A Matter of Perspective

A Qualitative study of Player-presence in First-person Video Games

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Abstract

In this study we aimed to investigate the process through which players of video games situate, and form an understanding of their presence within the virtual game environment. This study specifically investigates this process in games played through a first person perspective with the intention of minimising the amount of visual information provided the participants. For this purpose we created two scenarios within a videogame environment specifically design for the study. A total of thirteen participants took part in the study, and after each season a semi structured interview was performed. In a qualitative content analysis we identified patterns and commonalities ascertaining to our line of questioning, and conclude that while the player-presence relationship would appear to be largely dependent on the individual’s type of play, the varying focus on either narratology or ludology in our two scenarios did indeed influence the participants to approach this relationship similarly within the separate groups. Finally we defined four types of player-presence relationship, and how they can be said to relate to the varying ludonarrative dynamics within the two specified genres, as well as the varying types of play observed amongst the participants in our study.
Preface

First and foremost we would like to express our gratitude to our mentor Per-Olof Ågren, for all his support and unwavering positivity throughout this endeavour.

Secondly we would like to thank all of our participants for taking part in our study, and we sincerely apologise for the lack of explorable caves included in our test environments, and any feelings of unfulfillment this might have led to.

Lastly we want to express our general feelings of gratitude towards our Programme Co-ordinator and lecturer Karin Danielsson-Öberg, for inspiring us throughout our time at the institute of informatics, and for her commitment to the Digital media-production program.
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1. Introduction

The subject of interaction with and through computers has been a hot topic since the commercialising of the Internet, and countless studies have aimed to explore various aspects related to the subject. Since the early 80s Sherry Turkle has been researching the constantly evolving relationship between people and their computers. Of particular interest to Turkle is the subject of identity, and she has written extensively about so called Multiuser Dungeons (MUDs), a text based predecessors of both role playing video games, and social media (Turkle, 1997). Central to her studies of identity, is a focus on alternate identities as something that stem from within the self as a form of exploration, but what she does not focus quite as much on is the adjacent filed of identity and self, within the context of traditional pen and paper roleplaying games, such as Dungeons and Dragons (D&D). In these games identity does not only stem from one’s own self, but also from the partially defined character you as a player have been put in role of. This co-creation of character and identity is multifaceted, and with the recent influx of video games emphasising narratology to the point of challenging the very definition of the medium, it is a highly relevant subject for study.

1.1 Background

The phrase “gameplay is king” is often championed amongst both creators and players of video games, advocating the importance of ludology over traditional narratology. Despite the often fierce belief in this principal, it is not a universally accepted one, and as much as “Tetris” or “Pong” can be said to embody this mind-set, video games have roots reaching back long before them. The pen and paper roleplaying game Dungeons and Dragons (D&D) was originally an evolution of traditional war games, and aimed to quite specifically give players a framework for roleplay within a Tolkienesque context. Following its conception, D&D has played an important role in defining the video game-specific Roleplaying Game (RPG) genre, a genre that offers a quite different dynamic in terms of ludology and narratology compared to something like Pong.

Placing the player in the role of an often predefined character, RPGs require the player to at least partially disregard the “self”, instead situating themself as being their character, defining a form of co-identity. An interesting addition offered by video games belonging to the genre, is the varying degree to which players are made aware of a specific character they might be expected to take the role of. Games in “The Elder Scrolls” series put the player in the role of a figurative blank slate, leaving it up to the player to define who their character is and how they act. Meanwhile games in “The Witcher” series ultimately give the player the freedom of choice, but at the same time, presents the player with a clearly defined character, thus encouraging the player to imagining themself as the protagonist Geralt of Rivia. These two examples can be

1 http://dnd.wizards.com/dungeons-and-dragons/what-is-dd
2 https://en.wikipedia.org/wiki/Narratology
3 https://en.wikipedia.org/wiki/Game_studies
4 https://en.wikipedia.org/wiki/Tetris
5 https://en.wikipedia.org/wiki/Pong
6 http://www.elderscrolls.com/
considered quite clear cut, one presenting a silent presence from a first person point of view (POV), and the other a cynical and often times, snarky monster hunter, not only vocal but also visible in the form of an avatar included on the screen. But how does the player approach a game in which this distinction is not quite so easy to make?

To answer such a question further context is required, as there are countless types of games with various aims in terms of what the player of a game is expecting to attain through play. Whilst most might agree that the goal of any game is to be entertained, this does not have to mean the same thing for any two players. For this sake, a comparison should reasonably be made between two types of games that are both similar in terms of what a player might expect to attain through play, but also suitably different in terms of the varying dynamics between ludology and narratology that is inherent to certain types of video games, but not necessarily to what a player of a game may attain through play.

Games developer Clint Hocking coined the phrase *ludonarrative dissonance*\(^8\), referring to a perceived disconnect by the player, brought on by inconsistencies between actions required of the player, through a game’s ludology, and a narrative story portrayed within the fictional context. If a player for instance is tasked with indiscriminately killing NPCs (non-player characters), in segments of gameplay, the ludology is arguably implying that the player’s character is someone who does not in fact have any issues killing people. However if a segment of such gameplay is followed by a cinematic segment, in which the player character is portrayed as hesitant to kill someone, the player may perceive a disconnect between what has been conveyed indirectly through play, and what has been conveyed directly through narration.

This dynamic between ludology and narratology in video games has been a topic for debated amongst researchers and game developers for quite some time, and with certain emerging genres gaining an increased acceptance in recent years, it has also spread to be a debated topic amongst players as well, if not quite as formally discussed.

The term “walking simulator” is a recent term of debatable origin, which refers to games with unconventionally low emphasis on traditional ludology, often lacking aspects thought to be defining of not only video games, but games in general. Instead these disputed games put an emphasis on narratology, with games such as “Dear Esther”\(^9\) only requiring the player to follow a path through an environment, triggering different monologues, telling a larger story. The term *walking simulator in and of itself* is often used in a derogatory fashion, commenting on a lack of traditional mechanics, and whilst it is a term that is understandably disliked by many, there is still a case to be made for its use.

This new genre of sorts is interesting in the sense that it can be said to avoid a *ludonarrative dissonance*, but as might be argued, it also does so by putting a lesser focus on- if not entirely disregarding ludology, leading to the genres controversial nature. Looking at the other end of the spectrum, the “crafting survival” genre as defined by the indie success “Minecraft”\(^10\), offers a different perspective. These games can also be said to avoid a certain *ludonarrative dissonance*, the difference being in the way this is done. Rather than sacrificing ludology, these games can instead be said to sacrifice narratology, often lacking a clear narrative context, and

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\(^10\) [https://minecraft.net/](https://minecraft.net/)
sometimes even a goal, signalling the end of the game. This does bring up the topic of emergent play\textsuperscript{11} a subject of study in and of itself but that might be surmised as relying on goals and narrative to emerge naturally through the players’ interaction with a game’s mechanics and environment. Despite their inherent differences in terms of ludology and narratology these types of games can still be quite similar in terms of mechanics and presentation, making them suitable as a context for comparison. In addition, their debated nature and recent growth also gives their study relevancy in a larger picture.

1.2 Purpose
The purpose of this study is to explore what might be called co-creation of identity or character, common within games belonging to both traditional and emergent genres. Our study aims to shed light on the process we refer to as player-presence relationship, that is, the process through which players situate themselves in relation to their presence within a virtual game environment. How they perceive and come to an understanding of their character within a narrative context, and lastly we aim to explore how mechanics can be implemented to influence the player in this process, while still maintaining a ludonarrative consistency. We specifically focus on game environments portrayed from a first person POV, limiting the information provided the player so as to emphasis others sources of impression, and their influence on the player-presence relationship. For the purpose of the study we poise the following questions:

- How does the player identify with their digital representation in a lifelike virtual environment? (Am I the character placed in the context? Am I in the role of a predefined character belonging to the context? Am I simply playing my own character?)
- How can game mechanics be implemented to influence the player’s relationship to their presence in the environment, whilst maintaining a ludonarrative consistency?
  - How can mechanics specifically based on linear exploration contra agentic fulfilment of goals be implemented for this purpose?

2. Related Research
We perceive three key issues with methods commonly used in studies aimed at investigating aspects relating to the player-presence relationship. A focus on scenarios in which players have a visual perspective, informing them of their presence’s appearance, effectively giving them an avatar. A reliance on quantitative data either consisting of biometrics, or forms of self-evaluation. And finally, a lack of context as a factor, relying on pre-existing games with varying ludology.

In a study by (Lim & Reeves, 2009) the players’ response to varying influence over their character’s physical appearance is investigated. The study compares a choice – no choice scenario in the game “World of Warcraft”\textsuperscript{12}. While the study has the primary focus on the player-avatar relationship that we aim to distance ourselves from, it does notably included both first person POV and third person POV as a factor. Data gathered included biometrics.

\textsuperscript{11} https://en.wikipedia.org/wiki/Emergent_gameplay
\textsuperscript{12} https://eu.battle.net/account/creation/wow/signup/
measuring Heart Rate, Skin Conductance, and Physiological Arousal, as well as self-evaluative
measures of emotional arousal, and the player’s perceived “presence” within the game
environment. Their results suggest that being given a choice of avatar does in fact reflect
positively on their measures of player arousal, but this also appears largely dependent on the
participant’s POV, with the option of choice having a markedly lower influence on participants
playing the game from a first-person POV. Furthermore their self-evaluative measures of
“presence”, indicated that participants playing the game from a third-person person POV, not
given a choice of avatar, did not rate their perceived presence as highly, as participants playing
from a first-person POV, regardless of being given a choice or not. Once given a choice of
avatar, participants reported similar values, regardless of POV. This is an interesting point of
contention and it exemplifies why we consider biometrics unsuitable for a measure relating to
experience.

While their selection attempts to accounts for gender bias, by including an equal amount of
male and female participants, it is somewhat questionable as they choose to redefine the
avatars’ gender, based on the current participant’s biological gender, potentially negatively
influencing the participant’s ability to identify with their avatar. Furthermore, participants not
given a choice of avatar were also explicitly made aware of not being given a choice, again
potentially influencing their results.

Moreover, as mentioned the game used for the study was the massive multiplayer online
game (MMORPG) “World of Warcraft”, a markedly well-known game within a very specific
genre. Using a well-known game within such a specific genre potentially influenced
participants with pre-existing knowledge of the game, or of the principal mechanics,
highlighting another aspect which we hope to account for with our study.

Whilst including POV as a factor, the scope of Lim and Byrons study can only be said to
include the player-presence relationship in the form of their measure of perceived “presence”
within the environment. While we do perceive some value in such a measure it does not really
provide any specific insight into the player’s approach or placement of self.

Taking a specific focus on the player-avatar relationship, the “Player-Avatar Identification
Scale” (PAIS) defined by (Li, Liaw and Khoo, 2013), aims to more specifically evaluate to which
degree players’ identify with the avatar in a given game. In their work Dong et al. specifies
“identification” as the player putting themself in the place of a character, feeling as though the
things happening to the character are happening to the player. Dong et al. conceptualized PAI
as measured by the four factors “feelings during play”, “Absorption during play”, “Positive
feelings towards the avatar” and “importance of avatar to one’s self-identity”. The resulting
framework included 23 items presented to participants alongside the following instructions:
“Think about your favourite game and game character. Read each sentence carefully and
choose the answer that best describes you when you are playing video games such as: Maple
Story, World of Warcraft, EverQuest, and The Sims.” (Li, et al., 2013) We recognise the
definition of “identification” as at least being part of what we aim to investigate, but again the
focus specifically lie on the player-avatar relationship, and while the measure does include a
distinct character potentially already being ascribed to the avatar, it is a strictly self-evaluative
measure.

To summarise the key factors which we hope to account for with our own method.
• A specific focus on a visual-avatar, overshadowing other aspects of what we consider an overarching player-presence relationship.
• A disregard for the ludonarrative dynamic of different games, and the significance of a pre-defined character within a narrative context.
• A quantitative approach either relying on biometric measures that are difficult to interpret, or on self-evaluative scales requiring recollection of highly abstract feelings open for self-moderation.

3. Methodology
To answer our research questions we defined a core mechanic taking both narratology and ludology contexts into consideration. We then created a game environment primarily using the game development tool “Unreal Engine 4”13 in which we staged two separate scenarios, making use of our core mechanic to parrot two specific genres, one with a narratology-focus (scenario A) and the other with a ludology-focus (Scenario B). A qualitative user study was then performed in which a total of 13 participants, 6 male and 7 female were divided into two groups each corresponding to one of the two scenarios (Group-A and Group-B). Data was primarily gathered through the use of a semi-structure interviews performed after each individual session. These interviews were then transcribed and analysed in an inductive contents analysis.

3.1 Test Scenarios
A core mechanic was defined with the aim to account for both a narratology- as well as a ludology-context so as to avoid ludonarrative dissonance. This mechanic was implemented in a game environment specifically designed for our study, and two scenarios were staged with the core mechanic either placing an emphasis on the narratology-context (Scenario A) or the ludology-context (Scenario B). Both scenarios placed the participants within the same fictional context as someone who finds themself shipwrecked on a beach, faced with the realisation of having to assure one’s own survival. By creating a specific game environment we aimed to address the issue previously discussed regarding a disregard for context, as others studies tend to rely on pre-existing games. By parroting two specific genres with two different approaches to ludonarrative consistency we also hoped to provide specific insight of value to the industry.

3.2 Participant sample
When considering the amount of participants needed for a qualitative user study, (Kvale & Brinkmann, 2009) stress the importance of keeping your available resources in mind. The first and foremost advantage of including more participants is naturally a larger amount data gathered. This however also means that you will have less time to analyse the individual participants, which might be of greater importance than the sheer amount of data depending on the study in question.

The requirements of our potential participants was that they would at least have an intermediary knowledge and experience of videogames, including being familiar with the first person perspective mode of interaction. Furthermore, we required our participants not being

13 https://www.unrealengine.com/what-is-unreal-engine-4
any older than 30 years of age, since we wanted them to be relatively up to date with the current state of video gaming. This was not regarded a problem however, since we assumed that most of our participants were to be students.

The search for suitable participants began by scouting social media, with a focus on local student-groups. This however did not lead to satisfying results, since people were surprisingly reluctant to volunteer, this combined with our limited time frame lead us to eventually resign to a partial convenience sampling (Yin, 2011), with most participants ending up being students at our local campus. Yin mentions that normally when conducting user studies a convenience sample is not to be preferred, since participants may end up being too varied, having unpredictable backgrounds. We still made the decision to go with this method since time was of essence.

### 3.3 Test Sessions

#### 3.3.1 Location
For the most part the sessions took place in a designated conference room. The room contained sizeable pc-monitors, comfortable chairs, tables as well as adjustable blinds, making it suitable for our needs. When setting up the room we took into consideration the placement of tables and chairs that were to be used, and modeled it to best suit our needs. The computer used to run the scenario was a gaming laptop with external keyboard and mouse connected to it so that we could keep it off to the side.

During the individual sessions both researchers were to be present as silent observers. With the so called Hawthorne effect in mind, referring to the potential effect an observer’s presence might have on participants (Harrell, Gladwin and Hoag, 2013). We made a conscious effort to make our presence as discreet as possible, situating ourselves behind the participant’s at a distance. The reason for our presence was partially in order to observe any noteworthy behavior during the sessions, but also in case of technical difficulties.

On one occasion we had to use another room which did not contain the same equipment. In order to compensate we brought replacements from another location in an effort to keep disparities to a minimum. As a preemptive measure against any disturbances during the sessions, we put up signs to inform others that a study was being conducted.
3.3.2 Briefing the participants
Following the guidelines mentioned by (Kvale & Brinkmann, 2009) about Voluntary Informed Consent. Our participants were informed that all data gathered would be coded, and that they would remain anonymous. They were made aware that audio would be recorded during the session, and that they would be free to speak their mind, or ask for technical assistance, adding that we did not specifically require them to perform any kind of think out loud. Our reasoning behind this was that the participant might be drawn out of the immersion if unnecessary banter took place, however the same could be true if the participants were told to remain silent. Finally, the participants were informed that they were free to abort the session at any time without consequences.

3.3.3 The sessions
Each session began with the participants sitting down on their designated spot while we prepared the audio recording equipment, which was placed on the table in front of the participant. While the participants were playing through the scenario, there came times when they stumbled upon unnatural stops in their progression, such as losing sight on their current objective or getting lost in the game environment. To alleviate this, the observers gave hints to help the participant get back on track. Not every participant required such feedback, and during a majority of the sessions we remained silent. Sessions lasted anywhere in between 8 and 25 minutes depending on the scenario played and the participants’ varying play styles.

Figure 1: Depicting the location where the majority of test sessions took place.
3.4 Interviews

3.4.1 Outlining the interviews
After each scenario, the next step was to be a semi-structured interview. The nature of the questions we wanted answered were very delicate since if the participants were asked directly, their reflection on what we wanted answered might change the answer itself. There are two things to consider regarding this.

Firstly, the fact that the questions we aimed to explore relate to experience and thus we predicted that much of the participants thought process would be sub-consciousness in nature. Meaning that a retrospective reflection upon how they might have felt or thought during a past moment, simply may not be able to provide the insight that we were looking for.

Secondly there is the so called Social desirability bias, referring to a participant’s tendency during interviews to try to adapt one’s answers so as to better fit what is perceived to be expected (Lee & Sargeant, 2011).

Taking these factors into account, we formulated our questions hoping to prompt more spontaneous answers, not as clearly related to the questions we actually wanted answered. In addition, a number of the questions had no direct relevance to the study and were primarily intended to prompt spontaneous answers. This was done following the guidelines to performing what is referred to there as a “qualitative interview” (Yin, 2011). One of the context related questions was “Who were you in this scenario?” Depending on the participant’s answer it could suggest something about how they situated themself in relation to a potential character within the fiction, or perhaps as being a character distinctly different from the self. Another context related question was “What was your role in this scenario?” Here the answers could vary greatly from participant to participant, even though participants might be uncertain answering such questions it could still prove valuable when considered in a larger context.

Perceived age and gender were two specific questions and while the participant was asked outright about such traits, it was not until later in the interview as the intention was to get indirect answers leading up to the specific questions.

3.4.2. Performing the interviews
Only one researcher was present during the interviews as to avoid any unnecessary pressure perceived by the participant. During the interview the interviewer took on a professional, but friendly spirit, hoping that a relaxed environment would make the process smoother, in line with what (Kvale & Brinkmann, 2009) have to say on the matter.

While conducting the interviews, the interviewer had a sheet of paper in front himself with guidelines for the interview. This served as both a way to keep track of topics covered, but also to appear professional (Kvale & Brinkmann, 2009).

After the formal greetings had taken place, the initial questions started of very simple, not wishing to lead the participant to specific conclusions. As the interview went on however, the questions became more focused so as to prompt more specific answers.

After the interview the participant was thanked for participating and offered fika. The interviews varied from 9 to 25 minutes in length, depending on how keen the participants were to share, and the how detailed their answers were. Some participants appeared hesitant to
speak their mind and required more specific lines of inquiry. Others were in contrast very eager to share their experiences both from a narrative and a technical standpoint.

3.5 Analysis
When the audio recordings, observations and interviews had been transcribed and compiled, the next step was performing an analysis of the data gathered. Following the guidelines for a so called “qualitative content analysis” (Lundman & Graneheim, 2004), was performed with an inductive focus. Data gathered from each of the participants was impartially compiled and compared to find patterns. In further detail it can be said that the first step of this analytic method consisted of careful examination of the transcribed data, and summarisation of the most important aspects concerning each individual participant. Next up the summarized data was put together into easy to read diagrams that represented what each of the participants felt about relevant key questions.

3.6 Consequences

3.6.1 Convenience sampling
As mentioned the drawback with a convenience sample is primarily the unpredictability of participants, leading to too much variation amongst participants. However, in our case seeing as the requirements of participants largely fell in line with the kinds of people you can expect to recruit through such a process, this was not thought to be of considerable consequence. This ended up being the case true with the one exception Sofia who as it turned out was largely unfamiliar with modern computer games. This lead to a larger observer involvement during her session as she required considerable assistance get familiarised with the mouse and keyboard interaction. This led us to include a 13th participant (Alice) as we felt it appropriate with our desire gender representation in mind.

3.6.2 Lack of a pilot study
A decision made with our timeframe in mind was to skip an initial pilot study. This meant that we would not be able to revise our interview guidelines, nor would we be able to make any significant changes to the scenarios. While the scenarios generally did not require any modifications, the interview guidelines on the other hand could have benefited, as the general structure of the interview could have benefited from some restructuring, and clarification.

3.6.3 Hawthorne
Leading up to the user study it was clear to us that our presence during the sessions would preferably not be required. We did not however feel that we had been able to ensure that our scenarios would be adequately intuitive, or for that matter that no technical issues would arise during the sessions. Because this we made the decision to be percent as silent observers taking the opportunity to note any interesting behaviour. As it turned out, our presence did have an effect with certain participants expressing so. That said technical issues did arise, and while mostly minor in nature we suspect it right decision.
4. Scenario Design

4.1 Initial work
With our initial focus on gender roles and sex-typing in mind, we aimed to frame our mechanic as either reflecting agentic or communal character traits. However due to time constraints and the technical work that would have been required, we had to limit our scope and instead chose to frame our mechanic with a clearer focus on narratology contra ludology. We thus defined what we call the “thought-mechanic”. The thought-mechanic was imagined as conveying tasks in the context of ludology, through a subjective perspective within the context of narratology. These tasks can be thought of as the quest-objectives in traditional RPGs. Such tasks tend to be portrayed from a strict context of ludology, often disregarding a narrative context by informing the player of things they could not possibly know within the fiction. Our thought mechanic aimed to get around this by portraying objectives to the player as though they were part of a fictional character’s thoughts. The player could for instance be informed of where they might find a required item, by having the characters thoughts conveyed to them. Critically the mechanic could either put an emphasis on a narratology context where a character’s thoughts and perception are used to lead a player through a narrative sequence of events, or to put an emphasis on a ludology context, where a character’s thoughts and perception are used to convey tasks for the player to perform.

With our core mechanic defined, we set out to define a narrative context within which two similar antagonistic obstacle could be introduced, and overcome through two separate implementations of the core mechanic. Settling on a narrative context; we wanted to avoid unintentional or unpredictable iconography which might influence participants’ impressions. We eventually chose the context of the player finding themself marooned on the shore of an unknown landmass, presented with the antagonistic element of finding warmth and shelter before nightfall. The environment was loosely specified as a rocky shoreline leading up to a forest area.

Scenario A, defined as centring on “reactive exploration”, requiring the player to follow different signs of life found through exploration eventually leading them to safety. We aimed to parrot the genre of game sometimes defined as “walking simulator”.

Scenario B, defined as centring on “agentic fulfilment of goals” was decided to require the player to proactively create the means for the character’s survival. This was specifically to be done through the collection of materials later used to craft what the character needed. This scenario was meant to parrot games in the “crafting-survival genre”.

4.2 Environment design work
The process of creating the environment and the two scenarios took place during a two week long process. The software “World machine”14 was used to create a baseline terrain that could later be imported and fine-tuned in Unreal Engine 4. The biome’s southern edge depicted a shallow coastline on which the starting point was intentioned to be, and on the eastern edge a mountain chain was formed. The coast and mountain chain effectively hindered the players from reaching the southern and eastern edges of the landscape, a decision made partially for

14 http://www.world-machine.com/
practical reasons, having to adhere to certain size constraints, but also from a design standpoint seeing as the player would effectively be guided towards the centre of the biome where the forests was intended to be. The northern and western edges of the landscape were technically left open for the player to wander of but the intention was to obscure these visually through height variance in the landscape and the use of foliage. Once a satisfactory landscape had been created a so called height map was generated.

Once imported into the engine the landscape was tweaked further and a water shader was placed along the shore section of the landscape. Next a so called “landscape material”\(^\text{15}\) was created, which combined a number of different materials corresponding to different types of terrain. This landscape material could then be used to partially automate the painting process, using the height variance to assign specific materials.

\[\text{Figure 2: The painted landscape as seen from above in the Unreal Editor.}\]

\(^{15}\) [https://docs.unrealengine.com/latest/INT/Engine/Landscape/Materials/index.html](https://docs.unrealengine.com/latest/INT/Engine/Landscape/Materials/index.html)
Next, trees were added to the forest sections using the foliage tool\textsuperscript{16}. The models used were premade assets created through the commercial software “SpeedTree”\textsuperscript{17} and made available as free samples. Models of rocks were placed along the coast to complement the aesthetics, as well as a way to guide the player during the initial moments of the scenarios. At this point the scene was lit primarily using a sky light, and a sky sphere was implemented allowing for a dynamic time of day depending on the orientation of the skylight. An ambient light was later added so as to make sure that the scene did not become too dark as time passed. Heightfog was also implemented, partially as a means of limiting the view distance of the player, but also for aesthetic purposes. Lastly a post-processing volume was placed, allowing for general colour tweaking, and visual effects such as “god rays” and bloom.

![Figure 3: A sample image of the final environment.](image)

### 4.3 Interaction mechanics

The \textit{thought mechanic} was implemented through the visual scripting language “Blueprints”. The implementation allowed for objects to be created and assigned a 3D model representing it in the environment. These objects could be assigned a series of different “thoughts” in the form of text, a distance within which the player have to be for the thought to trigger, and a Boolean deciding whether the thought contains an extended “monologue”.

\textsuperscript{16} https://docs.unrealengine.com/latest/INT/Engine/Foliage/index.html
\textsuperscript{17} https://www.speedtree.com/
Thoughts appear on screen as coloured boxes with text conveying the thought. These boxes are visually tied to their associated object in screen space, effectively meaning that the player can only see the thought if they are looking in the general direction of the object. Thoughts can be one of two primary types; those that appear whenever the player comes within range of the associated object, and those that only appear if the player currently has the so called thought-mode activated (toggled by pressing the F-key). Once in thought-mode a bocha-filter is activated, blurring the players view, and allowing them to use the mouse to click certain thoughts with associated monologues (Figure 4). Thoughts with monologues can be told apart by their blue colour, other thoughts being yellow.

*Figure 4: In the image thought-mode is active with one thought tied to the sun, and one monologue tied to the sinking ship present on screen.*

The completed scenario A has the player discovering various objects through this thought-mechanic, and puts an emphasis on the character’s reactions and thought process. At key points time is elapse so as to strengthen the impression of the implied antagonistic element. As the sun is about to set the player discovers a house and as the player approach the scenario comes to an end with the screen fading to black.

An additional crafting mechanic was create specifically for scenario B. This mechanic include being able to pick up certain objects in the environment, required to create shelter and a fireplace. These objects become active after the player reach a specific point in Scenario B, and appear with a visual highlight when the player either has “thought-mode” active, or is close enough to pick one of them up (Figure 5).
As part of this mechanic, an additional set of thought boxes were created. Unlike ordinary thoughts, these task-thoughts are not bound to any specific object in the environment, and instead appear stationary, on the right side of the screen, when thought-mode is active. These correspond to the three requirements of “shelter” “warmth” and “food” and can be clicked to read further thoughts relating to the different tasks (Figure 5).

Figure 5: Image depicting a thought associated to a visually highlighted piece of wood, signifying that it is intractable.
Once all required objects of a certain type are collected, these no longer appear highlighted in the environment, and the colour of the task-thought becomes red to indicate a change. As the player collects the necessary items they can gradually start building the shelter and fireplace. These can be crafted at a designated spot previously discovered, and appear as silhouette informing the player of their significance and purpose (Figure 7).

As in scenario A, time elapse at key points, and the sun is just about to set as they player has crafted all that they need, triggering the end of the scenario causing it to fade to black.
5. Results

5.1 Group-A

5.1.1 Julia
When asked to describe her experience Julia immediately began by addressing her presence in the environment and herself as “I”, including herself in the fictional context “Apparently I or my character had been washed-up on a shore...” She immediately followed up by clarifying that she was referring to “my character”. This suggests that she did put herself in the role of the character, but at the same time it also makes it clear that she does not necessarily perceive the “self” as one and the same as a character played by the self.

Julia comments without any specific prompt that she has a tendency of inserting herself in the role of the character, and thus thought of her presence as a character quite similar to herself. She did however comment on character traits of the character which Julia herself did not identify with. In this way Julia and her character gradually become differentiated, as Julia can identify character traits which she does not consider herself to possess.

When later asked who Julia was in the scenario, she elaborated “I was a young girl who found myself on a beach. I did not remember if I had been washed up on the shore or if I had managed to swim...” “I was basically myself”. Going forward Julia referred to her character as “her” when asked specific questions about her character.

When asked if she had ever been in a similar situation either in reality or in a game, Julia at one point stated that it felt relatable in the sense that it triggered allot of the same questions about her character as other narrative games with ambiguous contexts. She later expressed
that the blanks in her understanding in and of themselves lead her to anticipate finding out more.

Julia was quite forthcoming in regards to her thought process, and described the thoughts going through her head as a kind of checklist of tropes, through which she tested the immediate situation she had found herself in. It is clear that Julia has an active interest in narrative design and throughout the scenario, different things reminded her of other works of fiction which lead her to consider what might happen next in the scenario. In this way Julia draws on her knowledge of other works of fiction in an attempt to predict what the fictional circumstance might be, and where it might be heading. In this regard Julia might be said to rely on narrative development and symbolic significance in order to further develop her understanding of her presence, and its character as something more than the “self”.

5.1.2 William

When asked to retell his experience William initially speaks using the “I” pronoun. “I woke up on a beach”. William elaborates that he came to his conclusion about his circumstance on the basis of “the character’s own thoughts” (referring to the thought system). This can be interpreted as William putting himself in the role of a character in the situation, rather than imagining himself as the one in the situation (it was the thoughts of the character, not his own thoughts). Further on however William increasingly uses “you” when describing key events and discoveries “you discover…” which further might suggest a disconnect between the self and the character, considering himself as one amongst others tasked with playing out the same role. William rarely refers to his character using a gender pronoun, and instead refers to them as “my character”. Further on when asked to describe his character in the scenario he does refer to them as “he” but immediately adds that he did not really know which gender to think of them as, and that he had not really thought about it.

William made it quite clear that he felt very much guided throughout the scenario and increasingly describes the course of events in broader terms as it becomes apparent to him that the scenario followed a linear path, quite literally. At one point he asks the rhetorical question “Why should I wander aimlessly when there is a path to follow?” and further on when asked what his role was he comments that he did not feel as though he had any real influence, and could only go thought the motions, so to speak. Of note, William was the only participant who inadvertently missed the abandoned mine part of the scenario, which may have contributed to a feeling of linearity, and to some degree a lack of influence, as it was completely optional. William only managed to miss it because he could see where the road would lead him using focus mode, and thus decided to take the shortest path through the forest.

At a few points William expresses a disconnect to his character’s reactions, and when asked if he could relate in any way (character not specified) he expressed not feeling as if his character really had any defining aspects for him to relate to. At one point William said the following “my character seemed quite hopeful”, noting that his character was quick to imagine a best case scenario when they saw smoke from the campsite. William on the other hand was not so quick to assume the same and expected some form of antagonistic element to be introduced at these points. William in general seemed to base his expectations on previous experiences, and when asked about initial thoughts at the start of the interview, he comments on expecting the scenario to follow a different route more akin to games in the crafting survival genre. As
William progressed it became apparent to him that it was more of a linear experience. These expectations might have had to do with his difficulties to relate as he had expected more agency as a player.

5.1.3 Ellen
It was generally speaking quite difficult to get any concrete answers from Ellen but when asked to recount her experience she uses the 2nd person plural “you”, referring to discoveries and the general circumstances of the situation “You were stranded.” She does however often refer to her own actions using “I”, which might suggest that she perceives a line in between a narrative course of events, she as any player took part of, and her own specific actions “I was only really following the path until I was unable to follow it any longer...” “… was looking for something else you could follow.” Of note Ellen was the only participant to inadvertently wander beyond the bounds of the environment, finding an unintended gap to walk through. Leading up to this moment Ellen did not appear to have given much thought to the thought meant to convey her character’s understanding that the path was indeed blocked.

When asked who Ellen thought she was in the scenario she answered without much deliberation that she had not really thought about it, adding after a moments pause “I was more focused on where I was going.” Ellen was also hesitant when asked if she could describe her character but resolved to comment on the implied reasoning conveyed through the thought mechanic, and concludes that “You” (as in the one playing the game) most likely was a fairly logical individual. Later when asked about specific attributes, Ellen reasoned that you probably were not a child but beyond that she did not get any impression of a specific age. At this point Ellen was reasoning with herself as to what might have told her anything in general about the character. She resolved to put it as the character simply being herself, specifically commenting on not being able to tell anything about her characters appearance “I got the feeling that it was me walking there.”

5.1.4 Hugo
Hugo stood out as one of the more technically minded participants, and described initially exploring just how close the rules of the environment were to the rules of reality. Hugo on numerous occasion made references to games he was reminded of, first and foremost “Rust” which appeared to have influenced his impression quite a bit. Hugo at one point comments “I am not very good at feeling immersed at times when there are aspects like these” referring to physics interactions and other technical aspects which can be explored. Providing further context to his thought process.

Hugo appeared to have no real reservation stopping him from using the “I” pronoun when retelling his experience, and when initially asked to recount of the course of events he started off with “I woke up on a beach...” Inserting himself into the role of the character. That said when later asked to describe his character, Hugo pretty much immediately answered that the character was not in fact Hugo himself. Asked to elaborate, he described being uncertain as to why he felt that way, specifically mentioning how even though he perceived the lack of information, to generally signal that he was supposed to ascribe himself onto the character, he still did not feel that he could do that. He concluded that he could not really imagine himself
in the same situation. It is interesting to note that Hugo had constructed a quite colourful image of his character, imagining a naked man in his 30s washed up on a beach.

This might initially be taken to suggest that Hugo has certain requirements of a games narrative setting and presentation that needs to be meet if he is to feel as if his presence is in actuality a manifestation of his own self. Describing the events from his own perspective might however also suggest that he still acts based of the character he has constructed. Hugo went on to talk about how he felt this way about most games “I do not think along the lines of “I am Mario” rather I think “that is Mario over there and I am in control of him.” Of note Hugo uses “Super Mario” to exemplify his thought process and does not seem to make much of whether a game is presented from a first person POV like the scenario, or a third person POV like Super Mario.

5.1.5 Oliver

Oliver stood out as one of the participants who put a lot of thought on the narrative exploration aspect of the scenario and described feeling very much compelled by exploring an environment, discovering different thing, furthering a narrative.

When asked to retell the sequence of events Oliver exclusively used the “I” pronoun in his retelling, putting himself in the role of the character. Furthermore he pieced together a back story from his understanding of the situation, putting himself in the centre of this retelling as well. There are a couple of instances in his retelling when Oliver refer to not being allowed to do certain things, “I managed to get up to an old mine entrance, which I was not allowed to enter… Even though I wanted to.” Oliver was not the only participant who attempted to enter the mine, and as with most others this was likely because the obstacles meant to block the entrance, appearing low enough to be climbed over. Describing the situation as “not being allowed to” might suggest a moment of disconnect in which the intentions of the creator are made apparent, informing the player of what is or is not allowed. While it might be considered obvious it is still interesting how Oliver recounts for this moment and he does comment on these aspects detracting from the explorative feel of the game.

Oliver only addressed his characters gender when asked who Oliver was in the scenario. He did not appear to have given it much thought up until this point, and concludes that he assumed his character to be “some average joe”, adding that he could not really tell whether they was a man or a woman. He later elaborated that not having received any hints, he just assumed them to be male like himself. Based upon this Oliver would appear to have simply applied himself onto his character, not receiving anything hinting otherwise. Oliver does however ascribe his character the age of 15 – 30 in hindsight, considering the written languish presented via the thought-mechanic.

Oliver like other participants does describe having expected an antagonistic element of some sort, and considering that Oliver makes references to games like “Skyrim” this might be considered as being based upon tropes, and common themes, playing a part in his expectations.

As a side note Oliver was one of the few participants who expressed a certain lack in regards to our testing environment (meaning the physical space), commenting that a pair of headphones would have improved his feeling of immersion.
5.1.6 Emma

Emma stood out as one of the few participants who remarked on anything when asked whether she had felt affected by the test environment (the physical space), or by our presence as observers. She admitted to having held herself back in regards to her usual tendencies to explore similar game environments, and described how she usually finds herself split between following a perceived path through a narrative, or simply wandering of in a direction that feels right in the moment “At the same time as I wanted to explore to a greater extent than I ended up doing, I felt it best to stick to the prompts provided through the thought boxes.” Furthermore when asked about any negative feelings or reactions Emma answered that it was a bit unclear just how far the world stretched and that she felt a bit deterred from wandering of the beaten path not knowing if she would just find another invisible wall. Pursuing this line of inquiry Emma at one point stated that it is hard to get a feeling for a game environment like the one in our scenario from such a short amount of time spent in it “It is not the same thing as having spent something like 50 hours in a game.” Generally speaking Emma seemed to have experienced some unease exploring an environment in which she had yet to fully grasp the rules and principles, leading her to conflicting thoughts as to what was justified player behaviour (I know that I can wander of the beaten path, but is there any real reason to do so?).

When asked about initial thoughts and impressions Emma without any further prompts addressed her role as the player in relation to her presence “Halfway through I found myself thinking “if these boxes are supposed to represent thoughts, then whose thoughts are they?” not my own thoughts... Or I guess they are my thoughts considering that I can see them.” Emma was the only participant to ever address her own thought process in relation the thought mechanic, and without any particular prompt at that, perhaps suggesting something about the way she approaches narrative games in general.

Emma did not go into much detail when asked to describe the scenario but she did not hesitate to situate herself as the character using the “I” pronoun. Of note Emma did not immediately understand the thought mechanic and therefore never read about swimming to shore. It was not until during the interview that she was informed of this but lacking this bit of narrative input Emma had imagined her character as lost and seeing the sinking boat in the distance she imagined herself perhaps as a Norse fisherman (Not necessarily meant to imply a gender). When later asked about specific traits, she reasoned that her character could probably be anywhere in-between 15 – 40 years of age. In hindsight she reasoned that her character probably was male but added that she did not really think about this during the session and that she based it upon stereotypes within her backstory.

When asked about her characters implied reasoning and reactions throughout the scenario Emma described how she in hindsight found them reasonable, being able to relate to her own childhood much of which was spent in an environment not entirely unlike the one in the scenario. However, despite being able to relate in this regard, Emma described not necessarily being able to let go of the context of playing a game thus feeling a stronger connection to her own curiosity than she did to her character and their apparent needs.
5.2 Group-B

5.2.1 Julia

Julia was the only participant who noted herself as not playing all that many video games and she was unfamiliar with the mouse and keyboard mode of interaction. When asked about the test environment (the physical space) she answered that it had not bothered her and added that it was a good thing that we were there to provide support as it did take her some time until she felt comfortable navigating the environment.

When asked to retell her experience Julia describes her own actions using the “I” pronoun “I came across a tree” but when referring to narrative circumstance or the goals she instead uses the “you” pronoun “You are shipwrecked”. When referring to the thought mechanic she often ties it to the key command “you could find objects by pressing the F-key.” It is dubious whether or not this can be said to suggest anything about her own positioning in relation to her presence and/or character considering her unfamiliarity with the mode of interaction, but at one point she does comment that she did feel immersed in the environment.

When asked about who Julia was in the scenario she was uncertain about anything beyond her characters apparent circumstance, and she concluded that she did not feel as though she was given much information in that regard. When later asked specifically about her character she elaborated that she had not really thought much about it seeing as she had not been given any visual hints to her character’s appearance. When asked about gender she reasoned that her character probably was male since it is the norm in videogames.

When later informed about the purpose of our study she commented that she did not considered her character to be a reflection of her own self, adding that she did not really think that way regardless of perspective.

5.2.2 Felix

Felix was likely the most technical minded out of all participants and often interpreted questions from this perspective. When asked about his initial thoughts he immediately remarked about parts of the graphical interface which had him a bit confused, specifically mentioning how it was not conveyed just how many of the different objects he needed to collect. On this note Felix was seemingly eager to give feedback on the scenario design in and of itself, and in doing so he went into detail both elaborating on his thought process and general impression of the narrative framing, as well as his thoughts about certain technical aspects. Despite commenting on details such as a lack of auditory feedback and what he found to be a somewhat overwhelming introduction to the thought mechanic, he did not appear to consider these aspect as significantly detractors from the credibility of the scenario.

When asked to retell his experience Felix quite readily conveyed his characters circumstance using the “I” pronoun “I was shipwrecked” elaborating on the blanks with what he considered to be plausible details “I got the impression that I had managed to crawl my way to the shore.” Felix continued his retelling, notably referring to the quest objectives as part of his own thoughts “... I realise that I need to survive and in order to do so I need warmth, shelter and food.”

Of note, when previously asked about the test environment and whether our presence affected him, Felix did answer that he probably would not have been so quick to seek help in
regards to his understanding of the technical aspects of the scenario. Considering Felix’s technical perspective this might be construed to the impression of our study being one of evaluating a game concept, something he later commented on.

When asked to describe who Felix had been in the scenario, he describes how he generally thought of the character as male but continues to say that he did not know whether this was simply because he himself identifies as male, or if he simply assumed it to be the case on account of norms in video games. Beyond this Felix reasoned that his character might have been in his 30s. Later when asked for specifics about his character Felix added that he had gotten the impression of his character perhaps being a businessman considering how the ship seemed quite large ruling out some other possibilities. Of note Felix missed the thought informing the player of the vacation context. Still it might suggest something about Felix process creating an image of his character.

5.2.3 Adam
When first asked to retell his experience Adam began by recounting a plausible backstory using the “I” pronoun explaining why and how he had ended up on the beach where the scenario begins. Throughout the interview Adam continues to refer to his actions and thoughts using the “I” pronoun. Of note, Adam referred to his fictional characters presented goals as his own even within the context of not understanding certain aspects of the graphical interface. He specifically states that he was not sure how many mushrooms he needed to collect in order to satiate his hunger. Adam only notably deviated to using “you” when attempting to provide context for his reasoning or when speaking about his understanding of mechanics or visual ques. This can be interpreted as Adam considering the character an extension of himself and not necessarily a predetermined identity for him to simply act out.

When asked about who Adam was in the scenario he answered with general uncertainty but eventually stated that since Adam identifies as a male himself, he also thought of his character as male, but that he did not really feel that the character in the scenario had to be of any particular gender. Adam later describes how he thought of his character as a variation of himself, perhaps suggesting that Adam applies himself onto a character when he does not perceive any pre-existing character for him to play the part of. Adam did provide some further details and attributes but he rationalised most of these in hindsight through what he perceived as implied physical capabilities such as not feeling confident about swimming to the shore. In general Adam would appear to use himself as a template when coming to an understanding of his character. He sticks to this understanding, not really actively thinking about unless something specific is suggested.

5.2.4 Tuva
When asked if she had felt affected by the study context or our presence during the session, Tuva answered “Maybe a bit weird to have someone sit behind you whilst you play a game… But you usually play video-games with other people either way.” Perhaps providing a context to the way she approaches video-games. She also noted that she did experience some initial pressure not knowing if she would understand what she was supposed to do which otherwise might have led her to play in a somewhat more exploratory fashion. Interestingly Tuva noted that she probably would have spoken more had she been alone.
When asked to retell her experience throughout the event, Tuva exclusively used the first singular pronoun “I” when referring to herself in the scenario. Of particular note, Tuva recounts for her characters backstory based upon the information she had been given via the initial thought-boxes, inserting herself in the context using the “I” pronoun “The game starts on a beach and I get to know that I had just been shipwrecked, and I was supposed to have been on a vacation.” When later asked if she could relate to being in a similar situation, Tuva agrees and comments on her characters priorities as conveyed thought the thought mechanic, referring to her character a generally logical. Interestingly she then says the following referring to how you could click on the quest thoughts for further information “The character gave me the hint that perhaps I would be able to find kindling in the woods.” Even though she recounted for her experience situating herself as the one in the situation, with this Tuva makes it sound as if she regards her character and herself as separate in the moment.

On another note when asked about her initial thoughts and/or feelings, Tuva expressed having been curious as to what events might unfold, “Am I to be killed now by some scary monster?” basing her anticipation on tropes which might fit her interpretation of the situation, clearly approaching the scenario from the context of a game, basing her expectations on media she was reminded of.

When specifically asked about her characters gender Tuva quite readily answered that she assumed her character to be male, adding after a short moment as if consulting herself that this probably was only because “it is almost always men in videogames...” But stating that there really was nothing hinting at it either way. Interestingly when asked further about her reasoning Tuva at one point states that usually if the player character is female then it is made obvious through visuals queue. Having said this she also added that while in the moment she did not think of herself as a man again hinting at perspective including not only herself but also the character as she has come to understand it. Towards the end she also commented that in a game played from a first person POV (like the scenarios in our tests) gender does not really matter seeing as the player is the one represented in the world.

5.2.5 Alice
When asked to retell her experience, Alice situating herself as in the centre of the narrative context using the “I” pronoun. When later asked about what she felt her “role” had been in the scenario, she referred to the narrative goal to survive as her own objective “I suppose, to help myself survive.” This might interpreted as Alice placing herself as the character in the scenario, not necessarily perceiving a pre-existing character for her to take the role of. That said, when initially asked if she had felt affected in any way by our presence or the general context of partaking in a study, she expressed that she experienced a certain pressure, fearing that she might not fully understand what she was supposed to do. Adding after a moment’s pause that “You naturally question yourself when people are watching.”

Alice mentions that throughout the scenario she felt lonely and that the world of the scenario felt empty. “It felt like something else should have happened...like something appearing.” At one point she comments on finding the mine and how it got her thinking about where she actually was and what might have been there once. Adding that it made her feel a bit excited about it perhaps developing into a horror game. This hints at Alice as being some who is drawn to the narrative aspects of games and at a later point she comments on generally
preferring video games that are more about the world you are put in, and the narrative that unfolds within it. Specifically mentioning the game “Life is Strange”\textsuperscript{18} as one of her favourites.

When specifically asked about the gender of her character, Alice replied that since she identifies as a female herself, it only felt natural to assume her character to be the same.

\textbf{5.2.6 Kajsa}

When asked to recount her experience, Kajsa did not go into very much detail but she did recount the narrative framing situating herself as a player “I got the impression that you had been stranded in one way or another.” When previously asked if she had felt affected by our presence or the context of partaking in a study, Kajsa did not express having been particularly bothered. She did however comment on how she had occasionally asked a few questions during the session, adding that she probably would have been a bit more diligent in exploring the environment had we not been there to provide hints. On this note Kajsa did have some issues orientating herself in the environment and when asked if she had experienced anything negative (open for interpretation) she answered that she had been a bit confused about certain landmarks. This lack of visual clarity might have had to with why Kajsa had difficulties providing further details, on account of distracting her from the narrative premise.

When asked if she could say anything about who she had been in the scenario Kajsa answered concisely after a moment’s thought “No, not really. It felt very ambiguous. I did not feel a connection... It mostly just felt like me since I did not get to see anything suggesting otherwise.” She did however elaborate on this when later asked for specifics about her character adding that she imagined them to be a man. When asked further she described how she had come to the conclusion based of the survival aspect of the scenario, stating that games with such themes usually revolve around male protagonists.

\textbf{5.2.7 Erik}

When asked to describe the character he had been controlling in the scenario, Erik analysed the surroundings in the game and draw the conclusion that he must have been “a high class citizen since the person could afford to travel in such a luxurious ship”. This could point to that Erik reads deeply into things other participants might not pay much attention to and made assumptions based on his observations within the context of the game.

Building upon the same reasoning, Erik explained that the character was probably aged between 30 and 40 since “I felt that he was a person of higher class and he did not feel like the child of a rich parent so he must have had the time to climb the ladder himself, while at the same time not being old enough to not make the swim to the shore.”

B7 referred to the character using the pronoun “he” on a few occasions following being asked the question if he could lift any specific characteristics that he had noticed about the character. His explanation to this was that “I feel like the reason that I refer to the character as a he is because that the game is viewed from the first person \textit{POV}, I am the one playing the game, which means the character shares my gender.”

\textsuperscript{18} Strange
6. Analysis

The perhaps most obvious pattern visible in our results is the majority impression of the character in the scenarios being male. 7 out of the total 13 expressed this opinion when asked to specifically reflect on their character attributes in retrospect. 5 out of these 7 were notably females and with the exception of Emma all belong to Group-B. These five female participants all at some point referred to tropes and norms in video games as having influence their conclusions. Of note this line of questioning specifically asked the participants to consider the in retrospect suggested character which does not necessarily mean that they considered these thing during the session, further suggested by the trend of general uncertainty when asked to describe their character. Some of these participants could confirm that they had not really considered a character of which they might have been in the role of during the actual session raising further doubts as to whether Scenario B in actuality gave a different impression in regards to gender. That said it can still be said to highlight how participants in Group-B did not perceive as strong of an impression as those in Group-A. Something which would align with our expectations as Scenario B was intended to be more ambiguous than Scenario A in regards to the suggested narrative.

While the trend of uncertainty when asked about a specific character is not exclusive to Group-B it is generally more apparent that participants in Group-A had given thought to whom their character could have been during the actual sessions, and not just in retrospect. Emma who stands out as the only female participant from Group-A to perceive her character as male was also the only one with this impression with the exception of Tuva to comment on what they perceived to be a distinct characters portrayed in the scenarios yet separate from themselves, something which hints at a general contrast between the two groups.

We perceive four types of player-character relationships amongst the participants.

- The “self as the player” referring to participants who regard their role as one amongst other players tasked with performing a set of predefined tasks, or going through a linear course of events.
- The “self as the character” referring to participants who regard their role as being within a narrative context, effectively ascribing their presence a character that reflect their own selves, acting based of how they themselves would.
- The “Self as a distinct character” referring to those who not only perceive themselves as being within the narrative context but as a distinct character either entirely belonging to the narrative context, or otherwise derived but made distinct by through a narrative course of events.
- The “Self as a player of a character” referring to participants who consider their role as a mix, approaching the scenario as a player but regarding their presence as possessing a character distinct from the self.

With the exception of Tuva, all participants in Group-B either belong to the category “self as the player” or “self as the character” and with only two participants from Group-A falling into these two categories a clear pattern can be seen. Common for these two categories is a perceived ambiguity or lack of impression expressed by participants in Group-B, with both
Sofia and Kajsa commenting on how the lack of a visual avatar left them uncertain, not really being able to perceive anything hinting at a character of which they were in the role of.

At this stage it would appear that participants either felt prompted to ascribe their presence a character reflecting their own selves as with Adam and Alice, or to partially disregard the narrative framing, instead focusing on the explicit tasks or suggested course of action as seen with Sofia, Kajsa and Erik.

Ellen who was the only participant from Group-A to seem to have taken the “self as the player” approach, was like Sofia and Kajsa seemingly uncertain as to her character and also commented on not being able to visually perceive her character. This reliance on visual information definitely stands out amongst these three participants as it leads them to a similar approach, and while other participants remarked on not receiving any visual ques they do not appear to entirely rely on the visual information forming an understanding of their character.

Of particular note Adam from Group-B stand out as the lack of visual information lead him to assume that he was supposed to ascribe his presence a character reflecting his own self. Felix and Alice also appear to have taken such an approach and together with Adam they make it quite clear that the lesser focus on traditional narrative ques in Scenario B is not necessarily preventing a narrative involvement.

Shifting focus to Group-A, and to the two categories “Self as a distinct character” and “Self as a player of a character”. These two categories are largely the same and participants belonging to them both seem to acknowledge the existence of a character within the narrative context. Differentiating them is the nature of this character and the pretext participants approach the narrative under. Julia and Emma stand out as the only participants who actually seemed to have approached the scenario from a perspective situating the “Self as a distinct character”. They both expressed approaching the narrative, gathering initial impressions of whom their character might be and then filling in blanks with parts of their own self.

The more common trend amongst Group-A seem to be an approach situating the “Self as a player of a character”, distinguishing one’s own thought process from the thought process of one’s character within the narrative context. William and Hugo both of whom made this distinction, expressed a certain inability to relate to their character. William commented on not being able to relate to his character’s reactions and Hugo commented on simply not being able to imagine himself in the same situation. While William and Hugo both would appear to exemplify a form of negative disconnect keeping them from perhaps approaching the scenario in a manner more akin to Julia and Emma, Tuva on the other hand, did not appear to have experienced a disconnect in a negative sense. Tuva instead expressed what seemed to be a perceived exchange of information between her and her character, interpreting the goals expressed as thoughts as her character giving her tips.

Looking at the larger picture it would appear that participants in Group-A perceive a stronger impression of a character and thus felt more inclined to approached the scenario from a narrative perspective. While this does highlight the different effect the two scenarios had on participants it does not appear to be as simple as participants in Group-A being able to approach the narrative whilst participants in Group-B were not. The difference would appear to instead lie in the perspective from which a narrative is approachable, with participants instead feeling inclined to apply their own character within the narrative context.
7. Conclusion

To answer our first line of questioning.

- How does the player identify with their digital representation in a lifelike virtual environment with a narrative context?

The participants in our study seem to identify or situate the self in one of 4 ways:

- The “Self as the player” referring to those who regard their role as one amongst other players tasked with performing a set of predefined tasks, or going through a linear course of events. Common amongst these players is a general sense of detachment from a traditional narrative context, instead placing a focus on clear tasks and/or course of action perceived from the context of playing a game.

- The “Self as the character” referring to those who regard their role as being within a narrative context, effectively ascribing their presence a character that reflect the self. Common amongst these players is a reactive type of play in which narrative circumstance is met and acted upon based of the player’s own thoughts, values and impressions.

- The “Self as a distinct character” referring to those who regard their role as being a distinct character within a narrative context, gradually forming an impression of their character as they act from their narrative circumstance. Common amongst these players is a reflective type of play in which the player creates an understanding for their character, aiming to act from the perspective of the character.

- The “Self as a player of a character” referring to those who regard their role as a player while still recognising their presence as possessing a character distinct from the self. Common amongst these players is varied type of play in which an understanding for a distinct character within the narrative context is made but not always considered in the furthering of the narrative.

To answer our second line of questioning.

- How can game mechanics be implemented to influence the player’s relationship to their presence in the environment?
  - How does mechanics specifically based on linear exploration contra agentic fulfilment of goals affect the player’s ability to identify?

A lack of visual feedback informing the player of their presence’s appearance does indeed limit the player’s ability to perceive a distinct character within a narrative context. However by combining the traditionally objectives explicitly conveyed to the player, with an implied line of thought or subjective perspective the player can be given an impression akin to what might be given through a visual representation.

By placing a stronger focus on the narrative aspects of such a mechanic it is possible to prompt the player to approach a narrative either placing the “Self as a distinct character” or the “Self as a player of a character”. Depending on the type of player the approach might however vary as players unable to perceive or relate to an implied character may not feel compelled to engage in a narrative context.
By instead placing a stronger focus on the ludology it is possible to prompt the player to approach a narrative placing the “Self as the character” within the narrative context. Depending on the type of player the approach might however shift as players may not feel inclined to approach a game from a narrative context lacking the clear presence of a distinct character. These players might instead feel compelled to perceiving the “Self as the player”.

7. Discussion

7.1 Scope

Looking back at our initial intentions and focus going into this study, a lot of things can be said to have been done differently than initially intended. Our initial intention to focus more specifically on the gender aspects of player-presence identification was of a considerably larger scope than the final aspects actually explored in our study. At the same time we maintain that the lack of visual input explored in our final study is and always was at the heart of the field which we wanted to shine a light on. Our substitute focus which we have expressed as “reactive exploration contra agentic fulfilment of goals” instead meant that we could investigate the two somewhat opposing trends increasingly gaining ground within the industry, in the form of “crafting survival” and “walking simulator”.

The subject of ludology vs narratology is a highly debated one amongst players as well as amongst developers. Through our study we have been able to explore ways of taking both of these perspectives into consideration for the purpose of avoiding the conflict coined as lodunnarrative dissonance.

While the scope of our study in this sense is in no way a thorough one, we do believe that our study can provide some insight in how traditional objectives and ludological mechanics can be combined with a narrative context in mind. The mechanic specifically explored in our scenarios demonstrates how goals within a ludological context can be portrayed through a subjective perspective within a narrative context. Our two scenarios also demonstrates how such a mechanic can emphasize either the narratology as in Scenario A, or the ludology as in Scenario B.

7.2 Preparations

7.2.1 Sampling method

Even though we were aware that it would not be smooth sailing gathering participants for our user study, it still proved more challenging than we imagined. We thought that by reaching out through social media we could gather at least 12 suitable participants. In reality, only five participants were not reached through what we consider a partial convenience sample. There may be several discernible reasons behind this, one of them could be that people simply are not that willing to spend approximately 40 minutes of their time to help strangers in their research without compensation. Perhaps people were just not willing to participate in being observed and interviewed since they felt it would make them uncomfortable. Perhaps we were simply not convincing enough when it came write appealing messages on social medias. Another reason may be that the average person is not very interested in our subject and the
fact that we could not go into detail about what the study entailed, since this could according to the Social desirability bias change the potential answers.

7.2.2 Interview guidelines
Designing the interviews for our study was a very interesting and at the same time challenging task since there were many things to have in mind while doing so. Since the subject of our study is intangible and not deeply explored, we had to make some assumptions in regards to what the participants would tell us when faced with certain questions. Performing the interviews was also challenging. Regardless, when seen as a whole, the interviews generated good amounts of what we consider relevant data from each participant and we feel satisfied with our results in this area.

7.3 Practical execution

7.3.2 Sessions
During our observation we tried to make as little sound as possible since we soon noted that every time happened to make a noise, such as when scribbling notes and the rustling of paper, seemed to provoke a subtle reaction from the participant. While the amount of data gathered from taking notes was marginal, we did learn a lot about the participants from watching them in their interaction with the world we had designed. Regardless we chose to take into account that this probably affected all participants in some way when performing the analysis.

7.3.3 Analysis
It was very interesting when a picture started forming through the analysis of the data gathered from our participants on how there seems to exist certain archetypes on relation to player presence in video games. Through our work we tried to find common denominators between the participants that shared the same archetype.
8. References


