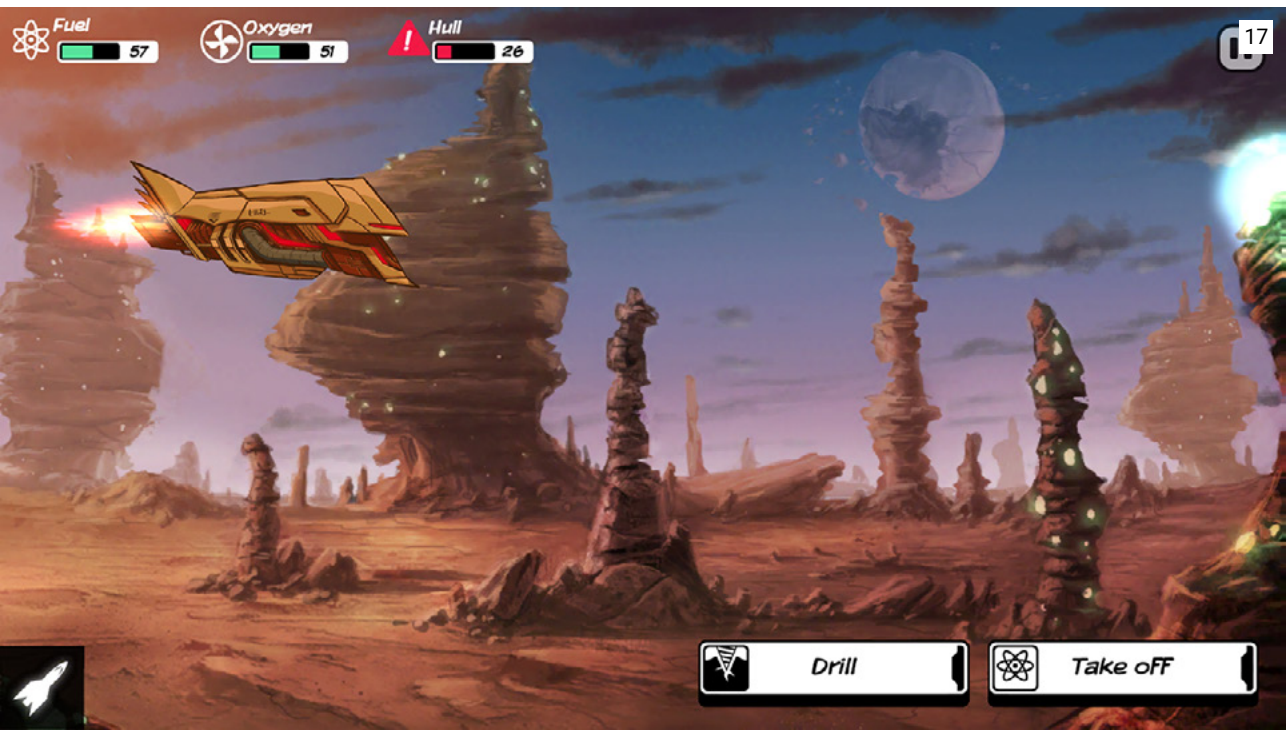
Summary - Analysis of narrative in games

Although narrative in game design seems to be almost inseparable from the mechanics and visual communication my analysis has led me to believe that the setting and story can create a sense of responsibility in the player. As my initial survey showed, responsibility is regularly associated with feelings of isolation.

Furthermore, the narrative in some games seem to rely on the mechanics of the game to provide motivation and employ a very effective form of authorial reticence, the "deliberate withholding of information and explanations about the disconcerting fictitious world" (Chanady, 1985, pg. 16), in a way that harmonizes with exploration-focused gameplay.

8.2.8 Early exploration

Outside of the more linear exploration of the visual style of the end product I've also taken some more experimental, and often highly rewarding, detours. In this section I will list the most salient of these detours and summarize the payoff derived from each diversion.

Endless Forest
Game experiment

In this early experiment I explored the possibility of creating an endless, procedurally generated forest for the user to explore.

the visual style was based around using billboard textures in a 3D game space with a perspective projection camera. This let me give the player direct control over the main character, enforcing the connection.

This experiment let me prototype and learn that the technical challenges involved in creating a functioning 3D world proved a bit beyond the scope of my project. This, in turn, led me to explore some more abstract visual representations of movement that culminated in the current shape of the game - contributing to the idea of the map GUI.

Summary - Endless Forest

Many games give the players an overview of the game world up front and the prevalent feeling of not knowing that this experiment produced was unsettling. This experiment provided me with anecdotal evidence that supports my earlier findings: that withholding information and explanations can be used to trigger feelings of isolation by way of alienation while adding to the motivational effect of an exploration-driven gameplay model.

Swimming
Game experiment

For one of the courses in the second semester of the master I made this short game as an exploration of minimalism in both visual style and input model.

As the character in the middle of the ocean paddled his feet, the screen would slowly fade to black as an unseen timer counted down.

The player could reset the (unseen) timer by hitting the spacebar, saving the character from fatigue and drowning, temporarily. This loop was designed to forge an empathic bond between the player and the character by putting the player in charge of the character's well-being.

This could theoretically go on forever, but in reality it served as a sort of simple Kobayashi Maru, forcing the player to eventually abandon the character, triggering feelings of loss and disconnection.

Watching people play this game I realized that the empathic connection was far stronger than anticipated and that the emotional payload of having to give up and feel the loss resonated strongly with the theme of my project.

Summary - Swimming

I interpret the outcome of this experiment as proof that designing for empathy between the player and the game's main character can be as powerful and motivating as designing for identification (the "player inhabiting avatar"-proposition).

Designing for empathy, while giving the player control over the main character's life would form the basis of my strategy to elicit emotional responses rooted in the players' sense of responsibility.
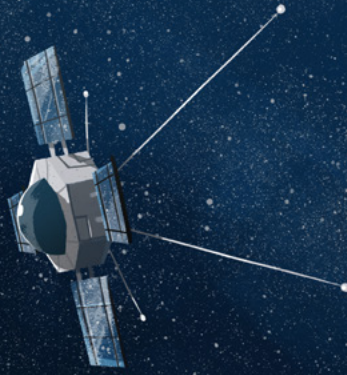
Early visual exploration

Including every direction, experiment and visual detour in this project would inflate this document unreasonably and serve no real purpose. However, showing the most important and/or interesting explorations can provide context and show how the early exploration influenced the later process and the final product.

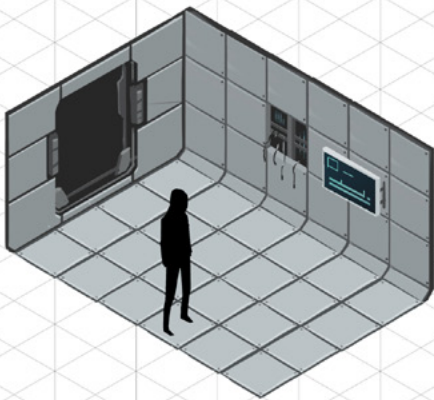These are presented in a loosely chronological order.
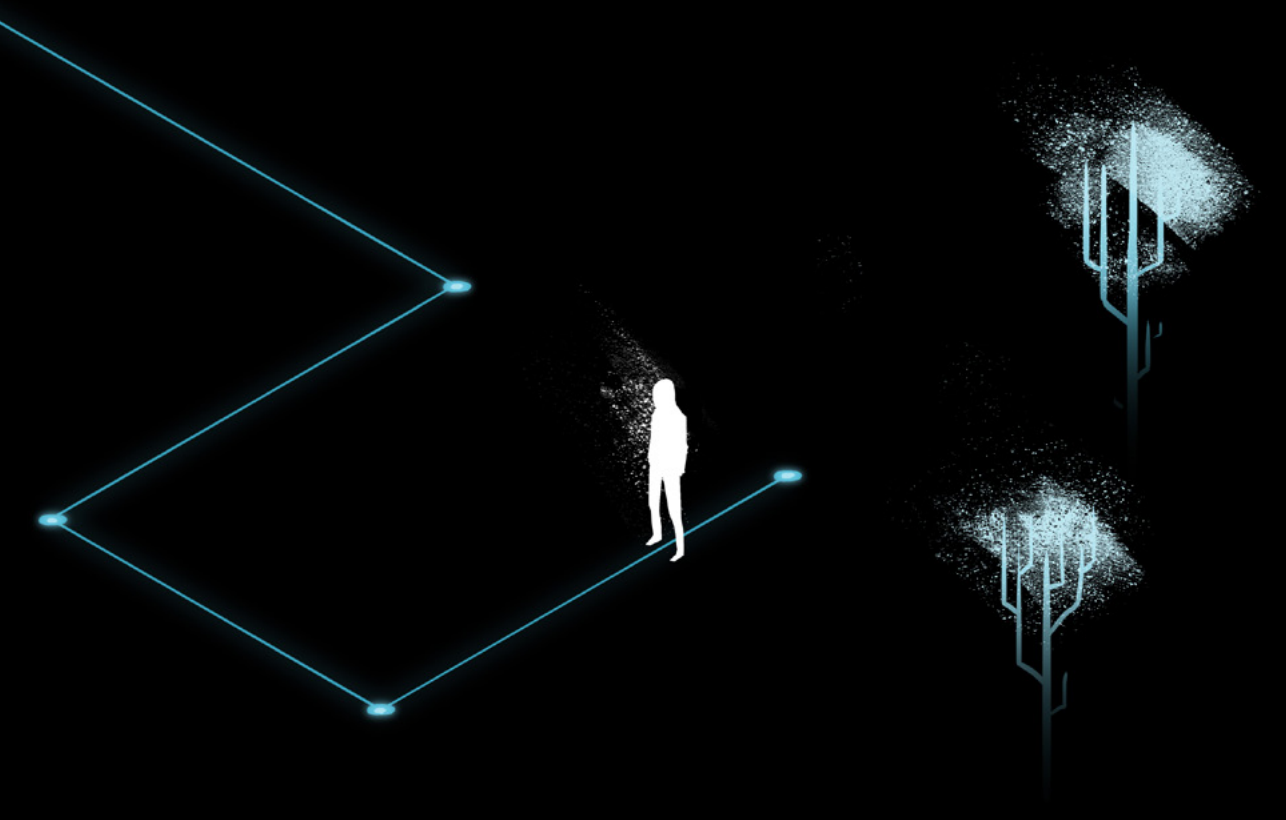
```
X- ./VESPER
*************** ./CAL -N
INIT.S_ARRAY_023...
INIT.TERMINAL...
>
```
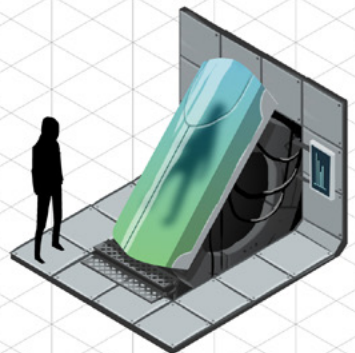
Summary - Early visual exploration

There's no easy way to summarize the many effects that the early visual exploration had on the rest of the project, but it is safe to say that it helped shaped the project by eliminating possibilities and adding to my own experience.

Even in the (many) cases where the style and/or subject matter are not directly relevant to the final product, the exercise in representing a game space visually provided opportunity to hone my skills in a way that was applicable later.

9.0 DESIGN STRATEGY

9.1 Challenges

Based on my key question; *How can design help create a game that encourages reflection on loneliness and solitude?* and my chosen target group; *people who have grown up to become busy young adults lacking the time to sit down and play games,* the challenges in this project are as follows:

- How do I design a game suited to the target group?
- How do i provide the target group with motivation to continue interacting with the game and the information to do so?
- How do I, through the game, expose the players to the theme; loneliness and solitude?
- How do I ensure that the game encourages reflection on the theme for the players?

The end product, a working prototype android game, is the result of meeting those challenges through experimentation and design decisions.

In the following sections I break down how I have used my findings in the research phase to identify and implement solutions to those challenges in the three aspects of the game design; the interaction design, the visual language and the narrative.

9.2 Interaction Design

To make sure that the game is suited to the target group I chose to design and develop for smartphones based on my research that identified this as the most viable platform for the target group.

Based on observations of the target group and my analysis of the game Lifeline I will design the game around periodical interaction and the notification system, respective of the target group's lack of free time to play, and their deep-seated positive response to notification.

Using notifications to engage the player is also a decision made to ensure retention of (and reflection on) the theme through repeated exposure over a longer period.

The decision to to build the game's long-term progression around the journey across a map was made to create context for the kind of scenes that I identified in the survey that I conducted (see section 8.2.1) as triggers connected to my theme; loneliness and solitude.

This choice is also supported by my analysis of other relevant games and their effective application of this game mechanic to provide the player with motivation to continue playing.

Exploration of panoramic scenes, as a game mechanic, is included in the main gameplay loop of the game (at each point on the map) as a delivery mechanism for atmospheric and tonal visual content.

The dialogue tree mechanic triggered upon interaction with objects in a scene is, likewise, included in the main gameplay loop as a channel for delivering narrative content. I have chosen this mechanic based on my research into the interaction models used in other games and their use of dialogue tree interfaces to present emotionally evocative and thought-provoking ideas, questions and scenarios.

Furthermore, the design of the gameplay loop is based in large part on the discussions and design decisions described in my informal interviews with game designer Henrik Mowatt Haugland.

9.3 Visual Exploration

My visual exploration is based on the results of my survey; The forest, the ocean and space, as well as the findings in my analysis of the visual styles and content of relevant games and the informal interviews that I have conducted.

The main purpose of the visual language of the game is to elicit emotional responses of solitude and loneliness, exposing the players to the theme and stimulating reflection. The game's style and subject matter is also designed to provide motivation by acting as a visual reward for further exploration and to assist in creating narrative context through environmental storytelling.

A stylistic transformation from figurative towards abstract throughout the game's progression transitions the players state of mind into defamiliarization to help create feelings of isolation. This design solution is supported by my discussion with Cathrine Kramer, as described in section 8.2.3, as well as the summary of my analysis of the visual design in relevant games.

The final visual language of the panoramic scenes is a result of my own visual exploration, informed by my analysis of the art of relevant games.

The design of the interface in the game is based on visual exploration around the guidelines derived from my analysis of the visual language in existing games; minimalist graphic design and typography, simple iconography, some ornamental elements and subdued animation.

9.4 Narrative

After a series of informal interviews with Henrik Mowatt Haugland, my external game design tutor, I decided to limit the amount of time spent on the narrative for my project by repurposing an old story that I had originally developed for my bachelor's project.

I chose this story because it's about an about an old man traveling to the ends of the earth to die; a narrative that let me design a game structured as a journey through the forest, across the ocean and into the stars, reflecting my findings in the survey that I conducted and my analyses of other games.

Based on my analyses I knew that I could rely on the motivational power of compelling gameplay systems and strong visuals to keep the players engaged. This meant I wouldn't have to spend a lot of time crafting a complex story.

By choosing a protagonist that resembles the archetypal hero from Germanic folklore (with a twist of old age) I can mine the bountiful vein of myths ingrained in cultural memory for narrative content, further limiting the amount of writing time needed in this project.

With exploration as the primary motivational force for the players I'm also free to use literary storytelling as a way to compliment the tone and atmosphere of the game.

The main character's advanced age and his journey toward his demise let's me nudge the player towards reflection on death, the final disconnection.

Meanwhile, the old man's solitary journey through the land while reflecting on his own death, mirrors the players journey through the game's isolation while reflecting on loneliness and solitude.

9.5 Roles

In this project I have chosen to take the role of visual designer, game/interaction designer, writer and developer.

Although this may seem like a lot, the deliberate scale of the project assures that the roles less relevant to my education represent a small part of my work.

Part of the reasoning behind taking on all of these roles was a professional goal on my part to have a basic understanding of the different disciplines that go into making a game and how they interact. Hopefully I will one day oversee game development projects as a creative lead and the experience gathered here will be invaluable to ensure communication, efficacy and high quality creative output.

Is it also important to me to not only design, but also build this game so that it can be tested based on the experience of interacting with it. If I really want to find out how design can help create a game that encourages reflection on loneliness and solitude, I need to able to test if my game actually does that.

9.6 Methodology

The shape of the final prototype will be the result of a sequence of prototypes that have been developed in iterations, testing the prototypes on members of my target group and letting the results of these tests dictate the flow of development. This model of development is universally held to be the most user-oriented and effective (Zimmerman, 2014).

To ensure that the visual communication of the end product serves the goals of this project I will conduct targeted visual explorations between the iterations of the prototype and integrate the results into the game as they mature.

10.0 PROCESS

Armed with a design strategy I set about exploring the game's interaction model and narrative, as well as its visual language and content, through iterative development and user testing with the target group.

I needed to do some experiments and start tackling these problems head on, gathering data, iterating and honing in on a complete solution.

## 10.1 Visual exploration - Style & content

Based on the results of the survey and my own reflections on the theme I conducted an intense one week session of visual experimentation, producing fifty digital paintings that ranged from five minute speedpaints to forty-five minute renders.
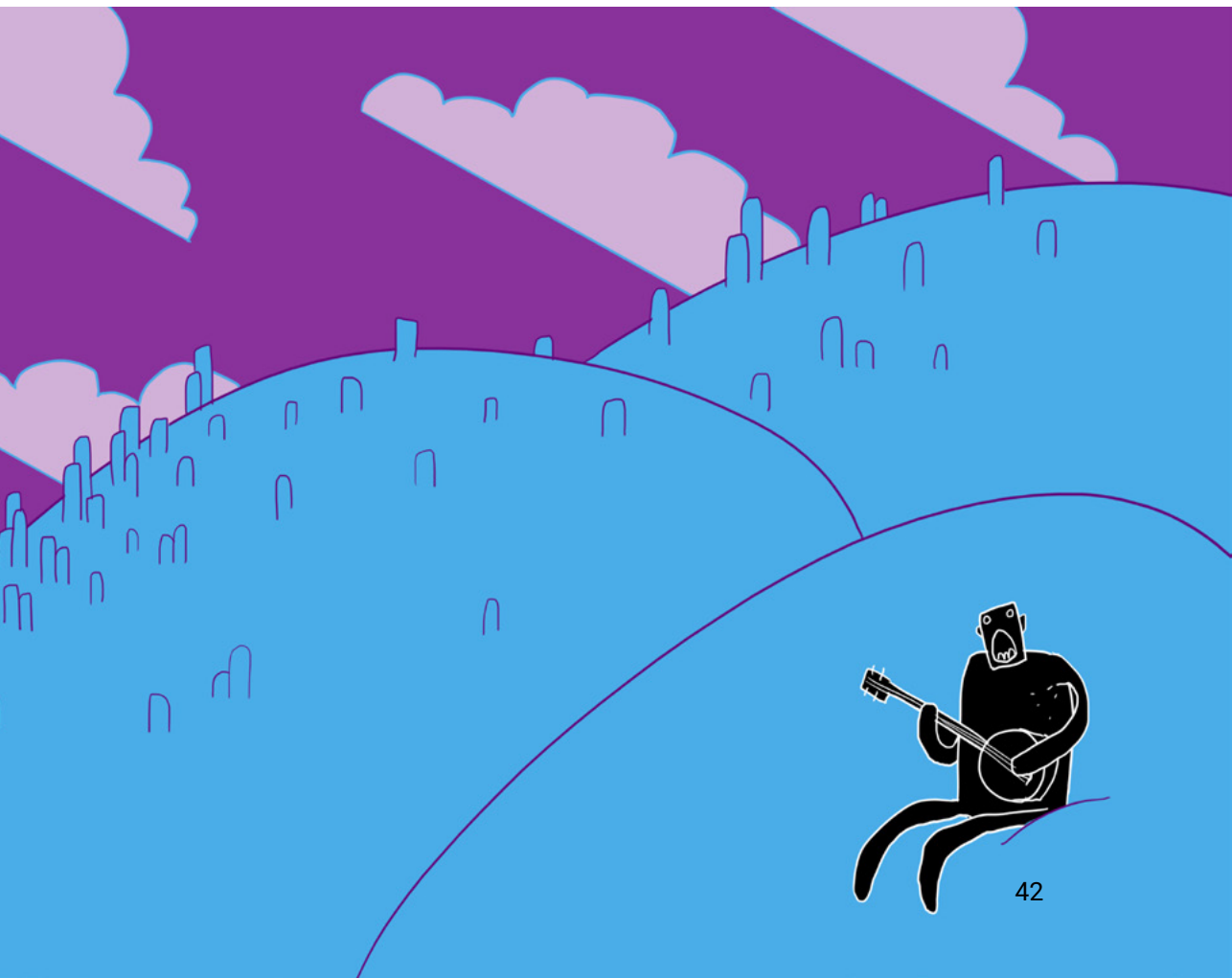
The pace of the experiment was largely set to force me out of my stylistic comfort zone and it resulted in some interesting (and in some cases mildly disturbing) results. Much of the subject matter in these paintings came directly from the survey that I had conducted earlier.

I noticed that the paintings that resonated with the theme for me were the ones that had some measure of strangeness about them. The disquieting feeling that accompanied the tilted sky, juxtaposition of happy and scary imagery and unusual subject matter seemed to alienate the world of the painting from my world while retaining some resemblance.

I soon realized that the feeling stemmed from an visual alienation that severed my emotional and intellectual tie to the objective world, leaving me feeling isolated and dissociated.

44
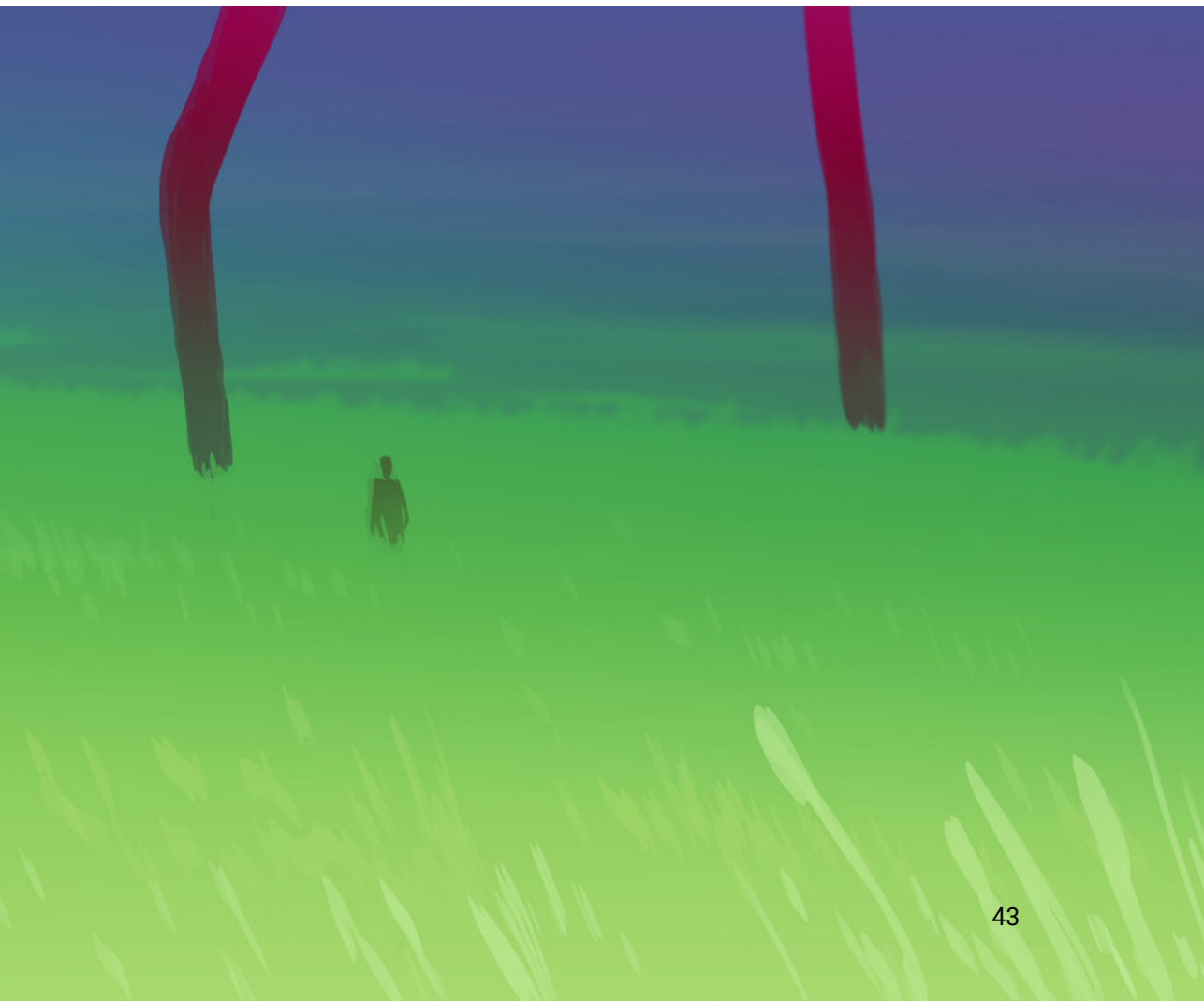
10.2 Visual exploration - The map

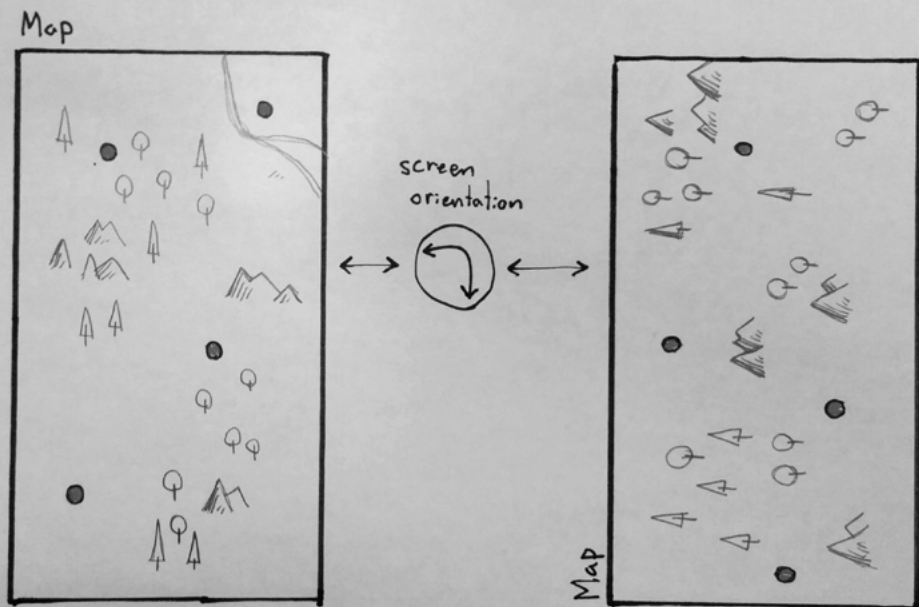During my early visual research into maps I stumbled upon an image of an old star chart.

Somehow that map reminded me of old *ascii art* images and especially the overworld map from the indie game Dwarf Fortress, which used ascii art as a sort of code to represent the world. I remembered how it took me weeks to learn the code and finally understand the map to a degree where I was able to figure out what was going on.
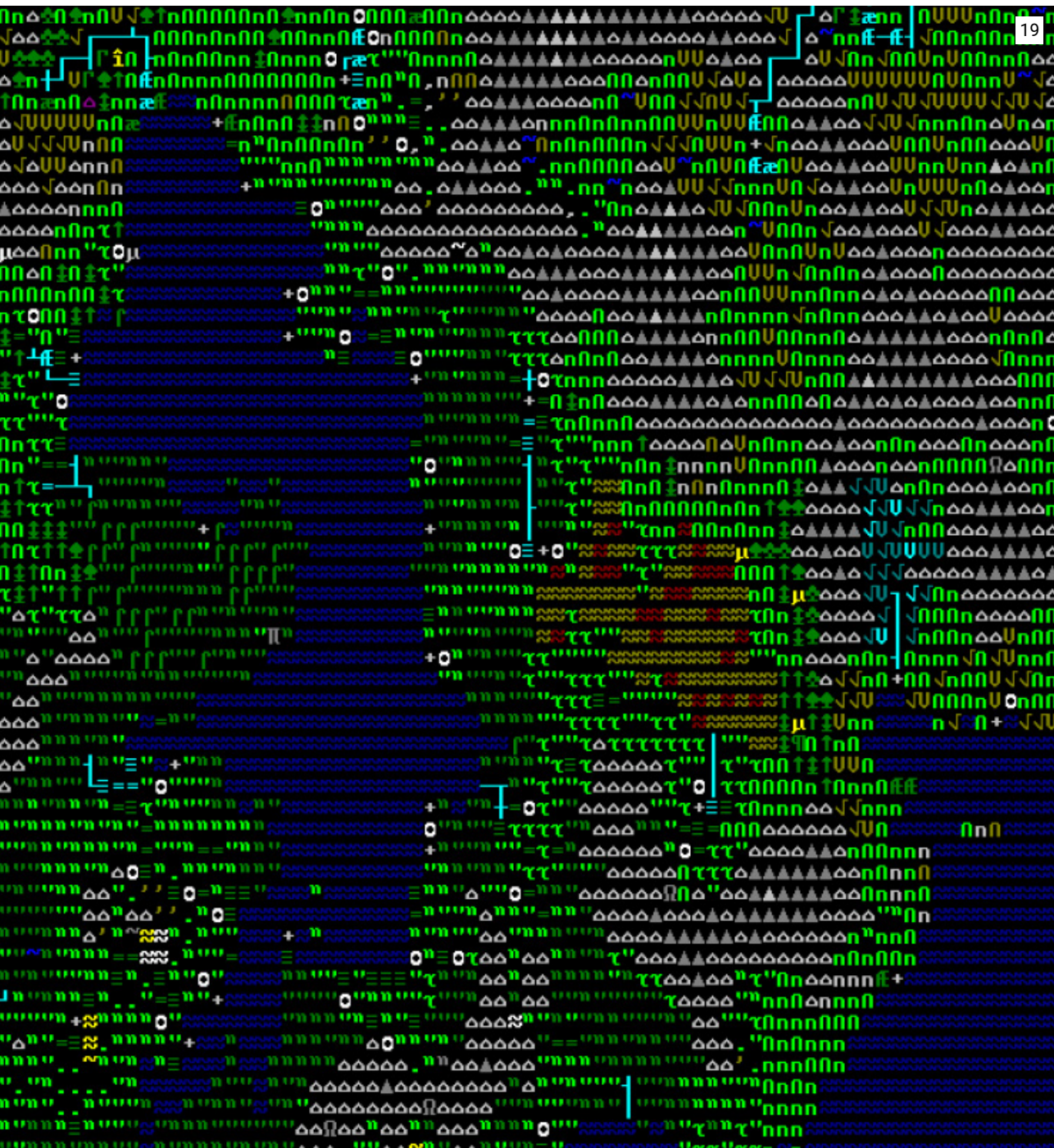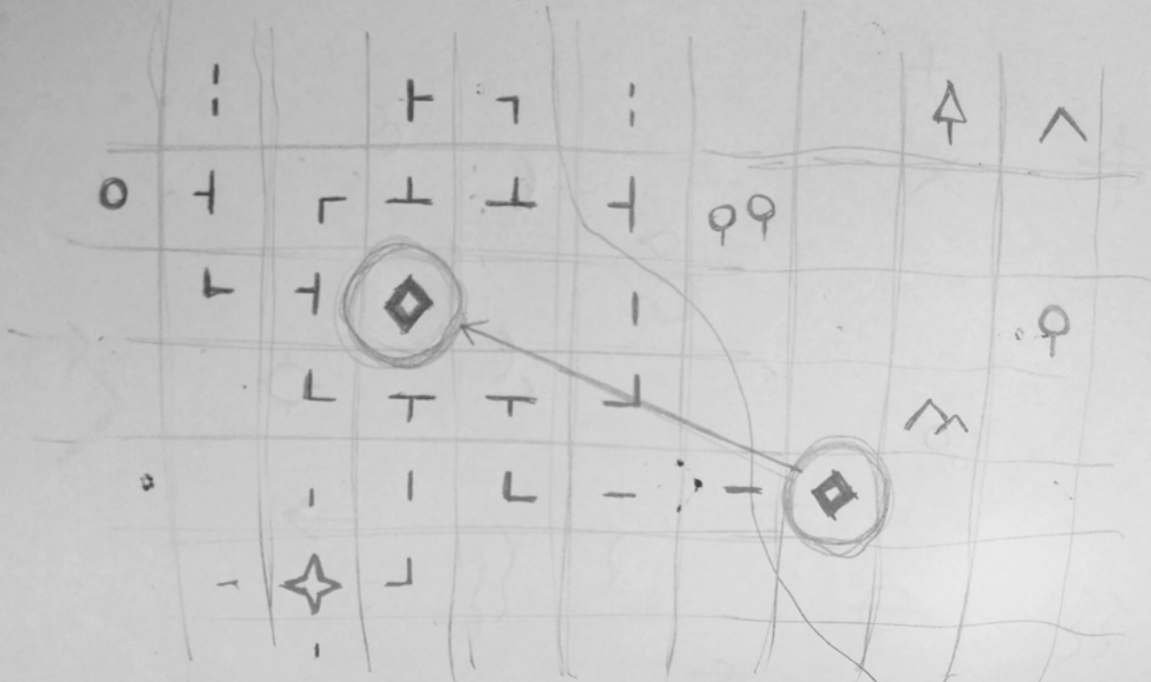
This is where I had the idea to combine the strict, grid-based layout of traditional ascii-art with the flowing, undecipherable jumble of old star charts. If I could make the resultant style readable as a map it wouldn't be hard to gradually, throughout the game, reel it back to something abstract that lacked the representational quality of a map. Slowly robbing the player of their connection to the landscape they were traversing.

I could bring in some of the more uncomfortable aspects of alienation in the design of the map. Here, I could induce a cushioned form of loneliness in the user through the experience of losing their understanding of their surroundings over time.
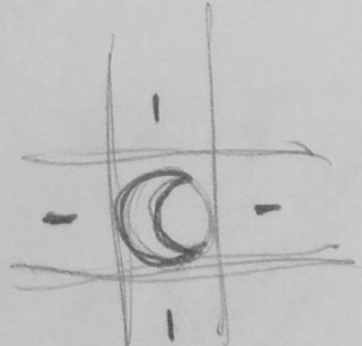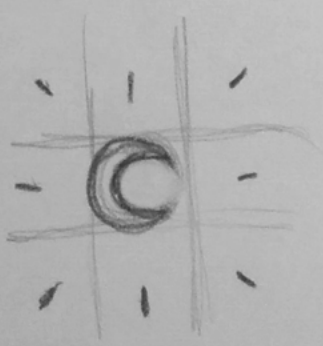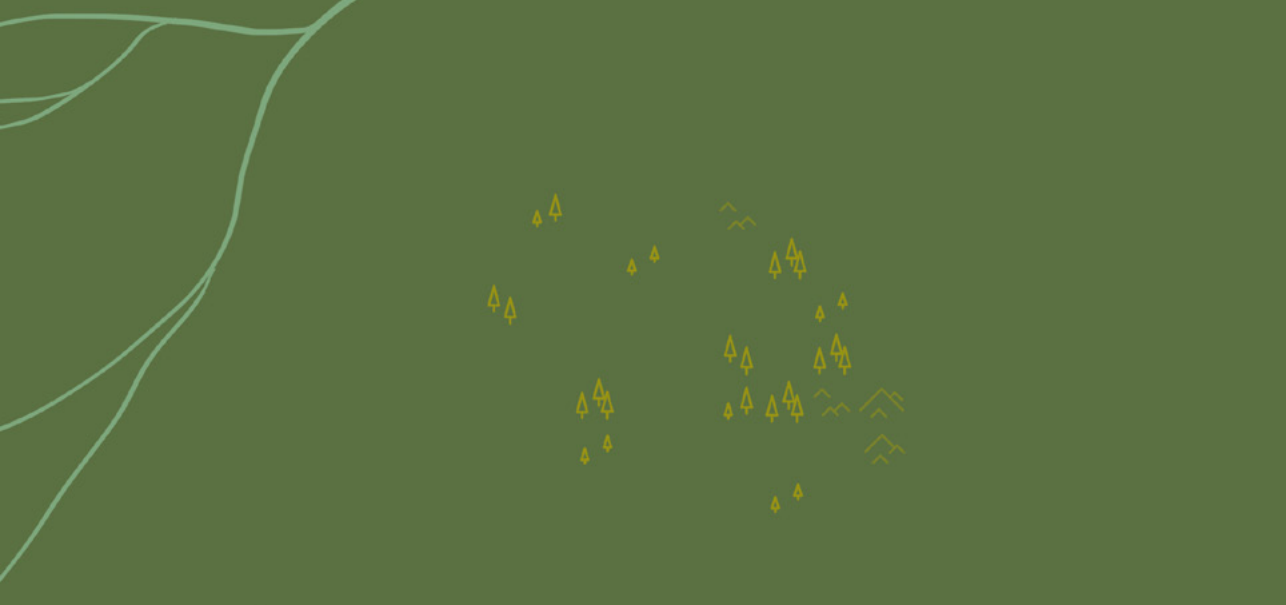
SUNKEN
FARMSTEAD

QUARRY

BROKEN TREE

CAVES

CROSSING

CLEARING

WAYSTONE

54

COTTAGE

SILL

BREAKWATER

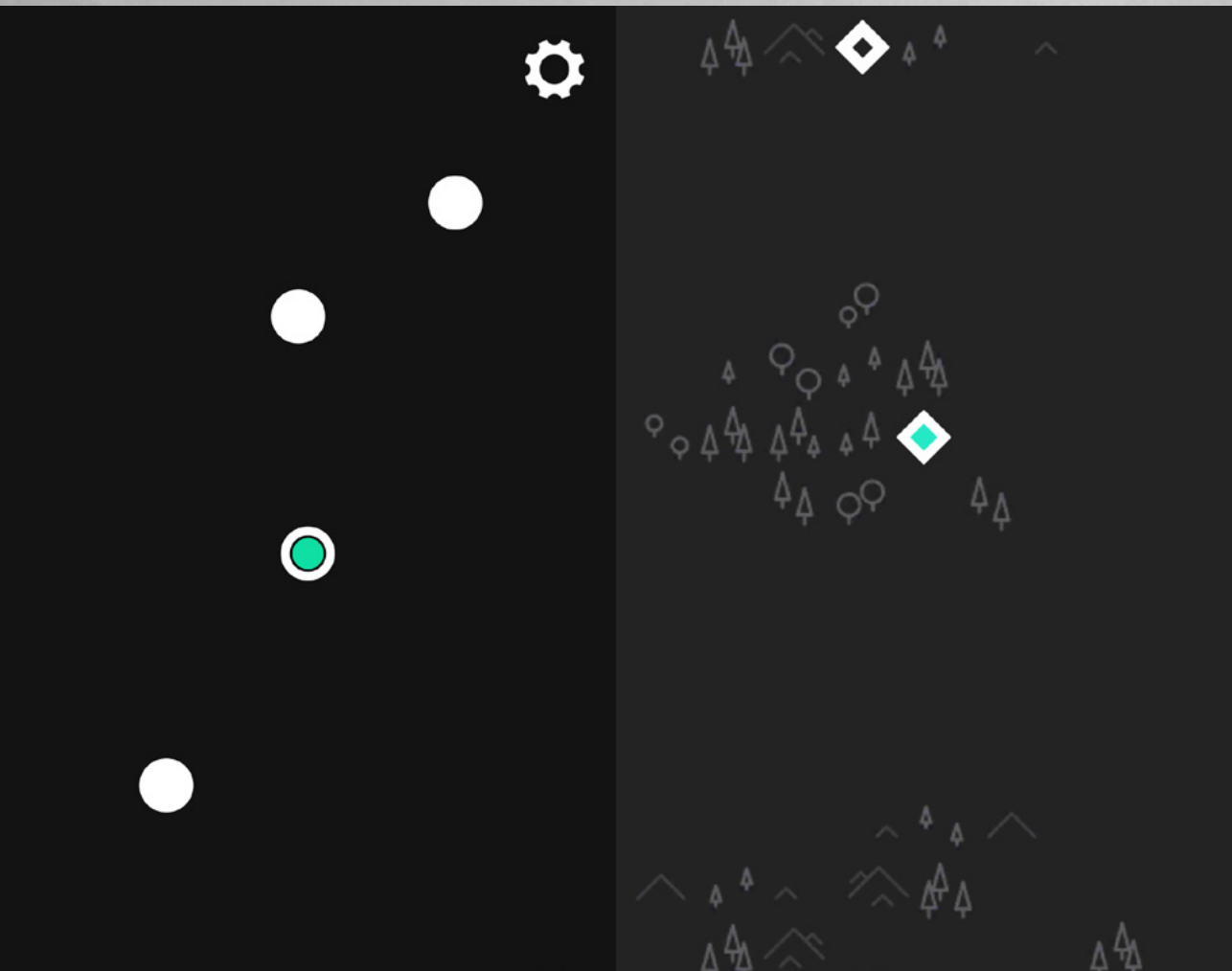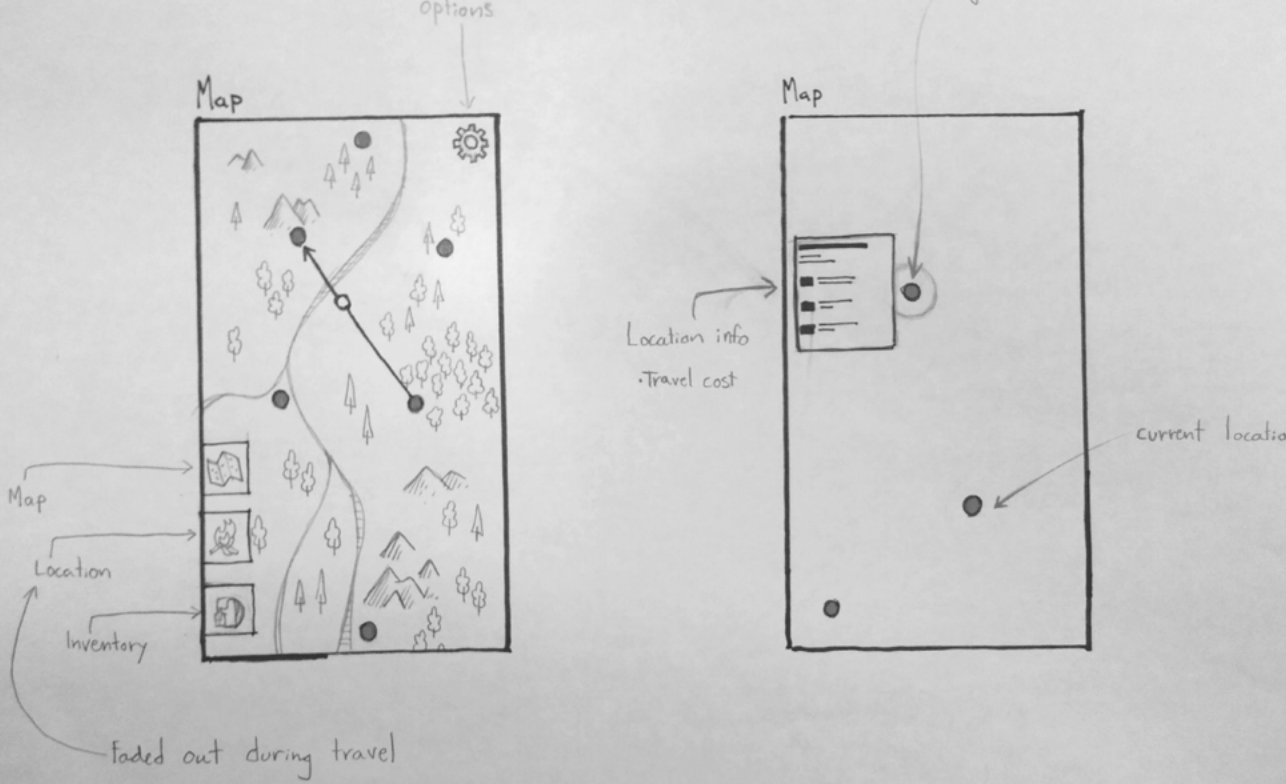WELLSPRING

TOWER

WANE

THRESHOLD

55

10.3 Design & prototyping - Alpha version

I had a provisional concept of what parts could make up the whole of the game and I knew that I needed a solid framework to experiment and tweak within.

I will not venture into the details of the system design and architecture other than to say that my formal training in design practices and methodology was invaluable even there.
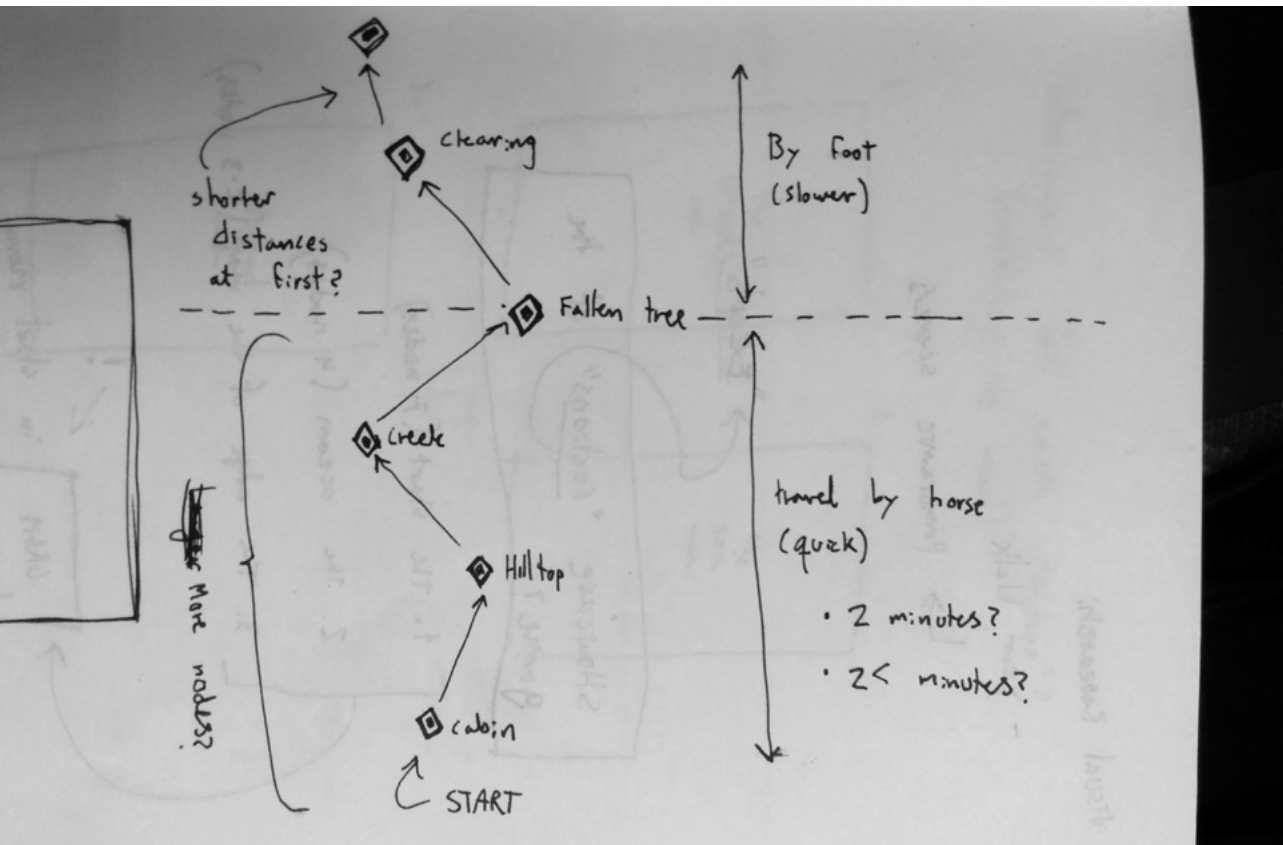

Based on the many sketches, layouts and thoughts in my field notes from my interviews, along with my analyses of existing games I built a prototype that combined the map-based navigation with a simple dialogue tree interface.

Options

Map

Map

Location info
•Travel cost

Map

Location

Inventory

current location

Faded out during travel

I knew I had to introduce a more direct and visual experience of these location, beyond a map, but for now I wanted to build a prototype that would let me test the pacing and structure of a story told in intervals.

To achieve this I created a narrative dialog mechanic inspired by early text adventures like Zork and the planet fall series.
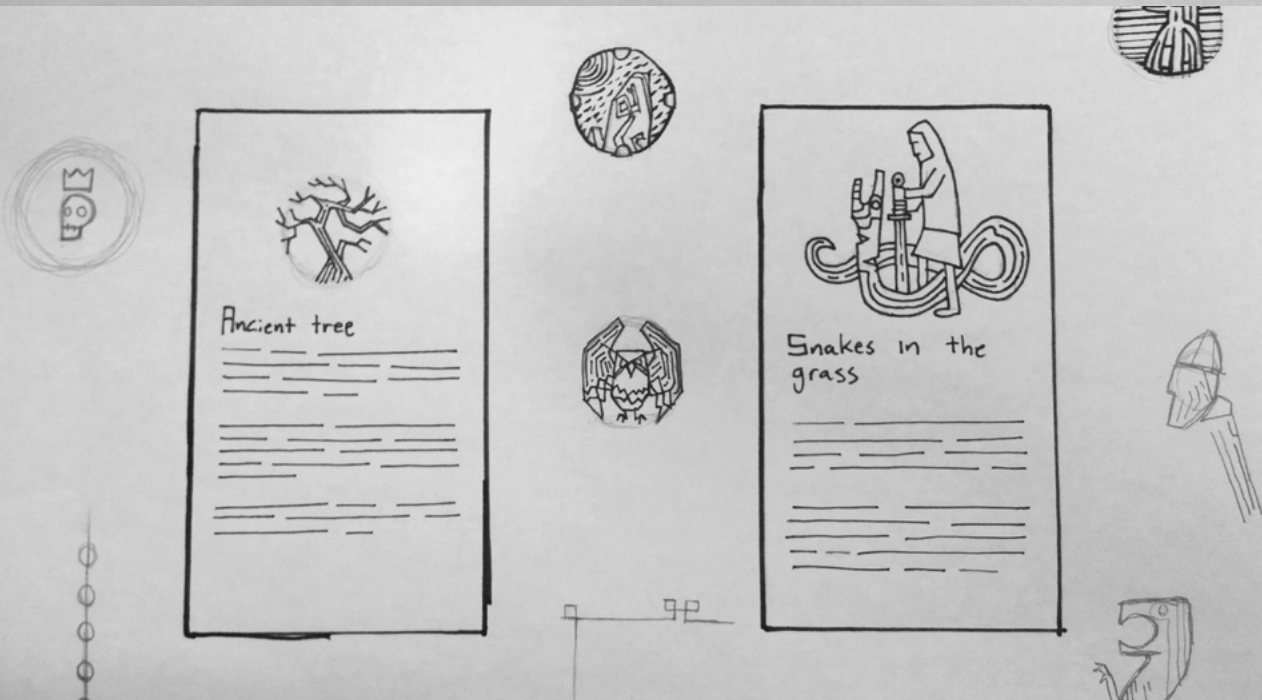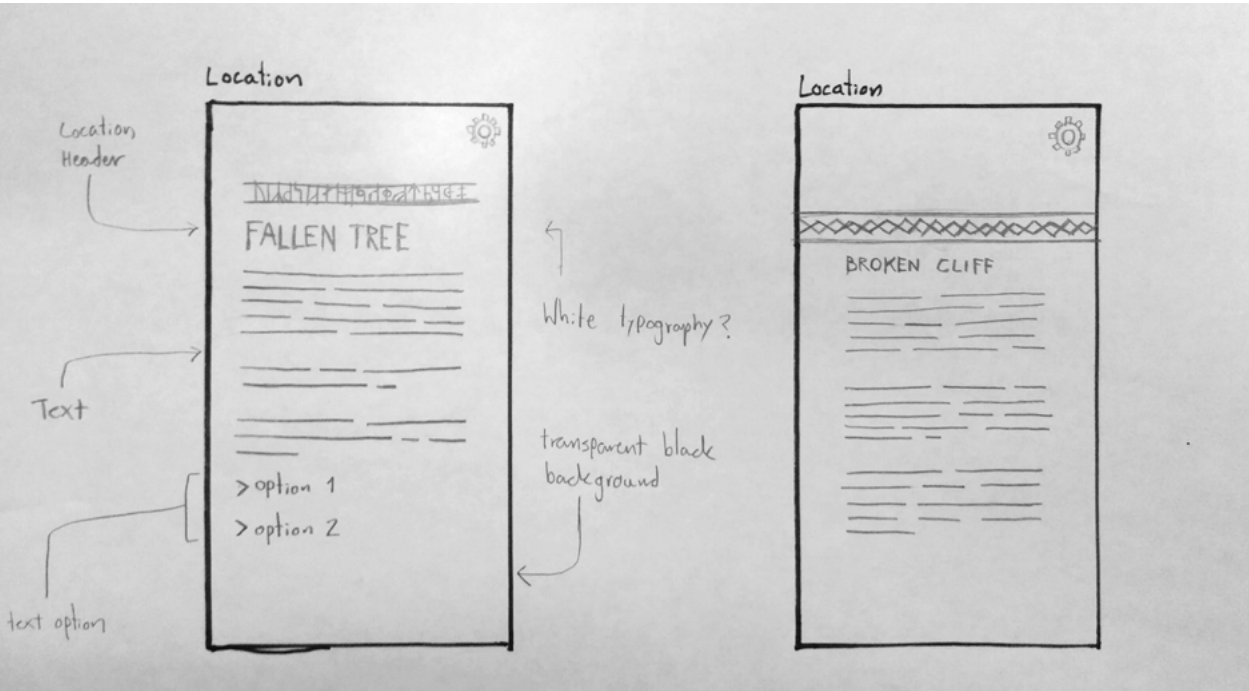
SHATTERED TREE

IN THE CENTERED OF A BLASTED PIECE OF
FOREST YOU SEE THE SCORCHED REMAINS OF
A MASSIVE OAK.

TENDRILS OF SMOKE EMANATE FROM THE
SHREDDED TRUNK AS SPARSE RAIN PATTERS
AGAINST THE SUROUNDING GROUND.

> WALK UP TO THE TREE

> TURN AWAY

LAST REST

The lingering stench of death permeates the air as a dozen black birds abandon their price and retreat to the trees.

A shriveled shape leans against a tree.

> Examine the body

> Back away

Reaching a new point on the map would trigger a notification and the user would then open the game and be presented with a branching text interface that told a piece of the story, set in the new location, giving the user some choices and creating a sense of agency.

Upon finishing the narrative of a location the user would return to the overworld map and choose another location to travel to, triggering a new timeout.

This was the first version of the core gameplay loop.

Gameplay Loop

① 1.

[Go through
Dialogue]

[Pick
destination]

[Travel (time-out)]

60
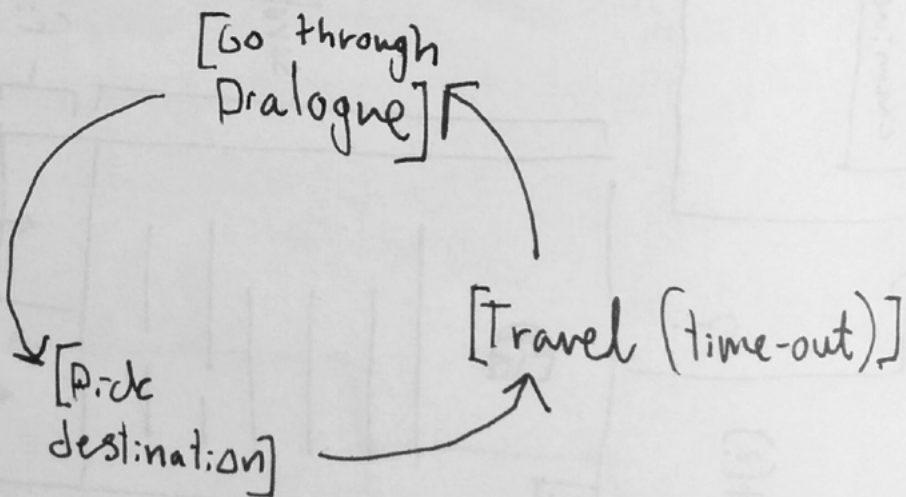
## 10.4 Visual exploration - Locations

While I was prototyping the alpha version of the game I started exploring and developing the look and feel of the locations for the game.

I knew that I wanted a stylized look that I could transition towards something more abstract during the progression of the game and I knew that I wanted to create the scenes in a way that would leave me room for environmental storytelling.

I already knew that I wanted to expand the core gameplay loop slightly and introduce another layer of interaction that would let the users explore the location they traveled to visually. The text dialogues would then become a part of interacting with elements in the locations, rather that the locations themselves.

To create a sense of exploration I had decided on panoramic scenes that would let the user swipe back and forth to discovers new part of the scene and interact with them.
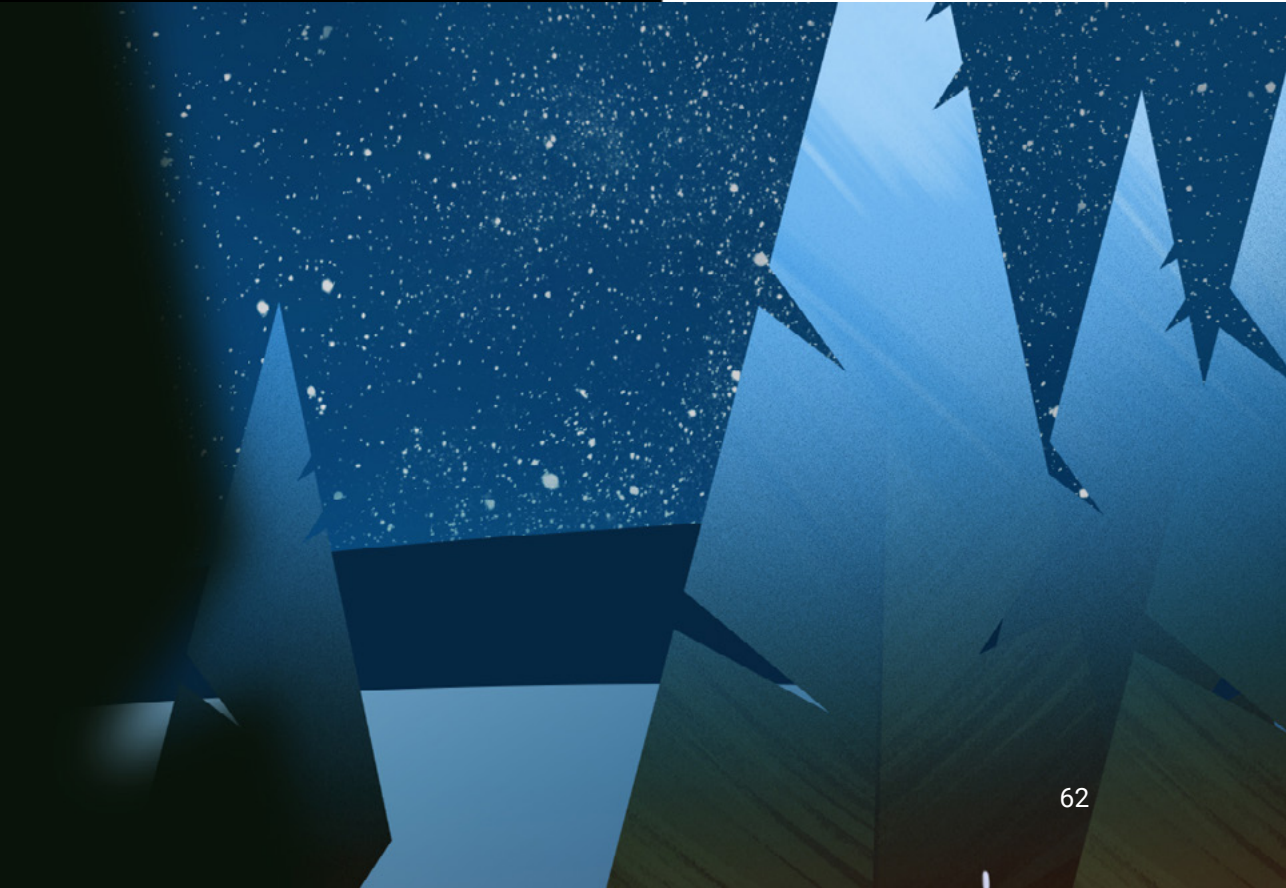
At this point I only had a vague idea what the content of the scenes would be. Besides providing me with an opportunity to workshop the style in a very basic way, this exercise proved to be slow, unstructured and yielded few good results.

I needed more direction.

10.5 Visual exploration - Art direction

To achieve more of a structure visual development I looked at a lot of work by artists, illustrators and concept designers that have mastered the highly stylized figurative look, people like Nikolas Ilic, Elle Michalka, Marie-Laure Cruschi, Ty Carter, Joey Chou and Arnie Jorgensen.

I then compiled the massive body of reference and inspirational material I had gathered and created several mood/style boards.

Philip Jodidio

CABINS
HÜTTEN / CABANES

TASCHEN
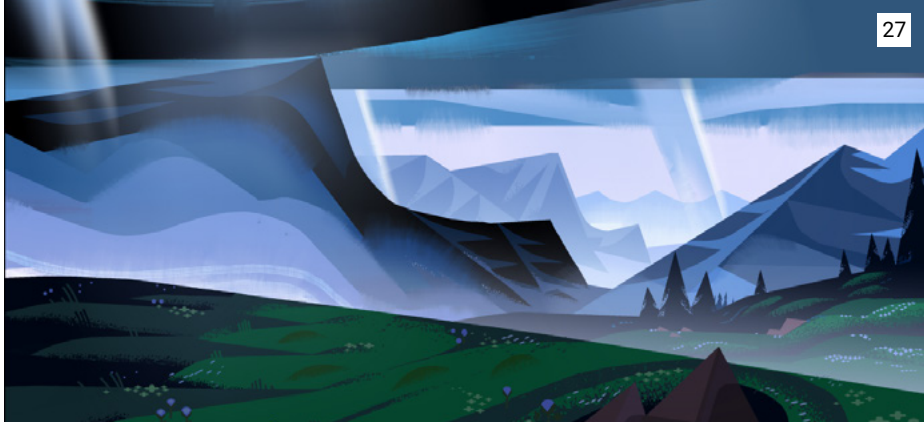
After that I had a lot better grasp on what I wanted to do with the style of the locations and I started doing key art pieces to try to capture the style, atmosphere and tone I wanted.

This helped me narrow down the style, discard some inspirational sources that didn't gel with what I wanted to achieve and develop some stylistic tricks of my own to bring the feel of the game together.

In the end I felt like I had a solid stylistic foundation to build on and I could turn my attention fully towards the visual storytelling.

10.6 Storyboarding the journey

Next, I started to map out the visual progression of the the game to see if I could nail it down in some form and have something to process further.

The next version of the game, the beta, would have some of these scenes and I didn't want to waste any time producing graphics assets for scenes that would end up getting cut once I saw the arc of the journey more clearly.

I also wanted to try my hand at steering the style of the locations from figurative towards abstract, something I knew would be complicated to pull of gracefully and would demand several failed attempts, dead ends and a lot of time.

I ended up storyboarding a progression of ten locations.
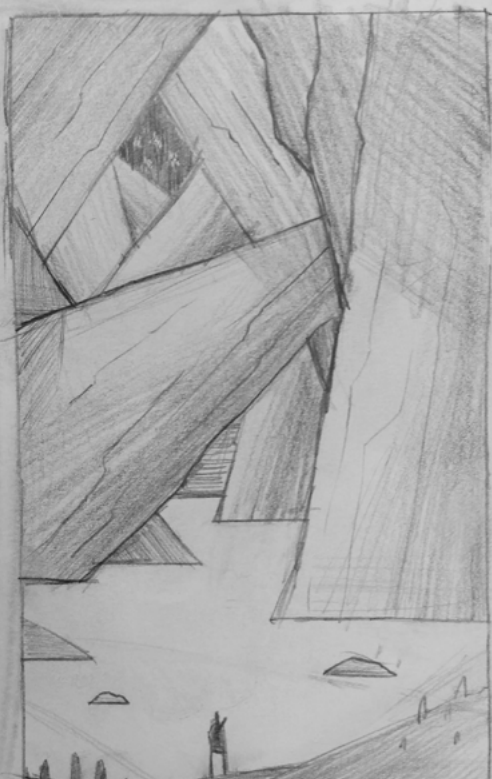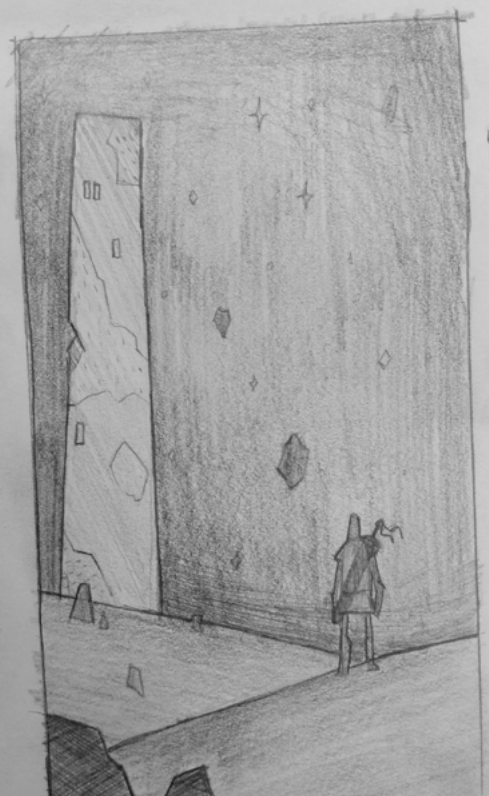
10.7 Testing & feedback - Alpha version

Testing Methodology

Once the alpha version of the prototype had all the features that I wanted to test in the initial round of user testing I sent it out to the five testers that I had gathered together beforehand, all of them in the target group of my project.

What I wanted to measure in this round was the motivational power of the travel-based game mechanic and the text-based narrative (independent of the visuals of the location that would be introduced in the next version.

I wanted to see if the theme would shine through, carried only by the map-based journey, the interface, the timeouts and the poetics of the textual content that was going to accompany the visuals of the locations.

I also wanted to test the pacing of the travel and the timeouts and see if any frustration arose from the waiting or, in the other end of the spectrum, the timeouts were too short, causing annoyance at the constantly harassment from the notifications. I set the timeouts to be between ten and thirteen minutes.

After they had spent a couple of days with the prototype on their phones I sent them an online survey.

The first part of the survey had some basic questions about their response to the mechanics of the prototype and their opinions about the timeouts and general comprehension of the flow of the game.

The second part of the survey was designed to gauge their emotional response to the experience, using what is known as Bipolar Emotional response testing, or BERT, within the field of UX design.

This type of survey testing asks the participant to rate their experience on a scale between two words. If there's enough of these questions (some of them slightly reworded repeats, to weed out personal biases) it is possible to identify clusters that point towards how the experience will be perceived the target group (Hay, 2013).

Response analysis

Once the responses started coming in I could quickly see some patterns. The game rated 4.5 (on a 0 - 6 scale) towards "understandable" on the flow of the game. This told me that I was on the right track, but that there was room for improvement with the instructional communication in the start of the game. This was also backed up by a solid 4 (on a 1 - 5 scale) from "complicated" to "easy" and my email-correspondence with the testers.

The clustering of responses towards the middle in the "sad" to "happy" question tells me that I'm striking a good balance between positive and negative emotions in the tone of the game.

The most relevant results where a definite clustering towards "lonely" and "solitary" in a series of questions that pitted them up against words like "intimate", "familiar", "social", "together" and "united". This tells me that I've already created a good basis for extrapolating answers to the key question for the conclusion. What those answers will be remains to be seen.

Another salient piece of data is the response clustering towards "comfortable" and away from "uncomfortable" (4 on a 1 - 5 scale). Based on this I knew that I would have to rely on the visual language to trigger isolation by way of defamiliarization and experiment with the style and content of the textual content to ramp up the alienation and disconnection.

Having this baseline data would also let me compare the data that would come out of the beta testing to see what the new features added to the experience and how they affected the players' perception of the game.

In my correspondence with the tester several points of interest concerning the interaction design turned up.

A majority of the testers respond positively to the timeouts, saying that they appreciated the pacing and structure of it. A couple of the testers also commented on how it made them savour the experience in between the travel.

The feeling of traveling didn't reach everyone though. A few of the testers reported that the timeouts seemed arbitrary and disconnected from the rest of the experience. This might be a case of having to acclimate the players to a new mode of play, but there is also room to communicate the concept of the journey better. This is something that I would have to take into account in the next round of prototyping.

Some of the testers also reported instances where they waited days to go back to the game, citing lack of motivating factors. This might signal a weakness in the design of the notifications themselves, their content or delivery. It may also be a product of this version of the game having very little content.

In the textual content of the alpha I had included a horse that the hero brings with him on the journey. I used the horse as a device to communicate an ominous feeling once the player got to the edge of the forest, having the horse spook and then run away at one point, depending on if the player decided to calm the horse down or not.

Many of the testers talked about that horse a lot, describing him as "the hero's only friend" and lamenting the fact that they lost him. They seem to really care about it. The way I see it I could use this to greater effect in the next version of the game [insert malicious cackling].

10.8 Visual exploration - The interface

While I waited for the above mentioned responses i started to work on the design of the interface.

I needed to be expanded the design to encompass the features that needed to be introduced in the next prototype; the location scenes and a more robust menu system.

The interface design had also gotten a bit away from the specifications in my design strategy and I wanted to rein it back into the kind of unobtrusive minimalism I had identified in my visual analysis during the research phase.
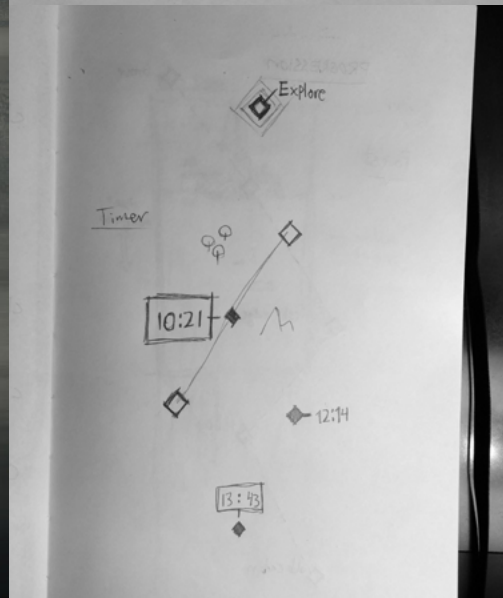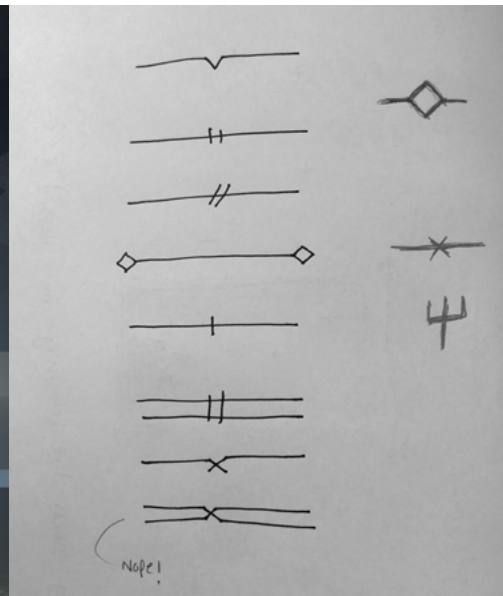
I also wanted to take a closer look at the typography and find a versatile typeface family that adhered to the kind of restrained and clear-cut language that I had seen in my visual analyses of relevant games during the research phase.

I looked at and tested a lot of neo-grotesque sans-serif typefaces before I landed on Roboto and Roboto Condensed. My decision is based on the unassuming nature of the typeface coupled with it being among the least geometric of the alternatives out there, leaving some room for emotion.

Roboto

SUNGLASSES

Self-driving robot lollipop truck

Fudgedicles only 25¢

ICE CREAM

Marshmallows & almonds

#9876543210

Music around the block

Summer heat rising up from the boardwalk

Roboto is also the default fonts for Android, which I hoped would let it slip by, not drawing attention to itself.

Furthermore, the two styles provided me with an easy way to create headings and display style buttons without having to resort to a secondary typeface. The text you are reading right now is set in roboto.

The fact that the Roboto families are freely available for download and use under a permissive free software license also helped.

THE MIST

Deep in the forrest there's an old wooden cabin. A man sits by the the stone hearth, soaking up the warmth of the fire. His hair is grey now and his hands are gnarled and tired from age and use.

> LEAVE THIS PLACE

> SLEEP BY THE STONE

> BRAVE THE MIST

GRAM
Alpha v1.1.5

Are you sure you want to start a new game?

CONTINUE

This will overwrite all existing progress.

EXIT

– YES –

– NO –

– LOCATION 1 –

– LOCATION TEST –

After the results of the alpha testing came in I decided that the flow of the interface needed to be tightened further to communicate more clearly.

To accomplish this I unified the visual language of the interface and reduced the number of graphical idioms by employing the "ghost button" pattern.

From this minimalist design direction I extrapolated a line-based interface that blends with the visual communication of the map while still differentiating the interactive and purely informative elements from the visual representation of the game space.
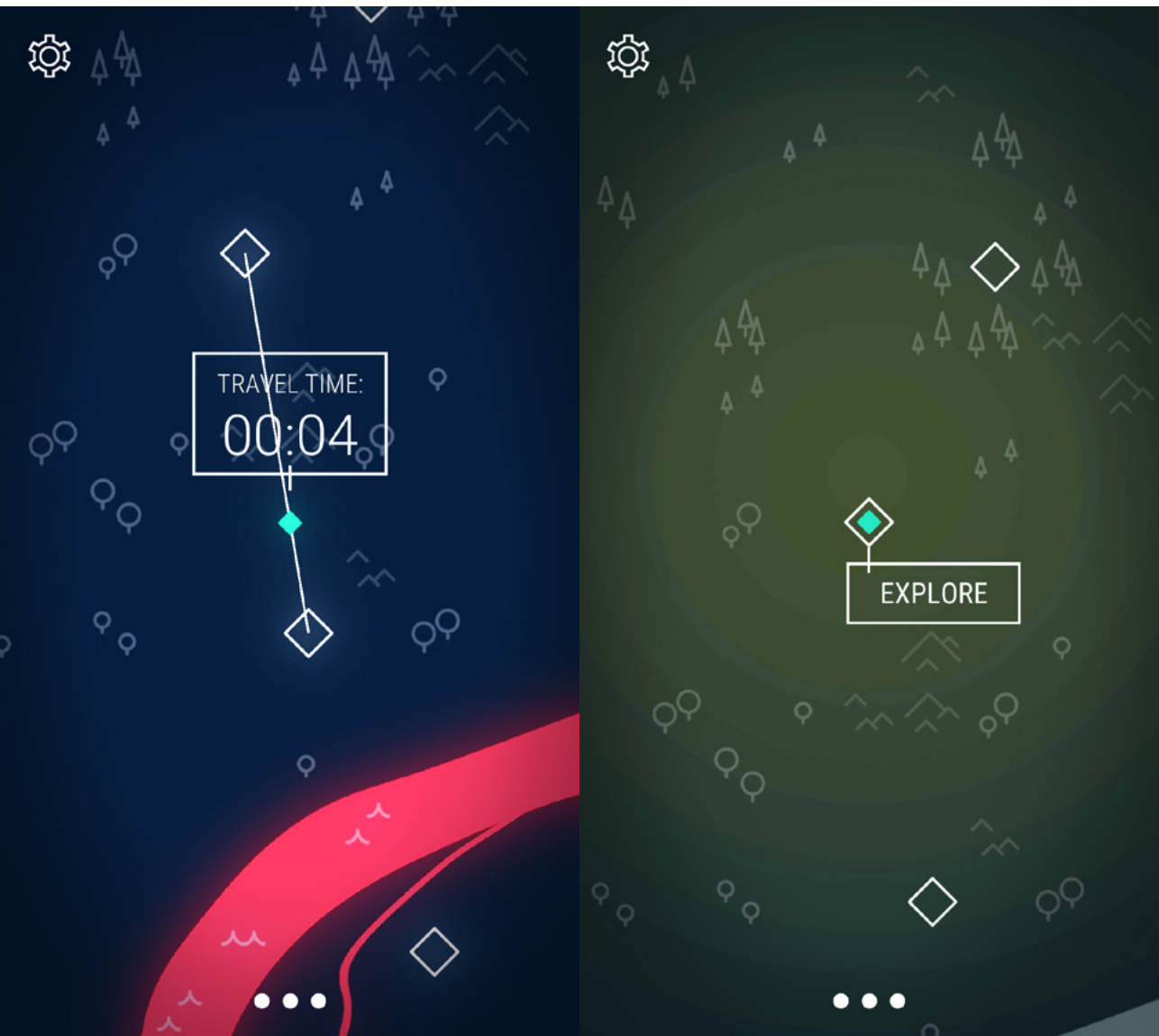
10.9 Design & prototyping - Beta version

I went into this round of prototyping with some features that I needed to add, mainly the panoramic locations scenes. That meant that I would have to throw out the textual material that I had created for the alpha (not a huge loss) and restructure the flow of the game.

[Go through dialogue]

[explore location]

[Pick destination]

[travel]
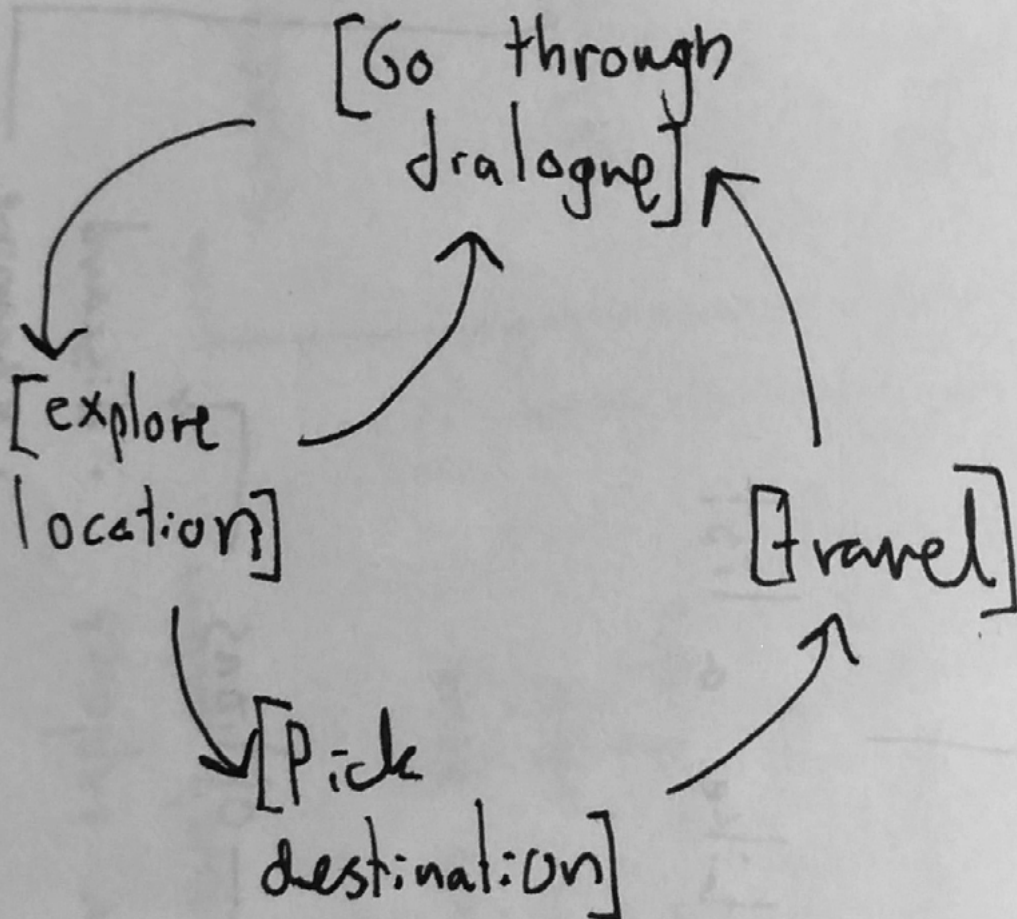
I also wanted to experiment with parallax in the locations, to create depth and give the scenes more life. I quickly realized that I could create the location illustrations in layers and offset them mathematically, taking care to handle the sorting order up front.

For now I wanted to find a well-design and solid implementation of touch-based navigation in the locations scenes that would give that part of the game an intuitive flow. In preparing for the next round of prototyping, I created the systems in such a way that there would be room to experiment later.
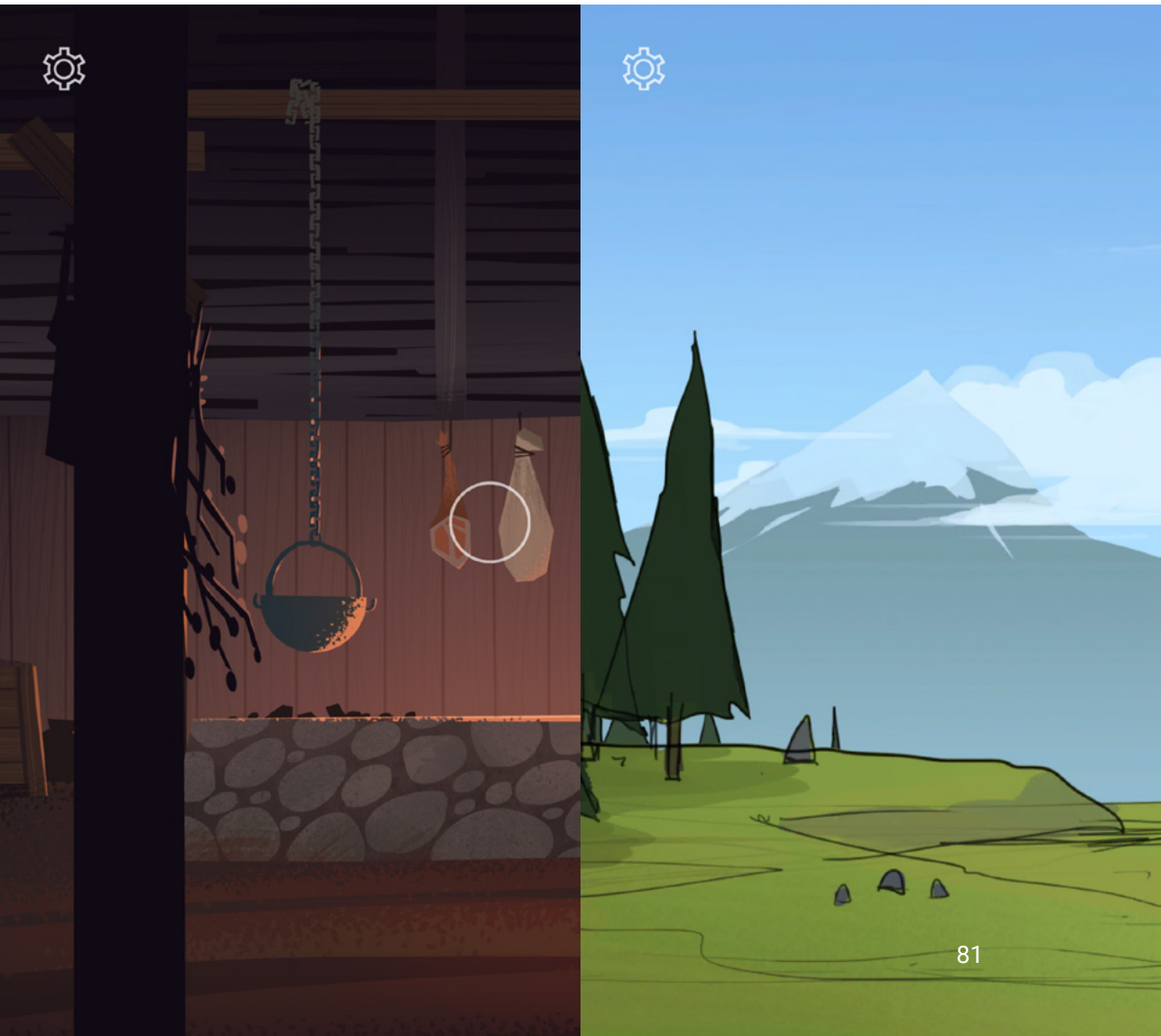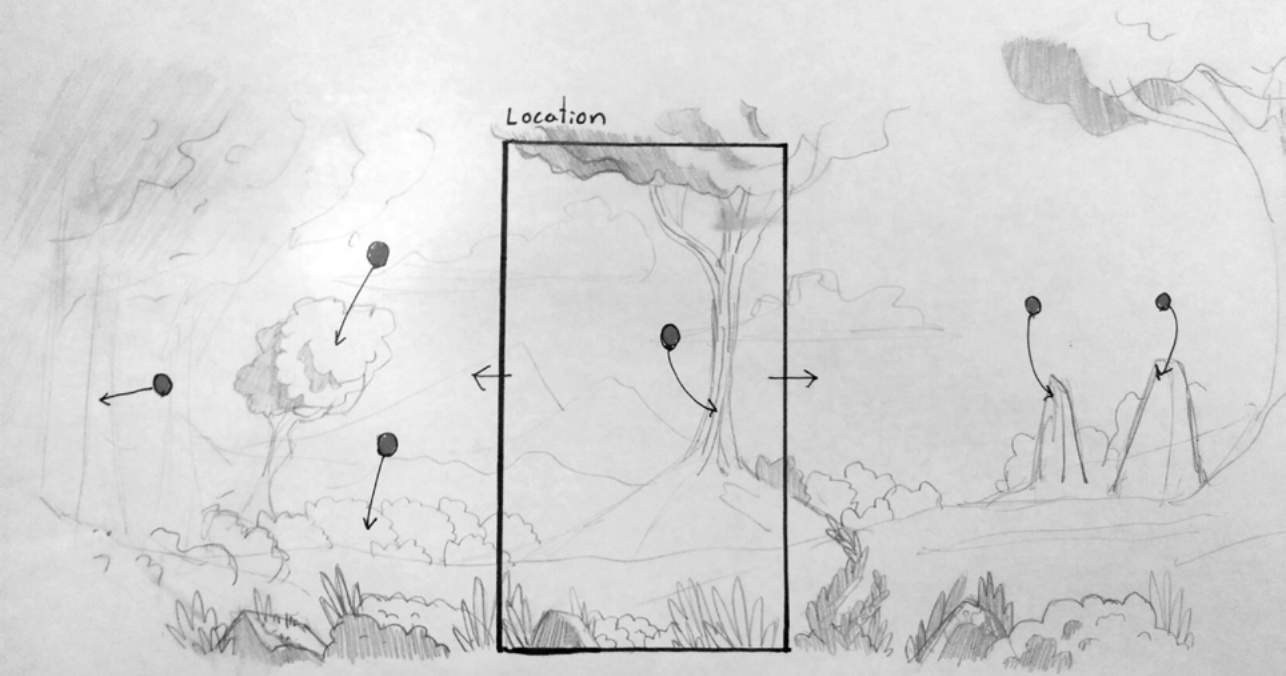
Location

2D Plane-based parallax

Panoramic Scene

Swipe-scrolling (banded)

Interaction P...

I also moved the text-based interface into the location scenes, having created in in a modular way for just this occasion.

THE WEIGHT

The old warrior takes a moment to regard the blade, the steel as unmarred today as it was the day he first lifted it. He feels the sharp edges of it's very name. Gram. He sheaths it and, with no small effort, lifts it onto his back.

His body complains immediately, but he pushes the pain aside, locking it away with practiced ease.

> SIT DOWN

Next, I started wondering about the central menu that I'd designed in earlier versions of the game. I had intended implement it in this version as an intuitive way to navigate between the two "states" of the game; the map and the current location scene. Now that the map had an "explore"-buttons that lead into the location scenes, the central menu concept seemed redundant and confusing.
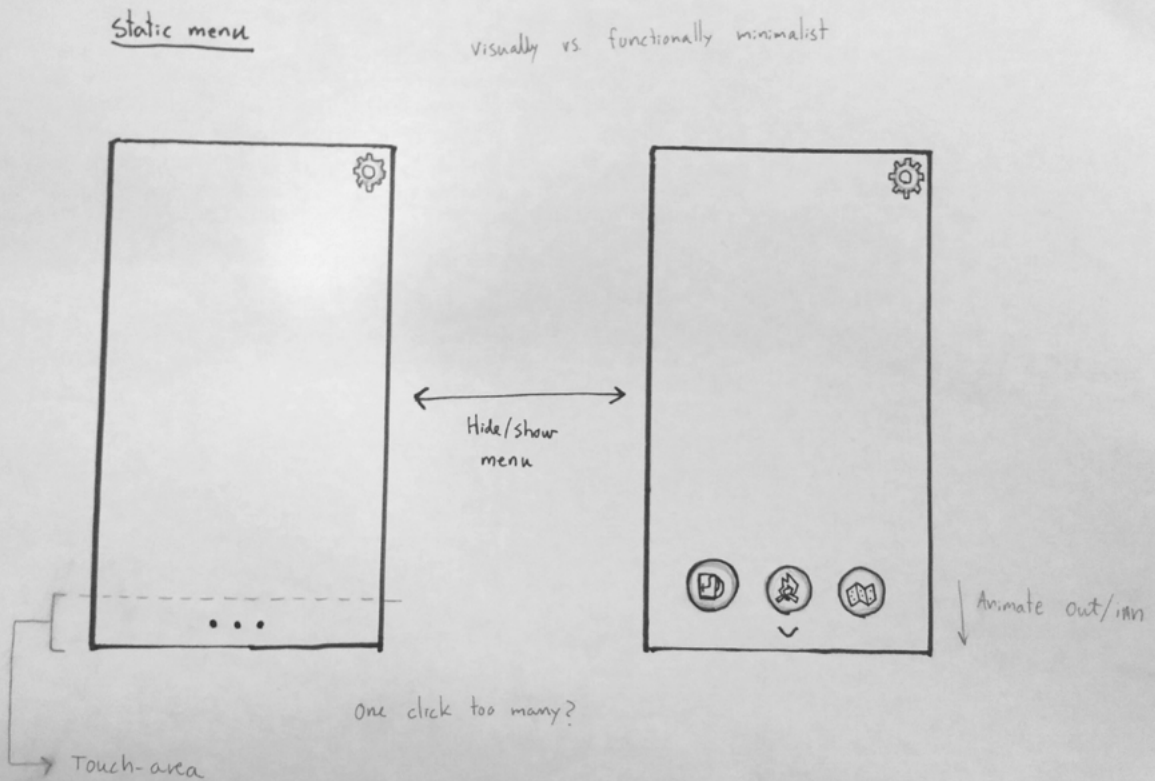
I still felt like the central menu would be a more user-friendly way of navigating through the game, but the relative simplicity and powerful communication of the map-based explore button made an asymmetrical navigation-model attractive.

If I went with this model though, I'd have to find an equally intuitive way to lead the player back from the location scenes to the map, and nesting it in

the interaction-point model seemed like it would cause confusion.

In the end I decided to go for the explore button on the map, and introduce a map-icon in the locations scenes, leaning heavily on the icons-representing-inventory-items convention that I'd seen in so many games.
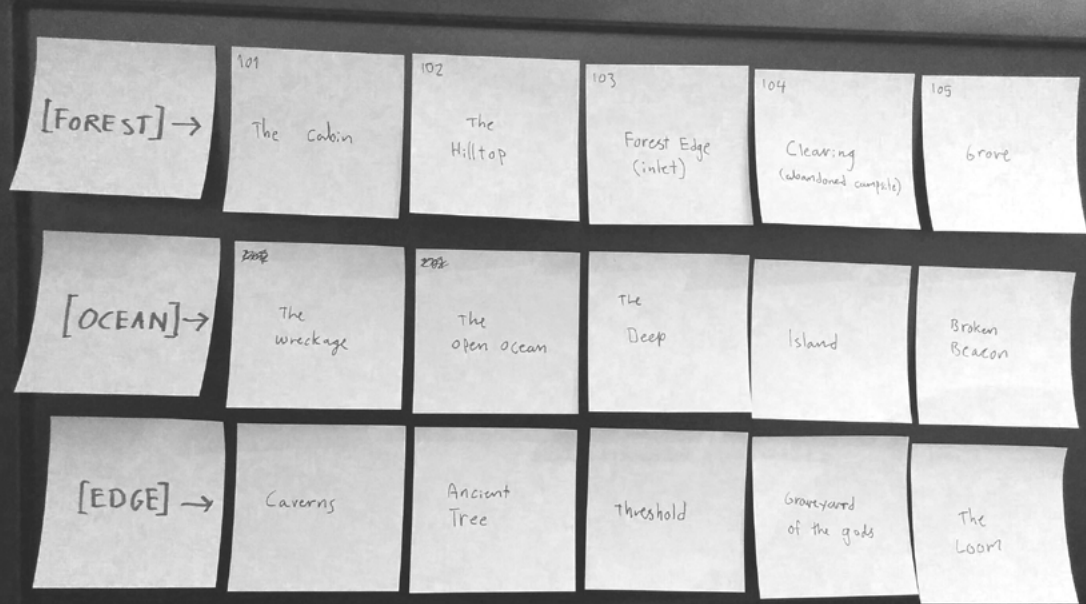
For this version I wanted a progression of five locations, like the previous version, not wanting to put too much work into it before I knew if it worked the way I had envisioned it. I knew that I wanted to aim for a final prototype with three sections, each with five scenes, each representing and demonstrating a section along the longer journey.

As soon as I had the locations plotted into the game, having made sure that they felt like steps in a journey and that the distances felt right, I sat down with the sketches and mockups of the map that I had made earlier and created a map graphic that would mirror the progression and the content of the scenes.

Lastly, I added short flavour-texts (about the new locations that they'd arrived at) to the notifications as means of enticing the users to come back to the game.

10.10 Testing & feedback - Beta version

Testing Methodology

For this round of testing I wanted to adopt a more hands-on approach, electing to use a proven observations-based testing method called playtesting (St. John, 2013).

During the course of a couple of days I identified several people from my target group. I recruited them as playtesters, gave them the game and told them to relax, think out loud and ignore me as i observed them playing the game.

As my game is based around periodic game play I often ended up sitting there, working on this thesis, while the testers watched a TV show, browsed the web or otherwise went about their day. I even had to accompany some of them when they went on errands.

In the end I would hand them my ipad so they could fill out a survey that was based on the one i designed for the previous round of testing and then engage them in conversation about their experience.

Response analysis

The data from the survey showed a slight skew towards "uncomfortable" and way from "comfortable" (3.5 on a scale from 1-5), an improvement over last version as I', relying on that discomfort to trigger feelings of isolation and uncertainty.

As the prime difference between the two versions is the inclusion of the panoramic locations scenes I feel comfortable crediting the visual language and content with the change in testers' experience.

Another relevant piece of data is the slight movement in "happy" vs. "sad" towards "sad" (4 on a scale from 1-5). I'm concerned about this development as it hints at a imbalance in the emotional experience, tilting it away from solitude and towards loneliness.

The textual content might be the culprit in this case as the visual style seems to strike a good emotional balance.

The really good news is that I've retained the clustering in responses toward "lonely" and "solitary" as opposed to "intimate", "familiar", "social", "together" and "united".

Even though the data that I collected from the surveys was very useful, especially when I compared it to my previous data, the real insights came from watching people play the game and talking to them afterwards.

I encouraged the testers to "think out loud" while they were playing and it payed off. All of them seemed to get the gist of where the story was going, that this guy, the old warrior, was some kind of heroic figure on his last days. They were also picking up the tone that I wanted to get across, that this guy was alone, and they were feeling for him – this was the empathic bond I was aiming for.

There was a lot of curiosity about where the story was going, but even more about the backstory. Who had this guy been? What had happened to him? Why had he disengaged from the world? The "authorial reticence" I referred to in my analyses of narrative in games (section 8.2.7), the deliberate with-holding of explanations and information, was working.

Please excuse my enthusiasm when i say that: we've got narrative engagement!

The changing nature of the map, as the players progressed, also seemed to peak their interest, triggering curiosity, but also some small amount of discomfort as the map ceased to feel like a trustworthy navigational tool.

The testers also pointed out a lot of small (and some bigger) confusing inconsistencies in the plot and my stylistic choices. I won't mention them all here, but I'll list of the most notable ones:

- The hilltop locations felt like it was a little bit of a departure from the rest of the progressions. Too serene and peaceful.

Some times I feel like I have to read these responses like they're encoded messages. I *want* some serenity and peace in the experience, so the prob-lem must then be that it's to abrupt of a break and that there's too much loneliness, not enough solitude. In a longer version of the game I could equalize this during the progression, but this prototype needs to stand on it's own legs.

- The "old man" didn't really feel that old.

Nobody made a big deal out of this, but I see it as a problem. The tone of the game hangs on the main character being perceived as physically and emotionally tired. The journey needs to feel like it's hard for him. I can adjust for this in the textual content, but I suspect that the most powerful way of getting this across is through the pose and expression of the old warrior.

- Some testers just didn't seem to be getting enough interactivity out of the experience.

There will always be some people I can't quite reach, but I can make an effort to include more meaningful choices in the textual dialogues and scale back the amount of reading that's required.

If I had more time I would attempt to reach this more interaction-demanding segment of my target group by introducing a secondary gameplay loop or expanding the main loop. One option that I considered was a survival-like resource management aspect which I describe in more depth in "additional & rejected ideas" (section 11.0).

However, time-constraints meant that I would have to make do with the system that I already had in place, stretching them to make the interaction less predictable and more divergent.

10.11 Concept design - Locations

Now that I had the complete core gameplay loop implemented I started
exploring the possibilities in the cross-section between the interaction
model I had created for the locations, the technical system and the visual
storytelling.

I wanted to get as much milage out of the model as I could, subverting the
players' expectations of the interaction to avoid fatigue with the gameplay
loop.

I also wanted to get them off balance in an attempt to defamiliarize them
further from the game space and push them towards the theme.

the Deep

— sunken
treasure

91
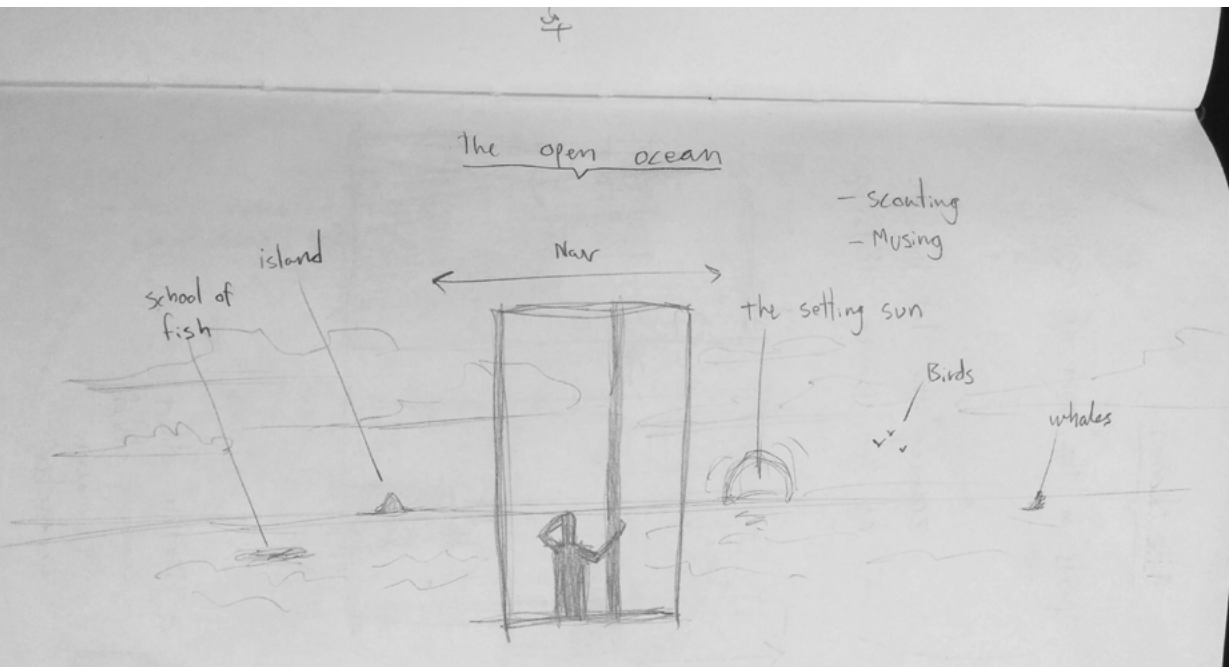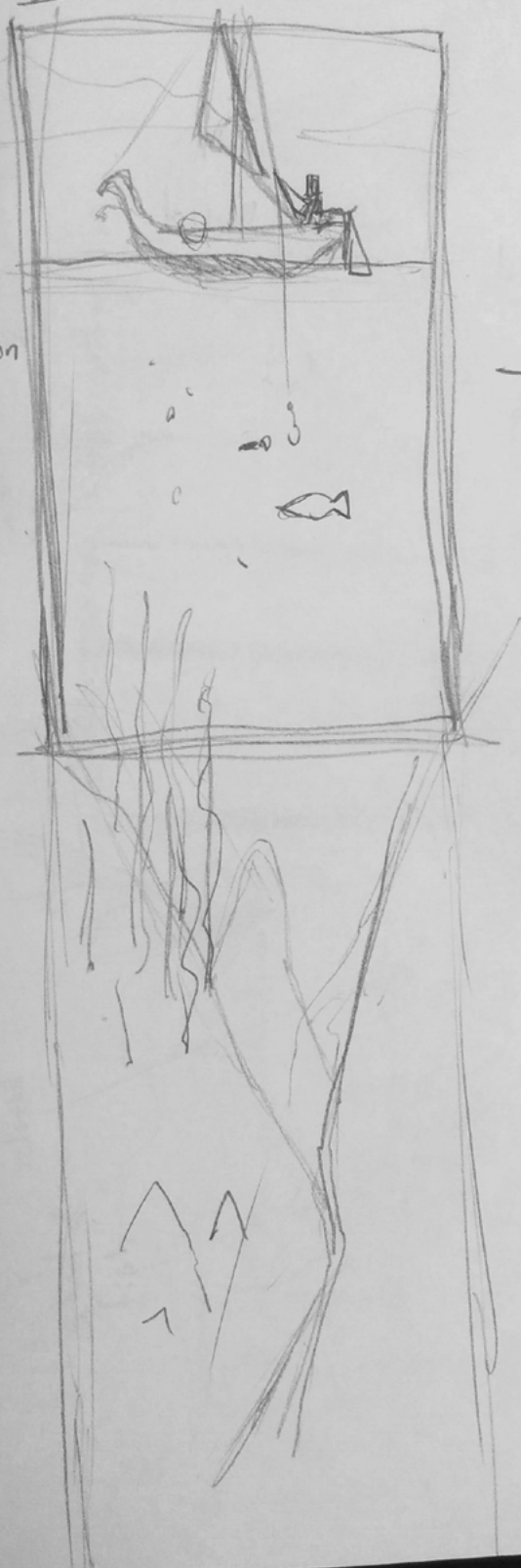
- Poetic verses
about "dead" gods (many

The stars behind
/ Parallax incredibly fast

choosing each line (composing the verse) ???

touch
Navigation

Dead body

Barrel

Piece of
ship

Broken mast

92

ocean ocean

The Loom

"points" in the "loom of destiny"

Zooming the 1st layer
as the player tilts up

Touch
navigation
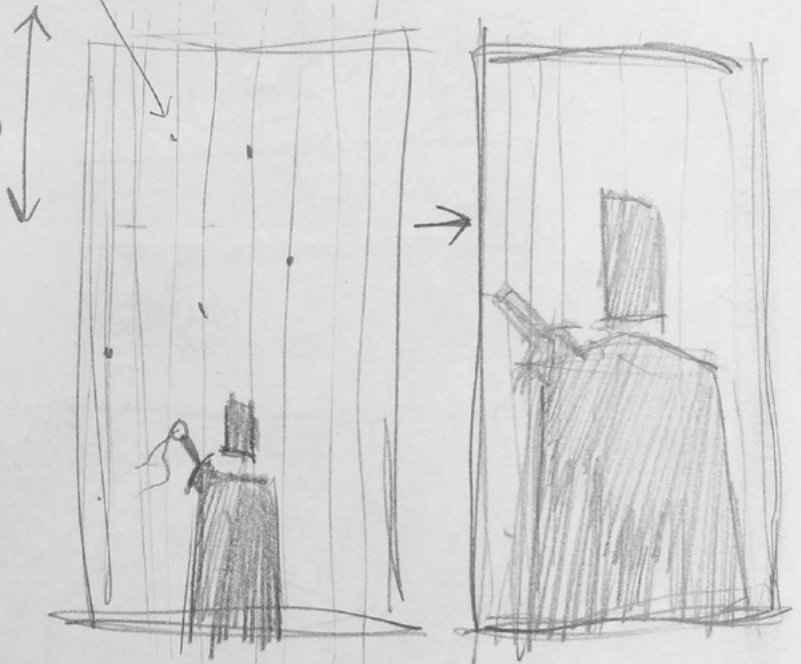
← Particle effect
comming off of
the main
character

10.12 Design & prototyping - Final version

As I hand in this thesis, there is still work to be done on the final prototype.

My work on the final prototype will be guided, in large part, by the feedback from the playtesting of the beta version, which is still ongoing, so anything here is subject to change if the feedback demands it.

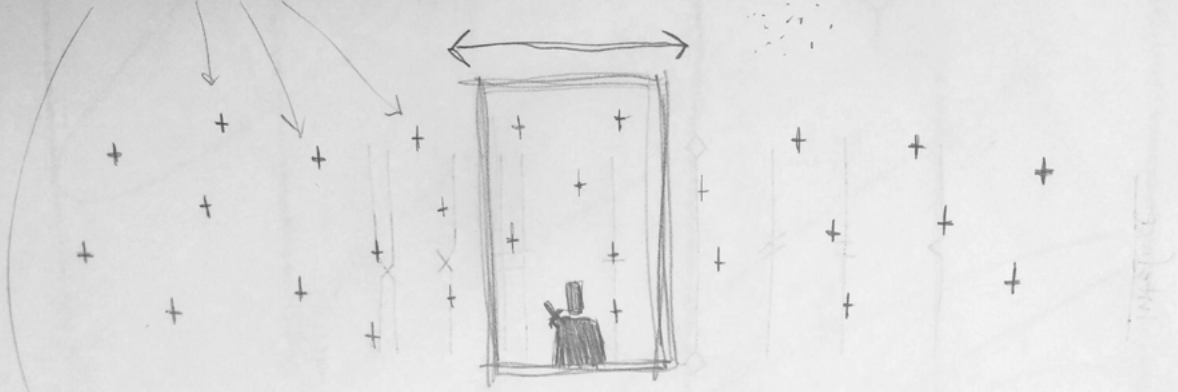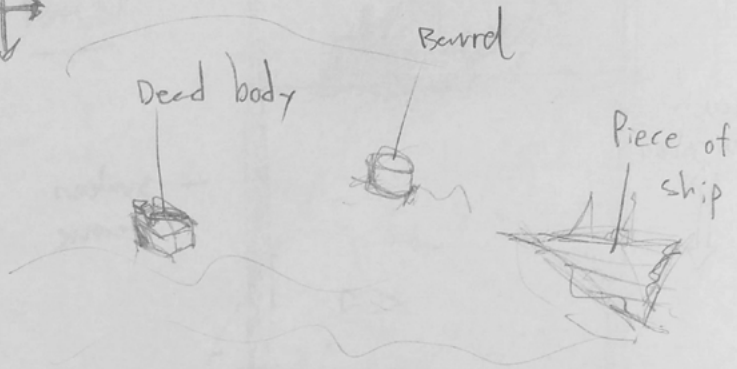My plan for this round consists of expanding the content of the game from one section with five locations to three sections, for a total for fifteen locations. That's what I'm aiming for, but I might need to settle for a little less if there are other aspects of the game that demands more of my time than initially expected.

I want to tweak the interface based on some of the conversations I've had with the testers about the placement of buttons, menus, etc. These are mostly straightforward concerns about usability in an ergonomic sense, something I only have myself to blame for not take into account in the design.

I also want to explore some ways of giving the player something to look at or do if they return to the game before the travel is done. Some simple textual choices or secondary story content maybe. I'll have to see what I come up with.

I'll update you on any drastic developments/changes in the presentation.

10.13 Testing & feedback - Final version

Just to be clear, testing on the final prototype has not started yet. This section is about what I learned from the other rounds of testing and how I want to approach it this time.

During the previous round of testing I had a lot of instances where the feedback revealed flaws and opportunities that I could go in and fix/tweak relatively quickly. To keep the data consistent I chose to wait and carry on with the same version of the game throughout testing.

Looking back, I had my priorities mixed up. Being able to make rapid changes, testing different solutions, seeing how people respond and then comparing and contrasting the results brings a lot of flexibility and spirit of adaptability to the process.

This time I want to prototype up to a functional level and then start testing as I prototype. I want to be able to test out different solutions to specific problems or areas of the game. Why test the whole game, every time, when you know where the weakest points are?

I'll let you know how it turns out at the evaluation.

11.0 ADDITIONAL & REJECTED IDEAS

Here are some of the most interesting ideas I have considered (often at great length), but that ultimately proved to be outside the scope of the project or ran counter to my goals.

Resource management

Some of my earliest ideas for this game included a resource management aspect that would have the players gathering food and other resources for each leg of the journey.

The concept is old, but my inspiration came from the Android game *Out there*, which I included among the games I analysed in my research.

I wanted to bring this gameplay mechanic into the design of this game to give the players a deeper sense of agency by giving their actions more severe consequences, Showing them that their choices affected the main character directly and that they could end up failing. I wanted them to feel invested, the way only games can.

I have a bunch of sketches for an inventory, scavenging options and resource, but I realized pretty quickly that there just wasn't time for it on top of the other, more important stuff. In a flash of good judgement I shelved the idea, opting to focus on the more central mechanics.

I would however like to explore that version of the game at some later time, so I'll keep the sketches and bide my time.

Procedurally generated content

I have some experience designing procedural systems that generate content within a set of rules and I know that the amount of work it takes to design such systems can be staggering. This is the only reason that I did not explore this as a part of this project.

I would have liked to design and build a system that generated a new map every time a new game was started. The degree of randomness in the map would have to be bounded by the design of the game while remaining flexible enough to produce fresh experiences and thus encouraging the player

to replay the game. This would increase the value of the game and increase the player's exposure to the theme.

Furthermore, I would have liked to introduce some randomness to parts of the narrative. Names, places, descriptions, backstory, events and scenes could all have degrees of randomness. At the far end of the spectrum from static to procedural the content could be generated to create stories from the ground up.

Another possibility was the use of procedural systems to add variation to the graphical assets used in the game. I would have liked to explore the possibility of procedurally assembling graphical assets from parts to get more mileage out of the work done to produce those assets.

One problem with procedurally generated content is the degree of randomness; any bounded system will eventually yield a predictable outcome once the player has understood the parameters that bind the randomness. More randomness demands more (or tighter) rules and more testing in order to eliminate results that break the intended gameplay or technical solution. It's the difference between building a house and building a machine that builds houses.

Dynamic in-game time of day

One way to increase immersion would be to tie the setting of the game closer to reality by using the mobile clock to determine the time of day and reflecting that in-game.

This could be done by creating sets of graphical assets for scenes and selecting the ones that corresponded with the players time of day. I also considered introducing a degree of dynamic lighting to the scenes.

I decided against this because the production of several variations for every asset would increase production-time exponentially unless I decreased the amount of baseline assets drastically.

Multiplayer

I briefly entertained the idea that some sort of limited online multiplayer functionality could be used to enhance reflection on the theme.

The award-winning game *Journey* from 2012 uses a severely limited form of online multiplayer where two players find each other while traveling through the game. The only form of communication that is available to the players is a one note musical ping and their movement.

The players travel together and interact with the puzzles together, but mainly the players would use the ping to draw attention and then demonstrate a solution or indicate a path to each other. The result was an experience of companionship and connection, unhindered by the more complicated social interactions.

My thought was that the introduction of such companionship and connection early in the game could provide a great opportunity to sever that connection at some point later. The player would then experience a much greater sense of loneliness/solitude, having gotten used to not being alone.

Even though I think this is an idea that shows great promise I quickly took stock of my own technical experience, the challenges involved in creating this functionality and the time needed to complete it and I decided against it.

Gyroscopic controls

This is an idea that has come up repeatedly in conversations with tutors, external resources and fellow student and one that I felt could be a way to use the strengths of my chosen platform to increase the level of interaction with the game.

The basic idea is that panning around in panoramic scenes could be controlled by holding the phone up and turning around, using the rotational gyroscopic sensor in the phone.

The scenes would then loop horizontally, as if they represented a view from the middle of the scene.

While the idea intrigued me I decided drop it once I remembered my own experiences with gyroscopic controls; I have yet to see a good implementation of this control model. The movement is always unresponsive and jarring, making the user aware of the technical issues and breaking the immersion.

12.0 CONCLUSION AND REFLECTIONS

How can design help create a game that encourages reflections on loneliness and solitude?

Implicit to this question is the proposition of melding design methodology and thinking with proven game development practices and models, using design, with it's long history of creative problem solving, to bridge the gap between the scientific and the artistic and provide critical momentum.

Looking back, I believe that I have developed and presented a process that adds to the established traditions in game development methodology by infusing a design-based approach to the research, ideation and implementation phases.

My focus on the visual communication of the game world and the solution-based thinking I brought with me into the shaping of the interactions and the interface has resulted in a pointed end product with purpose.

I also realize that, as a product of my training here at KHiB, I've gone about all of this while subconsciously keeping an eye on the ethical implications of the design choices that I made, wanting to nudge, but never manipulate the target group.

Going into game development as a designer, these are the things I feel I can bring with me to strengthen the process and the end product.

Still, in retrospect I could have structured the prototyping-phase better. If I'd started earlier I could have started wider and experimented with some completely different models, increasing my chances of discovering new, interesting and effective gameplay loops. A definite part of the take-away is "schedule more time for prototyping".

I would also have been good to recruit some more external tutors for the different parts of the process. I have some experience writing, but having somebody to talk to about this part would have let me spend a little less time on the writing and probably would have improved the quality of the textual content.

I said early that this was to be an experiment and that what I did with the prototype after the project would depend on how I felt about it at that time.

Now that the project is almost completed I feel like I really want to develop it further, expanding the game in both content and effect, doing more widespread testing, getting some collaborators in on it and maybe even publishing at some point.

Looking at the market place and what's available out there, I think there's room for this. It's different enough to stand out.

The feedback I've received indicates that I managed to direct my target group towards reflection on loneliness and solitude. Beyond that, many of the testers actually reflected.

However, an important part of my key question is the word encourage.

In much the same way as I would (presumably) be able to lead a horse to water, I have done my due diligence, examined existing solution, experimented and mustered all my design know-how in order to guide my target group towards the theme, all the while gently urging them to reflect.

I feel strongly that my process and solution demonstrates a good example of how design can help create a game that encourages reflections on loneliness and solitude.

Ultimately though, I can't make the horse reflect.

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