

# Master Degree Project



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**EXPLORING UNDERREPRESENTED NARRATIVES**  
Social Anxiety in Games

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## Abstract

This research focuses on pushing forward the understanding of mental disorders portrayals in games, more specifically social anxiety, which still lies as a marginalized topic in this medium. In order to understand honest manifestations of social anxiety in games, the first step is to conduct a close reading of games made by people who suffer from this mental disorder. A collection of five indie games, all of autobiographical nature and featuring social anxiety as an important part of their text, was put together for this analysis. This was done embracing the need to address the representational complexity, in order to tap into such a nuanced and elusive topic as social anxiety, not to identify rights or wrongs, but to engage in a discussion of how experiences are represented in games by people directly affected by this mental disorder. Individual experiences also contribute to expand interpretations and to identify additional keys of social anxiety representation. This is done by reaching informants, people living with a comorbid mental illnesses or disorders, that face or had faced social anxiety, and assess their perspectives through an experiential workshop. This work intends to further explore the practice of game design as mediator of experiences, contributing to both deepen the knowledge of game design and explore nuances of individual experiences present in autobiographical games and how this relates to perspectives of other people living with social anxiety. By combining the games and informants perspectives it is possible to structure a debate about game design patterns based on the findings of the game analysis and further elaborated with the nuanced perceptions gathered from informants. The knowledge acquired through this work is a step towards understanding of how games can represent, in an honest and non-stereotypical way, mental disorders, starting with social anxiety and, hopefully, contribute to spark other studies to broaden the spectrum of how the complexity of adverse mental conditions can be more respectfully addressed in games.

**Keywords:** game design, game design patterns, social anxiety, mental disorders, representation, personal experiences

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# 1 Introduction

Throughout many years working as a game designer, I have shared office with many people with different levels of social struggles. Learning about people in my surroundings and knowing their struggles is a personal motivation and a kind of connection I like to develop with people close to me. The embryo of this project is an empiric experience I had on trying to take a co-worker's perspective on social situations, after he shared the information of a recent Asperger's diagnosis. He also suffered from social anxiety and the conversation we had took place around trying to understand how he felt during social situations. Then, after talking to him, I designed a game prototype with a personal approach intended to represent a condition I don't live, neither was familiar with.

When the prototype was ready he was the first person to try it and he was completely unaware of what the experience was going to be about. While interacting with the system he thought out loud "What is this magic that you did? This feels just like real life!". At the same time this likeness caused him distress, he was compelled to understand the system better and try to figure out patterns and solutions.

However conducted without scientific rigor, relying only on experience in the game design field and previous theoretical development on translating concepts into game systems, we had our share of an empathic connection using the game as a mediator for dialog when playtesting it. This hinted for the need of further studies improving the game design knowledge, on this specific field, to make the mediation of others' experiences into a game more conscious and respectful process.

This research focuses on pushing forward the understanding of mental disorders portrayals in games, more specifically social anxiety, which still lies as a marginalized topic in this medium. Researchers and practitioners have identified lack of nuance and appropriate consideration for representations of mental illness in various forms of media, including video games. Shapiro and Rotter (2016) argue that film, television programs, and video games often portray mental illness associated with stereotypical violent, criminal and dangerous behaviors. *Depression Quest* (*The Quinnsspiracy*, 2013) co-writer Patrick Lindsey (2014) writes that, despite not being hard to find games depicting mental illness, especially in the horror genre, the conditions are often treated as a kind of insanity, showing lack of empathy and contributing to dehumanizing those characters.

The work of Sabine Harrer (Harrer and Schoenau-Fog, 2015) shows another range of representational deficit of bereaving in games, which is a delicate and nuanced subject, and aims to close this gap by assessing personal experiences as a means to achieve respectful portrayals of a complex issue. Thus the potential prosocial benefit from a respectful representation of a mental condition makes for a suitable choice.

## 2 Background

Being a part in the area of Games in a general sense and part in the area of Serious Games, there is the Empathy Games area. Empathy Games could be roughly described as a game made with the intent to use game immersion to promote incorporating the roles of other people (Belman and Flanagan, 2009). It is made aware, however, of potential backlashes of games being regarded as empathy games, as Anna Anthropy on her personal blog (Anthropy, 2015) criticizes the harms of shallow engagement and consequences those could bring, sharing some experiences she faced with *Dys4ia* (Auntie Pixelante, 2012).

More specifically, within the area of Empathy Games, the intention is to explore the personal approach of autobiographical games, which is a kind of game that has little documentation, thus being a gap this project also intends to cover. It is important to note, however, that the intention with this project is not to meant to have a personal approach from my own perspective. Perspectives from informants who suffer from social anxiety and the “voice” of autobiographical games about social anxiety are the ones to be explored throughout this work.

Considering prosocial and therapeutic uses of games (Sanchez, et al, 2017; Wilkinson, Ang and Goh, 2008), having a deeper knowledge on how to better convey social anxiety in a game can be of great value for the Serious Games field.

Little has been published about this specific approach of game development. The work of Sabine Harrer (Harrer & Schoenau-Fog, 2015) can be considered related, although focused on mediating experiences of grief in a game, and a huge inspiration for pursuing the goals of this project. It can be considered that what this work intends to do embraces the proposal of shifting the practice of game design to act as mediator of other’s experiences, as suggested by Harrer and Schoenau-Fog (2015).

In this regard, this project intends to further explore this practice, contributing to deepen the knowledge of game design by analyzing how social anxiety is conveyed in autobiographical games and how this relates to the perspectives of other people living with social anxiety. The knowledge acquired through this work is a step towards understanding of how games can represent, in an honest and non-stereotypical way, mental disorders, starting with social anxiety and, hopefully, contribute to spark other studies to broaden the spectrum of how the nuances of adverse mental conditions can be more respectfully addressed in games.

### 2.1 Key Concepts

This section explains in detail the concepts that are the core of the project: *social anxiety*, *autobiographical games* and *game design patterns*. Social anxiety is the very nature of what is being explored throughout this work. On the other hand, autobiographical games becomes relevant once this work is also intended to explore personal narratives and better understand the nuanced perception of individuals, whereas game design patterns provide a structured understanding of game design elements that relate to these narratives. Game design patterns are also a key element for discussing the perspective acquired through the game analysis in correlation to the findings from the informants personal narratives.

### 2.1.1 Social Anxiety

Social anxiety disorder and generalized anxiety disorder share many common characteristics. It is possible to consider social anxiety as parented by general anxiety, since the former inherit manifestations from the latter. According to the definition of the disorder by the Social Anxiety Association (2017), social anxiety is the “Fear of social situations that involve interaction with other people. You could say social anxiety is the fear and anxiety of being negatively judged and evaluated by other people.”, placing anxiety and fear as prominent characteristic related to judgement and negative evaluation from others.

As a pervasive disorder, this fear and anxiety are bound to affect many areas of a person’s life and also have physical manifestations. The anxiety symptoms from the disorder can trigger physical changes, such as increased blood pressure, sweating, trembling, dizziness and rapid heartbeat, as it is described in the Encyclopedia of Psychology (Kazdin, 2000) from the American Psychological Association.

According to Kleinknecht et al. (1997), the essential feature of social anxiety (social phobia) is related to fear social or performance situations, with precedents that other people might judge or consider the person different. They also elaborate on the concept of Taijin Kyofusho (TKS), a distinctive phobia in Japan resembling social anxiety, which means symptoms of fear in situations of face-to-face contact. TKS is “an obsession of shame, manifest by morbid fear of embarrassing or offending others” with “inappropriate behavior or offensive appearance” (Kleinknecht et al., 1997) by physical appearance, such as presenting a deformity, bodily manifestations considered improper by the person, such as blushing, blemish, emitting odors, or social misconducts, such as staring inappropriately or facial expressions deemed improper.

Looking back at interchangeable symptoms with anxiety and social anxiety become apparent when further examining definitions of social anxiety. Definitions of social anxiety from the Mayo Clinic (2017) include “Fear, anxiety and avoidance that interfere with daily routine, work, school or other activities” that can start to develop during adolescence and, in certain cases, the beginning can start in early childhood or in adult ages. The avoidance from people suffering from social anxiety is likely related to symptoms of anxiety, which causes individuals to avoid situations out of worry, along with intrusive thoughts and concerns (Kazdin, 2000).

While avoiding situations that are anxiety inducing might alleviate the distress caused by social anxiety, it is not a permanent solution as the disorder tends to persist, requiring treatment to achieve long term positive results (Mayo Clinic, 2017). Also, according to Mayo Clinic description, symptoms can change over time. Adverse situations such as intense stress or demands can trigger social anxiety outbursts.

A compilation (Table 1) of common symptoms, ranging from persistent emotional and behavioral symptoms, physical manifestations and some examples of common daily social situations that tend to be avoided by people suffering from social anxiety disorder can be seen in the table below:

**Table 1** Summary of social anxiety symptoms from Mayo Clinic (2017)

Category	Symptoms
<b>Emotional and behavioral symptoms</b>	Fear of situations in which you may be judged
	Worrying about embarrassing or humiliating yourself
	Intense fear of interacting or talking with strangers
	Fear of physical symptoms that may cause you embarrassment, such as blushing, sweating, trembling or having a shaky voice
	Fear that others will notice that you look anxious
	Avoiding doing things or speaking to people out of fear of embarrassment
	Avoiding situations where you might be the center of attention
	Having anxiety in anticipation of a feared activity or event
	Enduring a social situation with intense fear or anxiety
	Spending time after a social situation analyzing your performance and identifying flaws in your interactions
	Expecting the worst possible consequences from a negative experience during a social situation
	<b>Physical symptoms</b>
Trouble catching your breath	
Dizziness or lightheadedness	
Upset stomach or nausea	
Fast heartbeat	
Muscle tension	
Trembling	
Blushing	
Sweating	

<b>Avoiding common social situations</b>	Interacting with unfamiliar people or strangers
	Attending parties or social gatherings
	Entering a room with people already seated
	Returning items to a store
	Using a public restroom
	Eating in front of others
	Going to work or school
	Starting conversations
	Making eye contact
	Dating

As it can be perceived in many of the definitions presented, self-consciousness is a commonly mentioned factor for social anxiety. Takishima-Lacasa et al. (2014), in their study of self-consciousness and social anxiety in youth, present three dimensions for the self-self-consciousness model: Private Self-Consciousness (Private SC), Public Self-Consciousness (Public SC), and Social Anxiety. Private SC is related to personal aspects of self, such as trying to figure personal feelings and beliefs, whereas Public SC is related to attention towards public aspects of self, such as manners and appearance and Social Anxiety related to worrying about negative evaluation of others. For Private SC, some relevant aspects include knowing how the body reacts to certain feelings, the influence of feelings over actions and overall being in touch with one's feelings and trying to understand oneself. As for Public SC, some relevant aspects include worrying about looking good, spending significant amounts of time and effort in one's looks, constantly checking appearance and making sure to look appropriately before going public. Social Anxiety aspects include being nervous in large groups, insecurity to talk or perform in front of other people, being embarrassed easily and having a hard time to meet new people and overcoming shyness in new situations.

The study of Takishima-Lacasa et al. (2014) acknowledges correlations of social anxiety with anxiety and depression. Following that lead, it is important to highlight that social anxiety disorder can manifest in comorbidity with other disorders and mental illness, such as depression (Starr & Davila, 2008; Beesdo et al., 2007), bipolar disorder (Titone et al., 2018), borderline personality (Perugi et al., 2003) and generalized anxiety disorders (Perugi et al., 2003; Petkus et al., 2017). Although social anxiety and depression show comorbidity, according to Starr and Davila (2008), the interpersonal factors uniquely related to each and both conditions are unclear, not being able to precisely estimate if depression leads to social anxiety, or if social anxiety leads to depression, or the two conditions can also show no correlation of cause and effect. The study shows that these are all valid cases, despite of the comorbidity.

In synthesis, social anxiety can be considered a pervasive disorder that is predominantly characterized by fear of social situations involving interaction. It can be talking to other people, especially strangers or unfamiliar individuals, performing to a group of people or being the center of attention. It is also related to a strong worry about being negatively judged, be considered different, have the anxiety noticed, embarrassing or humiliating oneself. People who suffer from social anxiety can be taken by intrusive thoughts and concerns, such as obsessively reevaluating one's performance after interaction, expecting the worst out of every social situation. It can show physical symptoms, such as blushing, increased heart rate, muscular tension, sweating, trembling, dizziness, mind blank and difficulty to breathe. Social anxiety can lead to avoiding a series of common situations, such as making eye contact, parties and social gathering, using public spaces, starting conversations, interacting with storekeepers, going to work or school, causing a negative impact on the person's routine.

### **2.1.2 Autobiographical Games**

Regardless of being involved in the game industry, or an enthusiast, it is likely that one have already heard the demeritizing jargon "it's just a game". As Cindy Poremba (2007) points, tapping into one's real life experiences through game work and exploring games as a means for creating autobiographical content is also a means to go against that belief. When analyzing Mary Flanagan's' games [domestic] (2003) and [rootings] (2001) Poremba (2007) notes that games, while crafting the self as an active agent, make room for connections beyond identification and allowing for a reflective experience.

Gareth Schott (2017) refers to *That Dragon, Cancer* (Numinous Games, 2016) as a "personal confessional game", which can be framed as a term interchangeable with autobiographical game. The author posits that conveyance of personal experiences has a higher priority over fitting into game norms, as the game intentionally defamiliarizes the player in each new scene.

Stefan Werning (2017) explains that autobiographical games can either tell a particular story of the author or a self-expression based on their experiences and thoughts. When discussing about the concept of persona in autobiographical games, Werning (2017) argues that the authors often implement their personas on games in the form of characteristic actions or in the space of possibility of the game, rather than their own depiction as a character.

Autobiographical games focus on exploring idiosyncratic lifelike experiences through the authors' intimate views and identity. This approach is found on Anastasia Salter's (2016) analysis of emotionally resonant Twine games, which revealed several titles created based on personal experiences of the authors, aimed towards empathic bounding rather than a goal-oriented structure. It results in an experience of connection, in which the game procedures are structured to share sentiments (Werning, 2017), instead of trying to equate emotion with information, as Sabine Harrer (2015) criticizes.

### **2.1.3 Game Design Patterns**

The inspiration to examine games through the lens of design of interaction (Björk & Holopainen, 2005) came from studies in the correlate design field of architecture. Design patterns as a concept was introduced by Alexander, et al. (1979) when addressing design challenges an architect could face. By focusing on codifying the design knowledge into separate and interrelated parts, patterns would provide descriptions of the core of solutions

for design problems, allowing to repeat the same process without ever employing the same approach twice (Alexander, et al., 1979). That means design patterns intend to explore the core of the problems, rather than specific solutions, hence allowing same patterns to be employed while the actual solution wouldn't need to be ever repeated.

When adapting the concept of design patterns to games, Björk and Holopainen (2005) decided not to focus on the problem-solution dichotomy for some reasons. Firstly to avoid the risk of using patterns to only remove unwanted aspects of a design rather than supporting innovation. Secondly, the authors identified that many patterns described game characteristics that would automatically presuppose other characteristics, making a problem described in a pattern likely solved by applying other patterns related to those characteristics. Lastly, the fact that game design patterns are related to a myriad of gameplay aspects make them an imprecise tool for solving problems, since introducing, modifying, or removing a game design pattern affects many aspects of gameplay, therefore indicating that problem-solution should not be the focus of game design patterns. With those considerations, the concept of game design pattern is defined as the following:

Game design patterns are semiformal interdependent descriptions of commonly recurring parts of the design of a game that concern gameplay.

Björk & Holopainen (2005, p. 34)

For semiformal descriptions the authors mean that game design patterns rely on general descriptions without the use of quantitative measures. Applying specifications that would rely on measurements would be a disparity with the imprecise nature of design problems. Despite of that, game design patterns do offer distinguishable structures, allowing to see differences and identifying relationships with other game design patterns in a game. Those relationships can be perceived in the interdependent descriptions, in which patterns can show interrelations of instantiating or being instantiated by other patterns, modulating or being modulated by other patterns, and one pattern can be potentially conflicting with another.

It is important to highlight that, according to Björk and Holopainen (2005), game design patterns are not to be confused with the meaning of repetition, therefore averse from creativity or innovation, that the word pattern might imply. On the contrary, the intention with game design patterns is to provide a universal simplified language, allowing multidisciplinary development teams to operate under a common language, and at the same time helping as a creativity tool, by improving the process of idea generation, structured development of game concepts and solving design problems with a focus on interaction aspects of gameplay. As the authors exemplify, when arguing about potential misconceptions given by employing the word *pattern*, it can be compared to using references in art works, that allows for both a better positioning and also being more certain of creating novelty. It is also relevant to mention that patterns are not meant to be used a definite set of prescriptions, but instead must be framed as a language that can and should evolve over time (Björk & Holopainen, 2005).

These considerations make the employment of game design patterns a way to structure the immense amount of data gathered throughout this project into a comprehensive and usable set of information. Therefore providing useful knowledge for people trying to improve their understanding of how social anxiety has been represented in actual games, as well as how social anxiety would likely be represented in hypothetical games envisioned by informants.

The structured knowledge is also useful for developers whose goal is to represent social anxiety in games, as it provides an extensive background fundamented on perspectives of people affected by social anxiety, facilitating the creative process and likely inspiring non stereotypical representations. More information on how the game design patterns will be applied in this work can be found in the Research Methodology chapter in the section *4.4 Game Design Patterns for Discussing Perspectives*.

### 3 Problem Statement

Considering the problematic state of mental illnesses representations in media, aforementioned in the introduction chapter, the topic is still marginalized, often reproducing stigma through stereotypical portrayals. The researchers and practitioners, used as a reference to motivate this work, have shared their studies and opinions identifying lack of nuance and appropriate consideration for representations of mental illness in various forms of media. Shapiro and Rotter (2016) argue that film, television programs, and video games often portray mental illness associated with stereotypical violent, criminal and dangerous behaviors. Depression Quest (The Quinnsspiracy, 2013) co-writer Patrick Lindsey (2014) writes that, despite not being hard to find games depicting mental illness, especially in the horror genre, the conditions are often treated as a kind of insanity, showing lack of empathy and contributing to dehumanizing those characters.

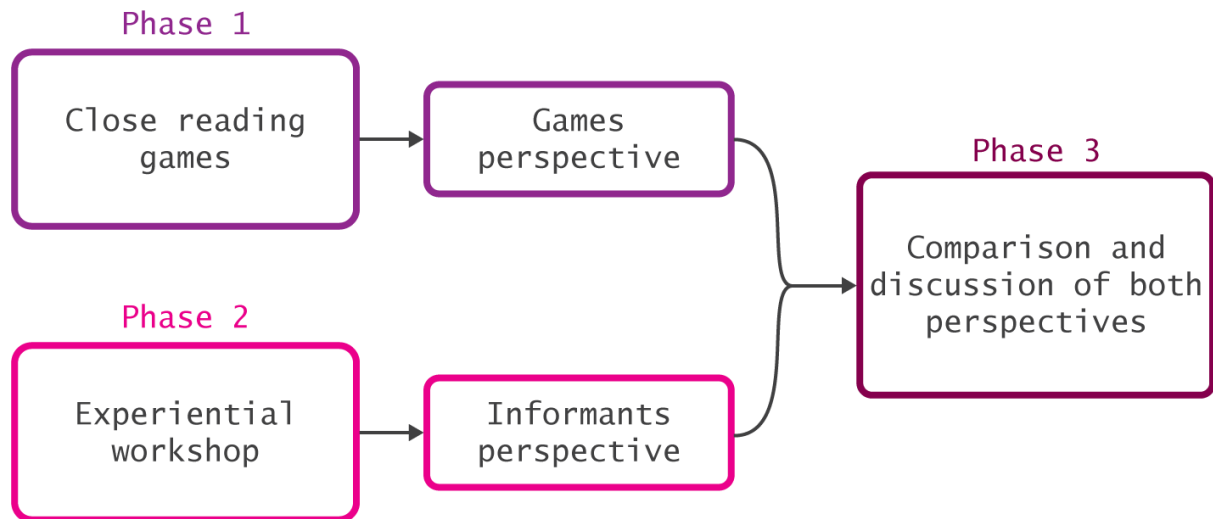
Inspired by the related work of Sabine Harrer (2015), this research intends to contribute with the goal she proposes: shifting the practice of game design to a mediator of other's experiences. It is meant to be a step towards this direction, contributing to deepen the knowledge of game design and explore how literary analysis, combined with other investigative methods, can be useful to identify nuances of individual experiences present in autobiographical games and how this relates to perspectives of other people living with social anxiety. The knowledge acquired through this work lays the groundwork for understanding how games can represent, in an honest and non-stereotypical way, mental disorders, starting with social anxiety and, hopefully, contribute to spark other studies to broaden the spectrum of how the nuances of adverse mental conditions can be more respectfully addressed in games. With that considered, it can be stated that this project has as research goal:

Gather personal experiences of authorial games and individuals to formulate an understanding of how social anxiety is perceived and expressed in games.

As a first step towards a bigger goal, developing a game is out of scope at this moment. It was decided to step back and first conduct an ethnographic study examining what social anxiety means, in game terms, to people who experience the disorder in their lives. Borrowing the definition Ashley Brown (2015) presents from Virtual Ethnographics of Christine Hine it is a “way of seeing through participants’ eyes: a grounded approach that aims for a deep understanding of the cultural foundations of the group”. It is not intended to provide a definitive guide of norms on how to create a game about social anxiety, what is being proposed is a study of the nuances and a discussion of intricate codes that permeates the imaginary of people suffering from social anxiety, both from game developers perspective by analyzing games depicting social anxiety, and from people who live with the condition that shared their experiences and vision of how social anxiety manifests in a game-like situation. It is believed that the findings and discussion provided by this research will contribute to more conscious mental illnesses representations in games, when acting as mediators of others’ experiences.

## 4 Research Methodology

The method set for conducting this research is a hybrid of close reading analysis, a workshop conceived to fill this project needs, then a discussion comparing data gathered in the two first phases.



**Figure 1** Flowchart showing the methods employed and their dependencies.

Phase 1 and 2 are of *descriptive* nature, then Phase 3 is a mix of *descriptive* with *prescriptive* nature. It is worth to stress that Phase 3 ceases to be prescriptive when acknowledging that this work has no intention to provide a definite guide for how to depict social anxiety in games. Instead, it is a collection of analyses that allows a discussion and insight gathering over a complex and nuanced subject. Before the methodology here described started to be conducted, a literature review on social anxiety and autobiographical games was conducted. As phases 1 and 2 unfolded and the project evolved, the need of additional literature review emerged.

Given the nature of this work to explore personal narratives, analyzing autobiographical games turns to be a source of understanding ways of bridging the creator's intents with the artifact as a form mediating their life experiences.

With that in mind, a close reading (Bizzocchi & Tanenbaum, 2011) will be conducted on games intended to voice a personal experiences, which also feature themes related to social anxiety, so that more actionable knowledge is provided for working. Diane Carr (2017) proposes to analyze games under the lenses of structure, text and intertext, according to Barthes literary theory, and she argues that hybrid methods are a sound decision to analyze games. The method employed in this work is a hybrid of the Consalvo and Dutton (2006) toolkit, allowing to conduct structural and textual analysis, while intertextual context is provided by the informants perspective acquired through the Experiential Workshop. More information about the process of close reading is found on section 4.1 *Close Reading*.

As for the Experiential Workshop, it is based on the works of Sabine Harrer (2015) that aims to get informants to express their experiences on a particular subject. This was then simplified to adequate for the logistical limitations of conducting the activity through individual video conference, allowing for a safer space considering the intent of the

workshop is to involve people suffering from social anxiety. These and other considerations, such as mitigating language barriers and improving access, will be examined in further detail on section *4.2 Experiential Workshop*.

Phase 3 is formulated by combining the games and informants perspectives it is possible to structure a debate about game design patterns based on the findings of the game analysis and further elaborated with the nuanced perceptions gathered from informants. Details about the method of applying game design patterns to the discussion of both perspectives is detailed described on section *4.3 Game Design Patterns for Discussing Perspectives*.

## **4.1 Close Reading**

In order to understand honest manifestations of social anxiety in games, the first step is to conduct a close reading of games made by people who suffer from this mental disorder. To preserve the authorial voice, that are likely diluted and systematically filtered in bigger productions, a collection of five indie games, all of autobiographical nature and featuring social anxiety as an important part of their text, was put together.

This was done embracing the need to address the representational complexity, as pointed by Dyer (1993), in order to tap into such a nuanced and elusive topic as social anxiety, not to identify rights or wrongs, but to engage in a discussion of how experiences are represented in games by people directly affected by this mental disorder. A close reading was conducted with the selected games, following Carr's (2017) proposal to analyze games under the lenses of structure, text and intertext, a hybrid method was put together to fulfill the goals this study.

The Interaction Mapping from Consalvo and Dutton (2006) methodological toolkit serves as a bridge between games structural and textual analysis, allowing for structural elements, such as rules, mechanics, aesthetics and narrative, to be framed as textual components that articulate meaning through play, as possible interactions or as results of a player interaction. The decision of focusing on Interaction Mapping (Consalvo and Dutton, 2006) came from the first iterations of analyzing the games. Thoroughly breaking apart the games, to identify all their structural elements by using all the toolkit (Object Inventory, Interface Study, Interaction Map and Gameplay Log), proved to be a daunting effort for six games and most importantly, didn't contribute to the textual analysis. The more focused approach allowed to understand structural elements only to the point that they contribute with the textual analysis.

Textual analysis of the selected games is also mediated by a literature review, collecting description of social anxiety symptoms, and individual experiences to guide and correlate meaning and codes identified in the games. Individual experiences also contribute with the lens of intertextuality, to expand interpretations and to identify additional keys of social anxiety representation, which will be covered under the Experiential Workshop chapter.

### **4.1.1 Games Selection Criteria**

When writing about independent gameworks, Guevara-Villalobos (2011) identifies the artistic autonomy as a characteristic more present in independent developers, allowing games to take part in contesting aspects of humanity in a personal relationship between creator and an artifact of artistic value.

With that considered, the game selection will be conducted on the three main venues of curated independent games:

- IGF (Independent Games Festival), including the nominated games and honorable mentions, from 2018 to 2013.
- IndieCade, IndieCade East and IndieCade Europe, including nominated games and the selection of games exhibited on the festival, from 2017 to 2012.
- Steam, filtered by the category indie, any date.

### **Keywords and Concepts**

When browsing IGF, IndieCade and Steam databases the criteria for selecting games include two main aspects: intention and theme. The method of gathering information on the games will follow the procedure of opening each entry, reading the description on the game pages of the festivals. In case of lacking artistic statement or vague and unclear descriptions, the search will be extended to the game's website.

Considering the objective of this work to explore game design potential of voicing others' experiences, the first selection criteria is the intention of the author on using a game as platform of self-expression.

**Autobiographical** games is the main keyword, as analyzing games with autobiographical intention will increase knowledge on transferring the personal space into a game. Considering this keyword as a concept, mentions of self-expression, personal experiences and related terms are considered fitting the criteria.

Regarding the main theme of the games, the keyword and its concepts for selection are the following:

**Social anxiety** is the main keyword for theming; meaning if the game description presents hints of social anxiety symptoms, such as fear of rejection, worrying about embarrassment or humiliating oneself, intense fear of interacting or talking to strangers and general avoidance of social situations the game fits the criteria.

#### **4.1.2 List of Games**

Exhausting the three venues returned a list of six games. All of them with autobiographical intent or drawn from personal experiences and with social anxiety around or as a central theme.

- Everything Is Going to Be Ok (alienmelon, 2017)
- The Average Everyday Adventures of Samantha Browne (Lemonsucker Games, 2016)
- Please Knock on My Door (Levall Games, 2017)
- </reality> (Fancy Fish Games, 2017)
- Sym (Atrax Games, 2015)

#### **4.1.3 Analysis Procedures**

After playing each game from start to finish, testing different outcomes and assessing definitions of social anxiety disorder presented in the previous chapter, it was possible to identify a soft coding and draw a thematic analysis of recurrent aspects in the games. This

coding also indicated the need to expand the literature review, which informed the themes Real Life Anchoring and Limited Agency.

Subsequent playthroughs were mediated by assessing the following themes through the lenses of Interaction Map from Consalvo and Dutton (2006) toolkit for game analysis. As the authors describe, it is a “micro-method” that examines choices the player is given when interacting with other game agent, be it a player character or Non-Player Character (NPC). Since none of the games involve more than one player character, as they are all single player experiences, the “other game agents” as human players is excluded for the purposes of the current analysis. The distinction of focusing the Interaction Map on agents, not on objects, is likely because their toolkit features another “micro-method” called Object Inventory. However, none of the games have an inventory system, or emphasis in object collection, making Object Inventory an inappropriate method for this project. On the other hand, some games do present object interactions relevant to what is being researched, so excluding objects would render some meaningful reflective interactions a player can have out of the analysis. Instead of leaving objects out of the analysis, or coming up with a new category altogether, an adaptation to the Interaction Map was made in which it can be considered “choices the player is offered in regards to interaction with NPCs and objects”. Some questions Consalvo and Dutton (2006) present to assist identifying the relations of the Interaction Map can include:

- Are interactions limited?
- Do interactions change over time?
- What is the range of interaction?
- Are NPCs present, and what dialogue options are offered to them? Can they be interacted with? How? How variable are their interactions?

The last question, in the case of some games analyzed, could be duplicated substituting NPCs for objects, since some objects provide meaningful interactions as it is the case of *Please Knock on My Door* and *The Average Everyday Adventures of Samantha Browne*, or as it is the case with *Sym* that some objects react to the player being on the normal or darkness worlds.

That analysis reveals game content from a interaction perspective, offering a structural overview of the game. However, as the authors mention (Consalvo & Dutton, 2006), it can be employed for textual analysis purposes, as it can in their argument about the game *Buffy*<sup>1</sup> and the TV series<sup>2</sup>:

The dialogue of the game *Buffy* could be studied and compared to the dialogue found in the television show of the same name, to determine how faithfully the game extends the "universe" of the original story. That could include studying which characters appear in the game and what their dialogue consists of, as well as whether it is "in character" as compared to the television show.

Consalvo & Dutton (2006)

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<sup>1</sup> *Buffy the Vampire Slayer* (Fox Interactive, 2002)

<sup>2</sup> *Buffy the Vampire Slayer* (Mutant Enemy Productions, 1997)

As it can be seen on the Buffy example, a textual analysis examining available interactions in a game can provide insight on how they relate to a piece from other medium. The analysis conducted in the five selected games is similar to the one mentioned between the game and TV series of Buffy. Five games containing depictions of social anxiety were selected and the Interaction Map analysis will be used to correlate their interactions with information found on social anxiety literature review. Mapping the interactions of a game can also reveal social statements present in the game text, that could otherwise be overlooked if examining static game elements, as the authors present when examining relationships in The Sims<sup>3</sup>:

Sims can marry and move in with other Sims endlessly-there is no lifeline vow, and divorce appears to be automatically granted with the next marriage. As seen here, then, examining how interaction occurs in a game such as The Sims can help us determine how sexuality is constructed in the game, as well as the (many) choices the game affords to individual players.

Consalvo & Dutton (2006)

The protocol of playing the games consisted of playing each game from start to finish once without taking notes or breaking them down, intending to enjoy the games and figure out the overall message of them before narrowing down to details. Then, for the analysis, playing them over as many times as necessary to get the informations, with the analysis toolkit in mind. It is important to highlight that none of the analyzed games has been played before this work, therefore accounting for no predispositions towards any of them.

## 4.2 Experiential Workshop

The Experiential Workshop is based on the works of Sabine Harrer (2015) that aims to get informants to surface their experiences on a particular subject through dialogue, visual representation activity and reflection. The chosen medium for the workshop is video conference, through Google Hangouts or Skype, having the sessions recorded for later transcription. Such considerations relate to the sampling defined for the workshop and are further elaborated in the section *4.2.3 Sampling*.

Knowledge acquired through the Experiential Workshop provides information for the lens of intertextuality, as it gives insight on personal experiences and provide a wider range of interpretations in what concerns social anxiety. That considered, the Experiential Workshop can be considered an extension of the close reading process and will be used to formulate, in combination with the game analysis results, game design patterns on the Phase 3 of the project, presented in chapter 7 *Discussing Games and Informants Perspectives*.

### 4.2.1 Workshop Procedures

The workshop is comprised of three distinct stages that happen in sequence. First and foremost an explanation to the informant of what the workshop consists of, followed by a brief casual chat to set for a less formal tone and, hopefully, leave informants more at ease.

At this moment they are also asked if they feel comfortable to talk about personal topics and if, for any reason, they don't feel like proceeding with the workshop at the moment it can be rescheduled or the informant decide not to take part anymore. It is also reinforced that they

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<sup>3</sup> Consalvo and Dutton (2006) refer to The Sims (Electronic Arts, 2000) and its expansion packs *Livin' Large* (2001), *House Party* (2000), and *Hot Date* (2001) for their method description.

are free to opt out of the workshop at any moment, without disclosing reasons, and it's not a problem.

### **Interview**

After a casual conversation to greet the informant and introduction of the activity, a semi-structured interview takes place as the first part of the Experiential Workshop. The interview has a definite structure for guidance, but lies open to changing, adding, follow-up and probing questions based on the informants answers (Turner, 2010; Gall, Gall & Borg, 2003), as informants share stories new questions are likely to emerge and others might be skipped, if they ended up addressing what the question intended to uncover. Following McNamara (2009) recommendations, the questions are worded as neutral as possible, save for the first one, which comes from the previously known fact that the informants do have a level of uneasiness with socialization, hence the informants sampling. The main questions are listed below, also with potential follow up questions foreseen:

Q1: When did you realize socializing could be uneasy?

- Are you aware of things that likely trigger your anxiety?

Q2: How would you describe the social struggle you have?

- Did it change over time?
- Is it still something persistent in your life?
- Do you have any resource to cope with uneasy social situations?

This set of questions aims to get informants to provide an overview of how they are affected by social anxiety and engage a storytelling about the role it has on their lives.

After unforeseen and any additional points have been covered, the informants are guided to transition to the next part of the workshop, making informants aware of the current state of the workshop and preparing them for the upcoming activity (McNamara, 2009).

The first version of the Experiential Workshop was structured to, by the end of the interview and beginning of doodling activity, ask the informant to close their eyes and imagine a scene they consider to be an idealistic and perfect social situation, with no needs to be bound to reality. This was intended as a stimulus to the doodling activity, which relies on the informant representing scenes of how they perceive situations of social anxiety. After running the workshop with Informant 1, this was considered unnecessary for the transition of activities and then moved to be a relaxation moment by the end of the workshop session, so that informants could alleviate their thoughts and help relieving potential stress caused by the workshop.

### **Doodling Activity**

The second part of the Experiential Workshop is a doodling activity intending to make informants engage in a representation of their views of social anxiety. Informants are asked to visually represent a game concept meant to materialize their experience with social anxiety. In the case of TrauerSpiel (Harrer & Schoenau-Fog, 2015) the informants were given physical materials, like cloth, animal figures, LEGO bricks, buttons, yarn, to make a creative assemblage.

Considering the Experiential Workshop medium is video conference, the method of visual representation had to be simplified from the TrauerSpiel reference to better suit the non-presential setting. With this limitation in mind, the proposal for the visual representation activity is asking informants to make a doodle with what they feel more comfortable using from their available materials. It could be a drawing with pencil, colored pens, watercolor or a collage. The most important is that they use a method that does not feel like a hindrance to their creativity. Before starting the workshop, informants were briefed that the activity would require such materials and then asked to collect the ones they were inclined to use.

The informants were instructed to reconnect with their memories and feelings, not needing to answer anything at this moment, and then instructed to represent an unpleasant social experience and then a pleasant social experience. First the set of instructions for one doodle was presented, then after the informant finished that representation they were presented the following set of instructions for the other doodle, as described below:

Doodle 1: Ask the participant to focus on an unpleasant social experience.

- What were you thinking on that situation?
- What else were you feeling on that moment?
- What made you feel uncomfortable?
- What did you think or wish for when you felt uncomfortable?

Doodle 2: Ask the participant to focus on a pleasant social experience.

- What were you thinking on that situation?
- What else were you feeling on that moment?
- What made you feel comfortable?
- What did you think when you felt comfortable?
- Were there still any worries?

During this part of the workshop, informants were reassured not to worry on how their creation can be an actual game implementation and that by no means they are being evaluated. It was made clear to them that the intention is to grasp their experiences through their imaginary and how they can envision social anxiety in an interactable form.

## **Reflection**

After finishing the doodling activity and sending pictures, the informant is asked to describe their creation and then the researcher follows a checklist to incentivize further reflection. This is not intended as a means to make a logic analysis of their creation, but to instigate themselves to reflect and discuss upon their creation.

Questions based on “Why?”, “Where?”, “When?”, “Who?”, “What?”, “How?” are potential questions to make informants provide as much detail as possible.

The precise questions of the reflection moment depend on what the informants presented in the doodling activity. For example, while they are describing their creation some of the questions could already be answered in detail, rendering further questioning unnecessary. They are also meant to reveal specific aspects of their creation, therefore different questions would be required for each case, as each creation is likely to contain unique characteristics that can't be predicted.

### **4.2.2 Technical Environment**

The Experiential Workshop is intended to be conducted through video conference, either by Skype, Hangouts, or any preferred video conference client. However, before proceeding to the video conference the informant is asked if a video conference would be comfortable. Should the informant prefer otherwise, the workshop is then conducted through an instant messenger service of choice. This is a compromise aiming to promote a safer environment for the informant.

Should the workshop be conducted through video conference, as intended, the open source recording software OBS Studio is used to make the screen and audio recording. The trial version of Callnote is also available as a backup software, in case the former shows any sign of problems.

Video and audio files are stored in the personal computer of the researcher and not shared with any other parties. The workshop original and translated transcriptions are made and stored on a Google Drive spreadsheet, along with other media files produced during the workshop, such as pictures of the doodling activity.

### **4.2.3 Sampling**

To arrive on a sample considered adequate for the project goals, a series of considerations were made to allow for a better result in terms of getting informants to tell their personal stories. Such considerations also attempt to address biasing, reducing it as much as possible, while acknowledging that it is not possible nor intended to completely remove personal investment due to the nature of the project.

Taking into consideration the intent of diving in the depths of informants life experiences, the first consideration for the sampling was an attempt to reduce the language barrier. It is of great relevance that the informants and researcher can express themselves to their full potential. To achieve that the sample will be comprised of native Portuguese speaking individuals.

Another criteria for the sampling is that the informant should disclose to suffer from social anxiety and also being diagnosed with a mental illness comorbid with social anxiety, such as depression (Starr & Davila, 2008; Beesdo et al., 2007), bipolar disorder (Titone et al., 2018), borderline personality (Perugi et al., 2003) and general anxiety disorders (Perugi et al., 2003; Petkus et al., 2017). The intention behind requiring medical diagnose of a comorbid condition is to increase the likeliness of the informant having in fact a severe case of social anxiety, that could otherwise be just an occasional identification if the sampling would rely on people self identifying with the symptoms.

The last criteria of the sampling is to reach for informants from the researcher contact network, with the intention to increase access to informants' personal narratives, at the tradeoff of increasing bias. Gaining a higher level of access is an important consideration because the very nature of what is being studied - social anxiety - is related to a person having a hard time to interact with unfamiliar people. Access is also hindered by considering the researcher does not suffer from social anxiety nor has a diagnose of a comorbid condition, therefore lying as an outsider to the subject matter. By inviting informants that have a level of connection with the researcher and could feel comfortable with sharing personal, access limitation is therefore reduced.

#### **4.2.4 Addressing Bias**

As it was stated previously, when planning the Experiential Workshop, attempts to mitigate bias were taken into consideration. However, the very nature of this work is to embrace people's subjectivity and relies on the creation of an empathic connection with the informants.

This is a conscious commitment that grants an inevitable level of biasing from the researcher, but does so with the intention of revealing nuances that, arguably, would hardly surface if they were approached through a distant stance from researcher.

#### **4.2.5 Ethical Considerations**

This workshop follows the Principles for Research Ethics in the Humanities and Social Sciences (Vetenskapsrådet, 2002) from the Swedish Research Council and the Guidelines for Ethical Conduct in Participant Observation from the University of Toronto (2005). According to these guidelines, the primary requirements for a research involving human subjects are the following:

- The information requirement: the researcher shall inform the ones affected by the research project of its purpose, methods and procedures of the activity.
- Potential harms: informants are also made aware that the activity involves potential harm, as it deals with sensitive personal information.
- The consent requirement: respondents and subjects have the right to control the extent of their own participation in the research.
- The confidentiality requirement: information regarding all research participants shall be given the highest possible degree of confidentiality, and be stored in such a way that unauthorized people cannot access it. Upon explaining the activity they are also informed about the procedures of anonymization and confidential data storage.
- The data use requirement: information gathered regarding any individual can only be used for research purposes.

All the procedures for the Experiential Workshop follow these principles. Information regarding the activity methods and assessment of potential harms is made clear both in the consent form, as well as during the introductory disclaimer; informants are made aware that the activity only goes to the extent of their comfort and they are free to stop at their will, without providing any justification; they are also informed that all data gathered in the workshop is completely anonymized and kept in possession of the researcher, not shared with any party at any circumstance.

Due to the nature of the project and what the workshop aims to unveil, informants are made aware that the activities involve reminiscing potentially sensitive personal information and their well-being is priority, meaning they shouldn't overextend their limits. Considering the uncertainty of the current emotional state and extension of informants' social anxiety cases and being aware of the retraumatization risk, some changes were conducted to mitigate risks. Taking into consideration some feedbacks from the first informant and accessing Harrer's (2015) considerations on potential dangers of the workshop, the invitation to imagine a utopical situation was moved to the end of the workshop to serve as the beginning of an unwinding moment. This way, informants can have the opportunity to disconnect from stress the workshop might have induced.

Informants were asked to give their consent in a way that would require less effort possible from them. For that purpose, two consent forms were prepared. One is an anonymous Google Form, to prevent storage of their personal data, followed by verbal confirmation in the beginning of the workshop session video recording. The other one is suited for an informant in possession of a tablet to be able to provide a signature without needing to go through the process of printing and scanning by themselves. Both versions can be consulted on **Appendix A**, however they are in Portuguese as presented to the informants. In order to preserve their identities, some images created during the workshop required graphic editions. Before including those images on the project, they were shown to the informants asking their consent on using the edited images.

#### **4.2.6 Workshop Iterations**

Some improvements were made after running the first Experiential Workshop. The content remained the same but, changes to the order of questions and activities were made to better suit upcoming sessions. Those changes were considered to make the informants participation easier and provide more comfort during and after the workshop.

By the end of the first workshop, Informant 1 shared some feedbacks of the process. Those feedbacks are invaluable for refining the procedures and make the workshop more effective and enjoyable for future informants. Also, after the workshop ended, the informant also shared notebook drawings and a digital illustration previously made during a period of anxiety crises. However, those drawings would allow to trace back the identity of the informant, compromising the anonymity and editing the images to make them untraceable would also hinder their visual information, rendering them of little to no use. With these points considered, the decision made was to not include the additional contribution in the document.

Informant 1 considered going from imagining an utopic scene to doodling a game scene a dramatic shift, especially because the game scene part. This was related to a concern that other informants with less game literacy might find it too overwhelming to keep up to it, even though Informant 1 had some familiarity with this process it was still a bit hard. A suggestion given was to change the order of the doodling instructions and, maybe, breaking the activity in two moments - first representing the scene imagined and then thinking how it could be turned into an interactive experience. Then the informant reminded that it must be made extra clear, even repeating the information, that the informants are not being evaluated on how well they can conceive a game. It was interesting to note that, while showing concerns for potential setbacks, the informant followed up acknowledging that collecting perspectives of people with lesser game literacy.

Without being asked about it, the informant mentioned that talking to an intimate person made the situation comfortable and thus easy to share personal information. This is a positive reinforcement of the assumption that sampling for people with a degree of intimacy would lead to more access. Lastly it was suggested to add a moment and guidance to unwind after the workshop is done. The informant later disclosed to have felt the need to go for a walk and cool down the thoughts. This is a crucial feedback to take into consideration, once it might lead to informants going through unnecessary levels of distress that could be potentially dangerous.

### 4.3 Game Design Patterns for Discussing Perspectives

The use of game design patterns (Björk & Holopainen, 2005) can fill two main roles: analysis and design. Analysis is related to examining existing games to study game design patterns that are present in them. Design is related to the creation of a game concept employing game design patterns to structure the ideas and descriptions. Both purposes of game design patterns are relevant for this project. The first one is related to the work that will be actually conducted in Phase 3 of this project, whereas the second is related to potential future uses for the knowledge acquired and concluded herein.

As the authors stress (Björk & Holopainen, 2005), the use of pattern can and should, be tailored or combined with other methods to be used on specific uses. In the case of this project, the tailoring made is related to using game design patterns in combination with the close reading analysis and the Experiential Workshop to structure a discussion of the two perspectives.

Before examining the game design patterns related to social anxiety, identified by the analyzed games' and the informants' perspectives, a concept matrix was prepared aiming to synthesize the content produced from close reading the five selected games.

With the concept matrix available, the procedure that follows is to search for already mapped patterns, available in Björk and Holopainen (2005), that relate to what has been synthesized in the concept matrix and describe them in the form of game design patterns. After going through the list of available patterns and finding which ones apply, a second examination on the concept matrix is done to assess if new patterns, not present in the extensive listing from Björk and Holopainen (2005), could be identified. Those game design patterns are then seen in the light of the informants perspectives to either confirm the incidence of stronger patterns, or indicate the existence of newer unidentified patterns not present in the analyzed games.

#### 4.3.1 Game Design Pattern Template

For the discussion and elaboration of social anxiety game design patterns, the template provided by Björk and Holopainen (2005) will be used. The template consists of the following items, highlighted in bold and coupled with their descriptions:

**Name** of the game design pattern in a single word or a short phrase in a dictionary-style fashion.

**Core Definition** intends to provide a quick reference for the pattern, presented in italics.

**General Description** is presented immediately after the Core Definition. It is a short description of the properties found in the games that are used as a foundation for the pattern, followed by the motivation to define the pattern name. For some simple patterns, the General Description might be omitted if the Core Definition already provides enough information.

**Using the Pattern** is an analysis of how the pattern is used, exemplified with specific game components to elaborate how the pattern is used in a game.

**Relations** are the listing of other patterns that are related to the described pattern. This list is comprised by the categories of relations between patterns: instantiates, modulates, instantiated by, modulated by, and potentially conflicting with.

The **Consequences** item is not relevant for the discussion proposed of identifying representations of social anxiety, because its relevance comes from debating how a game design pattern could be applicable or lead to design consequences if one would apply such pattern in general and this is a discussion that lies outside this project scope. Since the identified game design patterns use the games herein analyzed as their reference, the **References** item of the template won't be used either. This is also the case with most of the game design patterns presented in the collection from Björk and Holopainen (2005), as most patterns don't present previous works, or inspirations, as references.

## 5 Games' Perspective - Close Reading

Given the nature of this work to explore personal narratives and act as a mediator of life experiences, analyzing autobiographical games turns to be a source of understanding ways of bridging the creator's intents with the artifact.

For that a close reading of games related to voicing a personal experience, which also feature themes compatible with social anxiety, so that more actionable knowledge is provided for working. More details about the method and procedure can be found in the chapter *Research Methodology* in the section *4.1 Close Reading*.

From the IGF and IndieCade selections and Steam, filtered by *indie*, it was possible to arrive on list of five games with autobiographical intent or drawn from personal experiences and with social anxiety around or as a central theme. These are the games analyzed in this chapter and a brief description from their creators:

### **Everything Is Going to Be Ok** (alienmelon, 2017):

A desktop labyrinth of vignettes, poetry, strange fever dream games, and broken digital spaces. It is a collection of life experiences that are largely a commentary on struggle, survival, and coping with the aftermath of surviving bad things.

On the surface it comes off as dark comedy, and humor is a prevalent theme, but as you interact the themes start to unravel and facilitate, what I hope to be, a deeper discussion about these topics.

I call it an interactive zine because it's broken, painful, beautifully terrible, and profound on a very personal level. Nothing about this is fiction, although the themes are abstract enough so that anyone can approach it and find it relatable.

### **The Average Everyday Adventures of Samantha Browne** (Lemonsucker Games, 2016):

An interactive story about a painfully introverted college student who has to make oatmeal in the communal kitchen of her dorm. The gameplay will challenge you to find the right ways to help Samantha as she embarks on her journey to the other side of her bedroom door.

Samantha Browne has been waiting patiently in her dorm room for everyone else to fall asleep, go out, or do whatever it is people who enjoy human interaction do. She's hungry, really hungry, and it's starting to get to her. The issue is not food, she's got a whole box of oatmeal sitting there just staring at her, waiting for her consumption. All she really needs is some help, your help specifically. Trouble is, helping Sam isn't always easy.

### **Please Knock on My Door** (Levall Games, 2017):

A story-driven game which gives you control over a person suffering from depression and social anxiety. Help them get through work and reach out to friends while desperately trying to survive. Experience the frailty these

themes bring and gain a better understanding of what it's like to live with some of the most common mental health issues today.

</reality> (Fancy Fish Games, 2017):

Supernovas blaze in the night sky, but the gaming world is abuzz over a new virtual reality console. Jacob Lessard, developer of the Penta device, promises a neural experience more "real" than reality itself. But what does it truly mean for something to be real?

When Lilya arrives at InterMense to beta test the Penta, she expects to spend the weekend battling her social anxiety in exchange for the opportunity to enter the Vitalia simulation. But when Ben, another tester, refuses to leave the world of Vitalia, endangering his life, Lilya sees that she has become involved in something much more eye-opening than she realized. As Lilya, Ben, and Jacob's fates intertwine, they must make some of the hardest decisions of their lives, and confront their own perceptions of the nature of existence.

**Sym** (Atrax Games, 2015):

A journey into your social fears in the form of a puzzle platformer. Explore the world that Josh, a teenage boy affected by social anxiety disorder, created to stay away from other people and help him take the right path to overcome his phobia.

A symmetric experience on black and white in which solid and hollow lose their meanings.

## 5.1 Analysis Background

As mentioned in the Key Concepts section of the Background chapter, the social anxiety synthesized definition is again presented here, since it is the mediator and main informer of the textual analysis for close reading the games.

Social anxiety can be considered a pervasive disorder that is predominantly characterized by fear of social situations involving interaction. It can be talking to other people, especially strangers or unfamiliar individuals, performing to a group of people or being the center of attention. It is also related to a strong worry about being negatively judged, be considered different, have the anxiety noticed, embarrassing or humiliating oneself. People who suffer from social anxiety can be taken by intrusive thoughts and concerns, such as obsessively reevaluating one's performance after interaction, foreboding every social situation. It can show physical symptoms, such as blushing, increased heart rate, muscular tension, sweating, trembling, dizziness, mind blank and difficulty to breathe. Social anxiety can lead to avoiding a series of common situations, such as making eye contact, parties and social gathering, using public spaces, starting conversations, interacting with storekeepers, going to work or school, causing a negative impact on the person's routine.

## 5.2 Thematic Analysis

Playing all games from start to finish and exploring different outcomes, with the intention of capturing their overall message, allowed to define a soft coding to identify themes for analysis. Those themes were identified by the researcher attempting to group a set of

relevant characteristics, according to the social anxiety literature review, that could be generic enough to be applicable to all or most games analyzed.

The themes are Real Life Anchoring, Safe vs. Unsafe Spaces, Self Harm, Unwanted Attention, Ominous Tone and Limited Agency. Those themes provide a way to understand how prominent aspects of the games relate to social anxiety symptoms and how they are conveyed. This will be covered in depth on the following sections, divided by each theme.

When writing the game analysis, correlations with social anxiety symptoms will be marked in bold, making it easier to visualize the correlations between textual analysis and social anxiety literature. Later on, those markings will help formulate the discussion. Also, to make reading easier, the first mention of a game within a theme is also marked in bold, making clearer when a new paragraph starts to describe the theme in another game.

### 5.2.1 Real Life Anchoring

The first theme to be discussed is Real Life Anchoring, since in some cases it's something present on the very core of the game, as it is the case with *The Average Everyday Adventures of Samantha Browne* and *Please Knock on My Door*. It can also be considered the essence of *Everything Is Going to Be Ok* allegories and the baseline for Sym and </reality> plots to be developed.

Although not mentioning games directly, stories based on lived experiences are strongly present on civic contexts as Copeland and Moor (2018) discuss digital storytelling. Isabella van Elferen (2012) introduces an interesting concept when addressing Gothic themes: "Gothic ghost story addresses the anxiety that arises when familiar values are transgressed and exchanged for the borderland of the unseen, the unheard and the unknown" (Elferen, 2012, p.14).

Even though the analyzed games wouldn't fall under Gothic content, save for Sym that features aesthetics that can be regarded as Gothic, the way familiarity is delivered in the games is useful for understanding the construction of the anxiety narrative. Based on common everyday situations and often involving game elements that depict menial activities, this familiarity allows for the dreads of mental distresses presented in the games to be perceived in a more relatable way.

Despite the heavily satirical and abstract aesthetics of **Everything Is Going to Be Ok** (from now on abbreviated as **EIGtBOK** to refrain from mentioning the lengthy title every turn), the game does not refrain from being deeply rooted in reality, as it explores serious themes such as mental illnesses, PTSD and suicide, along with social anxiety, employing many outrageous situations, because, as the author feels, "life is ridiculous"<sup>4</sup>. The game presents 27 different "Pages", each containing a vignette "zine" mini game focusing on a particular topic, with different interaction rules.

Most pages of EIGtBOK are related to some everyday activity. Some of those everydayness interactions can be seen on Pages 6 (Figure 2, left) and 19 (Figure 2, right), that are about awkward attempts to make friends. In Page 6 the player attempts to interact with other bunny-like creatures by clicking on them and has a random chance of making a friend, having them reject you, or losing a friend. Regardless of how many friends the player

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<sup>4</sup> [http://unicorncopia.com/ARTIST\\_STATEMENT.html](http://unicorncopia.com/ARTIST_STATEMENT.html)

managed to collect, by the end of Page 6 the main bunny jumps from a cliff alone and afterwards the player can “name the cult”. Page 19 starts with the main creature approaching the little ghosts asking “Please love me. Somebody please love >me<” and being turned down as tiny ghost responds with “No.” and the two ghosts exit the scene, leaving the creature sad. In the following screen it is possible to see many long legged creatures (Figure 2, right) that you can attempt to interact, by clicking with the cursor that changes to a heart, asking for their love and friendship with no success, since they all run away. By the end of Page 19, after several failed attempts to **interact with strangers**, the main character reaches the void and concludes that doesn’t need to be loved anymore, giving up hope on making new friends and being embraced by the void. In a more lighter tone, Page 6 also presents a significant level of awkwardness in the attempts to interact, especially when readily turned down. More details about interactions of Pages 6 and 19 will be further examined under the Limited Agency theme.

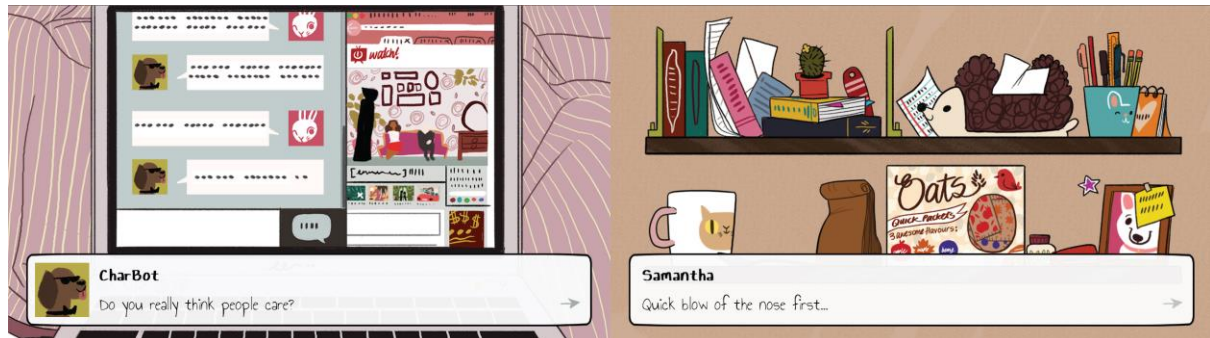


**Figure 2** Pages 6 (left) and 19 (top right): attempts to make friends.

Other lifelike element is the depiction of social media, satirizing the tropes of trying to achieve appraisal of others. It is the case of Page 17, that you need to keep pushing to get support from followers and reach 1000 friends, despite of the character’s seek for true help. By the end of this page the player is given the option of “Social love”, which open a widget that is similar to a tweet feed that allows the player to see random messages or “Throw words to the void”, or “Stream love” that opens a widget as if the game was being streamed. Neither during the interactions of this page nor after, with the social and streaming love, is it possible to establish a meaningful conversation with anyone. Some situations of EIGtBok are explicitly less abstract, as it is the case of Page 10 with mentions of abusive relationships and many hardships faced by women on a patriarchal society. This page even starts with a dialog box containing “WARNING: This gets real, say no and be happy.”, acknowledging the need for a trigger warning for the content depicted in this page. So is the case of Page 22 that offers words of support from the author in the form a suicide helpline after clicking the skull button that makes the character want to give up.

**The Average Everyday Adventures of Samantha Browne** (from now on abbreviated as **TAEaOSB**), as a whole, embodies everyday situations, hence the title, from taking place on the dormitory of a University campus in the middle of England to the premise of the game, which is successfully making yourself a meal. The game sets up a routinary environment that is soon going to be hindered by the character’s struggles with social anxiety **interfering with this routine**. One of the first sequences shows Samantha chatting on an

instant messenger with an intimate character that goes by the name of CharBot (Figure 3, left), while watching what seems to be a streaming of a tv show about people trying to stay amicable during a funeral. This also sets the tone of everyday life in the game. It is meant to be framed as a situation that would occur when someone is watching a soup opera.



**Figure 3** Samantha's chat with CharBot (left), handkerchief scene (right).

Before leaving the room to go prepare Samantha's meal, you have to choose a flavor of oatmeal. You can decide from Blueberries and Cream, Maple and Walnut and Apples and Cinnamon. In this scene it is possible to see a friendly looking hedgehog holder (Figure 3, right). If the player decides to click on the paper handkerchief, instead of anywhere else, it is possible to blow your nose. This action is only possible on the Steam version and awards the player with the "Blow your nose - It's a healthy thing to do" achievement. It's a detail that, despite not affecting the gameplay directly, reinforces the aspect of everydayness by giving the player the possibility to do something as trivial as blowing the nose.

The last step before leaving the room is collecting the keys and, despite being a small detail, it is an aspect of everyday life that can lead to decisive outcomes. Again, an interaction related to a menial task that can, later in the game, lead to an anxiety outburst, should the player forget to collect the keys. Other daily actions permeates the game, like cleaning the kitchen, and a detailed process of preparing the oatmeal. Those will be covered in more detail on the Limited Agency theme.

**Please Knock on My Door** (from now on abbreviated as **PKoMD**) is entirely based on real life situations and so are the main mechanics related to routinely everyday life actions and serve to articulate how the mental state of the main character **interferes with his routine** on his struggle with severe depression. The game premise is to move to a new place within a week, which might or might not happen. Due to a severe depression and anxiety, deeply **affecting** the main character's **routine**, this is quickly perceived as a task much harder than it appears. More details on this topic will be provided under the Safe vs. Unsafe Spaces theme.

The game is played in two main areas, the apartment and the office where the character works. In the apartment there are four areas, the hallway (Figure 4, top left), bathroom (Figure 4, top right), bedroom (Figure 4, bottom left) and kitchen (Figure 4, bottom right), each with its set of available mechanics. Those mechanics consist in taking a shower, brushing your teeth, eating, doing the dishes, staring at the window, trying to call dad, watching tv, using the computer and sleeping. All related to mundane routinary activities.



**Figure 4** Main character's apartment rooms.

In the office you can only interact with the character's desk and, in certain situations, textually descriptive scenes of other office situations give the player options to choose from. More details about those interactions, as well as the others available on the apartment, will be covered under the Limited Agency theme.

</**reality**> is set on a futuristic version of Earth, with clear mentions of real places like North Carolina, the home state of the main character Lilya Martel; California, the state of Ben Evers; and Toronto, the base of Jacob Lessard's company InterMense. The game story employs recognizable familiar situations as the main character, Lilya has troubles to keep her routine of attending classes and she has struggles in her family relationship. Lilya is an avid player of "Full Realms", referred to as "Realms" throughout the game, a virtual reality MMORPG she plays in her goggles with a group of virtual friends from the game called "The Ventures" (Figure 5).



**Figure 5** The Ventures chatting while playing Realms.

As it can also be seen on Figure 5, Lilya, represented by her avatar Lillight, considers herself to be almost a NEET (Not in Education, Employment, or Training), which is a condition that can have its roots in anxiety, as for example changes in transport (Scottish Executive Social Research, 2005). A situation related to the example provided is seen during one of the first scenes of the game, when Lilya is considering to go to school and doesn't remember if she has fare on her bus card. Then she recollects the last time she tried to catch a bus and says "That sucked" because she had to talk to the bus driver. Lilya mentions to have shown physical manifestations of her her anxiety, as she starts **sweating** from anticipating having to go to school and mentions to barely remember how to get there. Then she decides to remain home and play Realms. This is a definite setup on the strong **fear of social interactions** faced by the main character and one of the examples of how it **affects her routine**.

Not only Lilya has a troublesome relationship with her studies but she also doesn't hold a good relationship with her family, consisting of her father Ed and sister Maggie. Although her family shows constant signs of always caring, Lilya doesn't know how to interact accordingly. It is the case of the first scene, in which her sister Maggie says that Lilya promised to have breakfast together and now she is late to go, but had left Lilya some bacon. Lilya waits her to leave before opening the door and doesn't even remember to have made that promise. Later in the game the player is able to choose to be nice with Lilya's family and spend time with them. Doing so gives the player the chance to learn about their past and that Lilya's attitude towards her family comes from her anger and trauma due to her mother abandonment.

Other lifelike elements are presented in the second chapter, as the player has to decide if Lilya will either look for a job or go to college and study neural technology, which is a subject she grew even more attracted after visiting Vitalia. Regardless of the choice, they are both attempts of the main character to reestablish her routine and try to build her life from that

moment onwards. However, those outcomes only take effect if the player decides to go back to “reality” by the end of the game, instead of staying in Vitalia for good.

Real life theming in **Sym** is less apparent than the other games analyzed, however it can be considered a metaphorical journey of learning to cope with the **pervasiveness** of severe social anxiety, or giving in for good. The third and fourth chapters’ names “Building Self Confidence” and “Rehabilitation” (Figure 6, left), the latter showing the main character in a wheelchair, suggest undergoing medical treatment is something happening in the “real life” counterpart of the game.



**Figure 6** “Rehabilitation” chapter (left) and logic symbols (right).

Some of the game interactive elements are related to logic operators (Figure 6, right), as it is the case of the “input” and “output” symbols, “not” nodes, single and double “and” nodes and “flip” switch. Understanding these symbols and logic operator nodes is the key to solve the puzzles presented in the game. They can also be argued to be part of the main character idiosyncrasies, as a metaphor for its interests, likely to be a person occupying a logic-driven role in “real life”.

### 5.2.2 Safe vs. Unsafe Spaces

The games analyzed showed interesting relations with spaces or situations that could be considered more or less safe, both for the characters or for interactions that could take place on those occasions.

Most situations in **EIGtBok** can be considered to take place on unsafe spaces, as each zine presents different takes on uncomfortable situations from a humorous, but not necessarily optimistic perspective. Some pages show a gif of a scene ablaze, or set flames in the whole screen, as it is the case of Page 21 (Picture 7, top) when the player clicks the campfire labeled as “Hellfire” on the second part of the zine.



**Figure 7** Page 21 (top), Page 7 (bottom).

In EIGtBOK there are constant depictions of “worms inside the head”, than can arguably be considered a metaphor for **intrusive thoughts**, as they usually show adverse positions against the main character and other characters, making personal spaces less safe. Worms start appearing on Page 7, that features a big green one eyed suffering creature with a worm inside its mouth. When the scene starts, the worm says “When the beast wasn’t paying attention I started living in its head”. In this page you have to try and comfort the green creature, by choosing between peculiar options (Figure 7, bottom) with random chances of succeeding, and you are often in turn confronted by the worm saying mean things. In Page 9 the player interacts with strangers, which are similar green creatures with a worm living inside them. Upon interacting with the green monsters, the worms would say things to let the main character down, while the monsters just lie there.

While there are no particular safe spaces in EIGtBOK, the game addresses the hardships of living with mental illnesses, traumas, anxiety, while also having to face pressure from society. By the end of Page 22 there is a dialog box with the title “We heard that you want to give up!” and then a telephone icon appears with “HELP.exe”, which opens a series of messages coming from the telephone handle as a metaphor for a suicide helpline. At this moment the author engages in a heartfelt personal sequence of messages aimed to offer comfort and acceptance to whoever plays the game and might have been undergoing difficult times. In this regard the game is positioned as an experience that intends to be a safe space for a struggling person.

**TAEaSB** presents a very clear spatial distinction that puts Samantha’s room as the safe space, in which she can be herself freely, and everything from the door onwards is an unpredictable and dangerous place.

After collecting the packs of the chosen flavor, you have to collect the spoon (Figure 8). Upon clicking the spoon, the screen fades to black and Samantha says it’s time to play.



**Figure 8** “Choose that Spoon” show when you are about to pick up the spoon.

During this moment the game addresses a silly yet meaningful allegory sequence to humanize the character, showing how playful and creative she is while alone. It could be framed as something that one would do “when no one is looking” as well as a depiction of withdrawal, in which the reality inside the safety of the room is more interesting than the world outside. It is important to highlight, however, that collecting the spoon is more contextual than factual, given that you “collect” the spoon by clicking anywhere, pressing space or using *skip*. This can be argued as a sequence exploring the character’s **private self-consciousness**, as it depicts a sincere and spontaneous moment of connection with Samantha’s self expression. It is a moment when Samantha is aware that no one is watching and, therefore free from any **negative judgement**, she lets her creativity flow.

In **PKoMD** it can be hardly considered that there is a safe space for the character, since the battle faced lies inside his mind. Although the character faces strong **avoidance** of most social contact, frequently considering staying home instead of going to work, which is a dreaded place for him, his apartment is not necessarily a safe space. The character undergoes several **intrusive thoughts** and mentions of unpleasant memories that come from the apartment. The player can decide to delve into those thoughts, or attempt to ignore them and move on. More on this topic will be covered under the Infliction of Harm theme. One of those cases of bad memories that are influenced by the environment is when the character is eating and thinks that there is no reason anymore to have two chairs in the kitchen table, since he doesn’t live with Amy anymore. Stepping away from those memories is a reason why the character decided to move to another place. Moving away is one of the possible endings for the game and can only be achieved by keeping a high mental fortitude and calling dad, which also requires a high mental fortitude.

A place that can be considered safe for the character is the kitchen window. It is possible to approach the window and “Look”, changing the screen to the window view and often coupled

with ponderations from “the voice inside his head”, which is likely an impersonation of the character’s depression and anxiety in the form of a narrator. During the first week, when the character thinks that it is already Friday and wondering about the only thing that helps, the player is given the option to choose “the window” or “sleep”. Choosing the window reveals how it can still be a source of comfort for the character (Figure 9, left). At some moments the narrator will say encouraging things to the character like “Those people we wronged they would probably forgive us if we asked.”



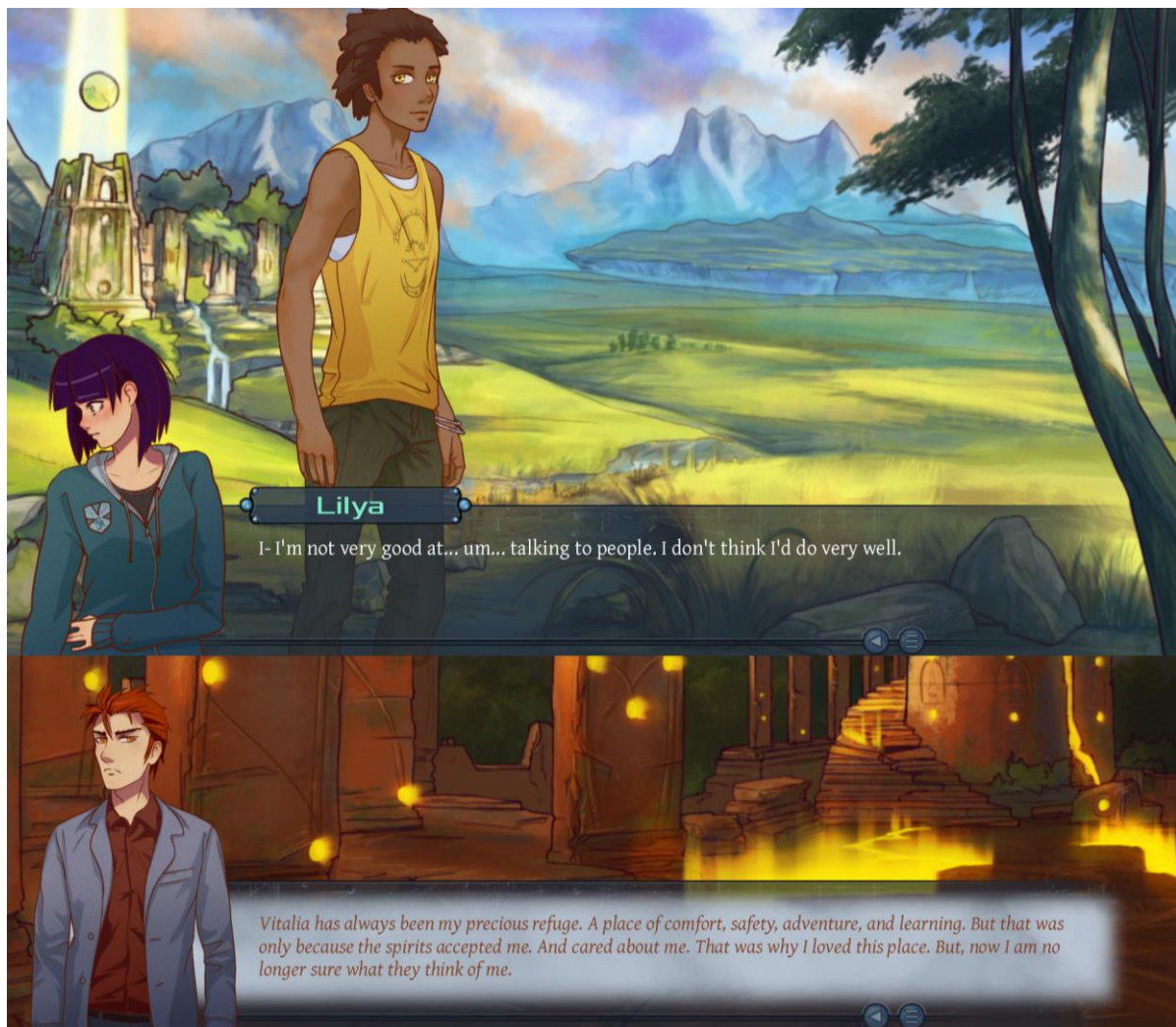
**Figure 9** Thinking about window (left) and staring during second week (right).

If the player doesn’t meet the requirements for moving to another place by the end of the first week, the character faces a depression crisis and can’t do it. This shifts the attitude of the narrator to an aggressive tone, rendering not even the window a safe space anymore, as seen on Figure 9 (right).

</reality> discusses about safe and unsafe spaces in many situations. For Lilya, reality itself is not a safe or comfortable place, due to her difficulties in **talking to other people** and taking part in social situations. She finds more comfort in virtual reality, having the MMORPG Realms as her safe haven when life gets tough. She is greatly excited to test a new “neural virtual reality” device called Penta that promises to be even better than virtual reality. There are several moments when this characteristic of Lilya is apparent, as it is the case when she is talking to Ben through the virtual reality chat of Realms, while waiting to test the Penta. This conversation piece happens if the player decides to talk about the risks of the Penta virtual device the characters are about to test. By choosing this option, after briefly talking about the risks they talk about where each other are from and Ben asks how North Carolina is like. Lilya mentions that she barely knows what to say about North Carolina, as she doesn’t go out often, reiterating her **avoidance** and withdrawal. Right after saying that, she goes on a retrospection of what she had said, **reevaluating the interaction** by thinking “Ugh what am I saying? I sounded super lame right now. Tell him something about NC!” and tries to compensate afterwards. The interaction ends with Ben realizing Lilya is more lively in the chat as opposed to real life.

Lilya has a mixed opinion of safety in Vitalia, both as a comfortable place for herself and for the safety of her physical bodies in reality, but her actual opinion of the place is dependant of

a series of choices the player can choose from, such as deciding to confront Jacob about the incident with Ben, or staying in Vitalia for good by the end of the game. In the end she is never completely sure about that. A ponderation from Lilya, when the player is about to decide staying in Vitalia, makes her mixed feelings apparent as she thinks “A part of me wishes to stay here, and hide away, forever. I bet I would have done that at one point. Just like I always escape to VR when things get tough”. Other signs that Lilya still has troubles within Vitalia is when she acknowledges that it feels “too real”, which also makes her manifest difficulties to **talk to other people** (Figure 10, top).



**Figure 10** Lilya talks to Ben (top), Jacob thinks about staying (bottom).

However, as the story unfolds and she gets dragged into the events of saving Vitalia, this seems to cease being a problem there. If she returns to reality, instead of staying in Vitalia, her epilogue tells that she found ways to cope with her social anxiety, by having a positive work environment in which people shared her interest and passion for technology. This acceptance lead her to better manage social situations, even though they remained not being her strong suit.

On the other hand, from the moment he stepped in there, Ben had no doubt that Vitalia is the only place where he belongs. It is the embodiment of his **avoidance** and the only place he can feel like his true self. Jacob has also a strong connection to Vitalia, as he discovered

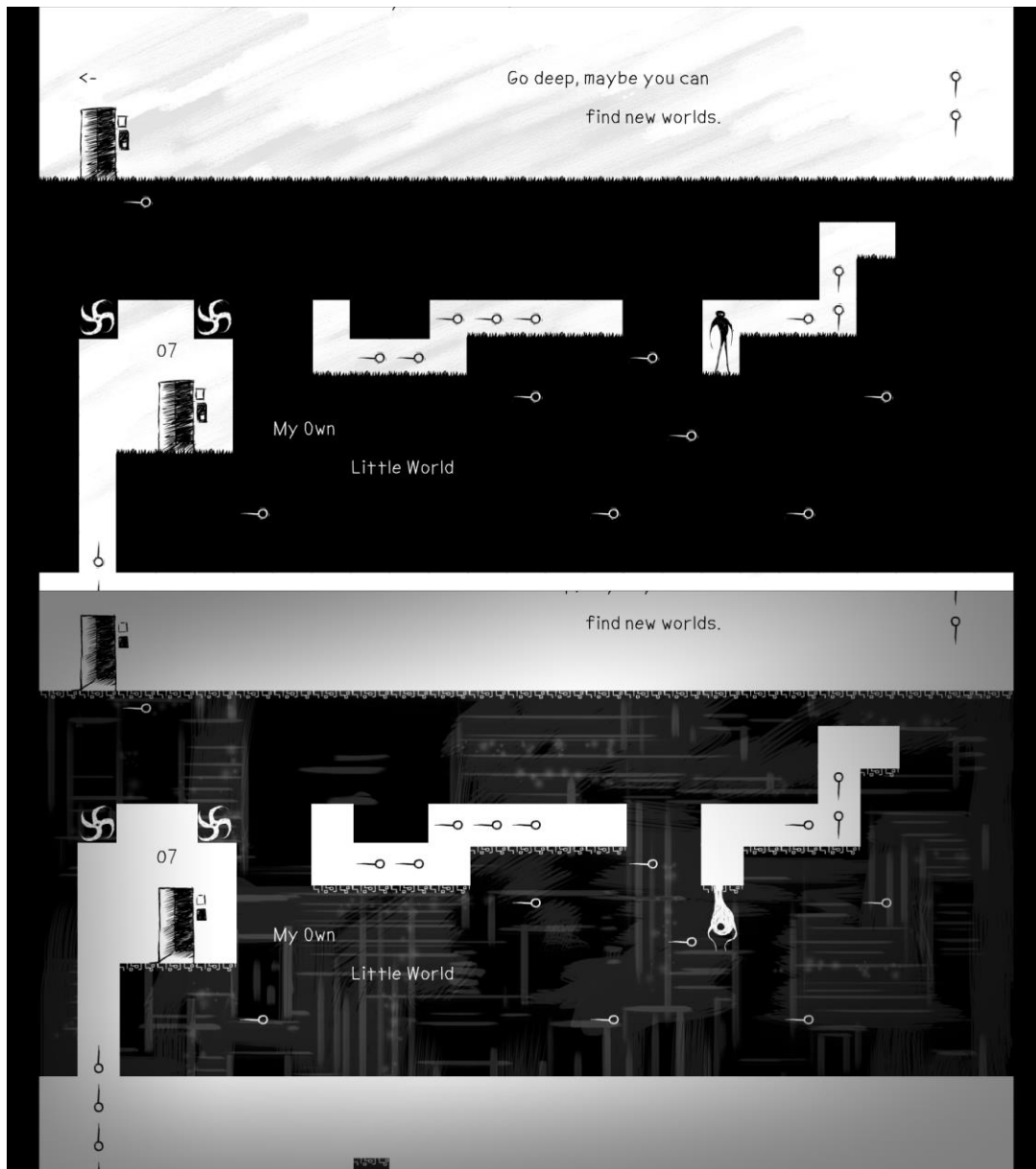
the place when he was seven years old and spent most of his life there. It is the only place Jacob considers to have friends (Figure 10, bottom). However if the player decides to be nice to Jacob when he asks Lilya to make amends of her interview to the media and, later, agrees with Jacob's theory about Vitalia's prophecy, he considers Lilya to be his only human friend. If the player chooses this path and both go back to reality, they end up having a relationship in the epilogue. The epilogue of this outcome shows how **dating** is also significantly affected by her social anxiety, as it can be seen on the description of Lilya's reaction to Jacob's confession "Even though she was not normally adept at expressing her feelings, Lilya worked up the courage and responded to Jacob's confession."

It is believed that staying in Vitalia for too long can be dangerous for the physical body. For that reason, one of the major plot developments in the beginning of the game is trying to make Ben return to reality. There is a situation that the player is in control of Jacob, while searching and finding Ben, and can choose to force Ben out of Vitalia or try reasoning with him. If the player decides to force Ben back to reality and afterwards don't provide him a way to return, Ben never again appears in Vitalia and holds grudge forever against Jacob during the epilogue.

In **Sym** you play the world of Josh, controlling his two alter egos, Caleb and Ammiel, balancing the tension of trying to overcome **fears** and complete **avoidance** from reality and **human contact**. Aside from walking and jumping, the main mechanic of Sym is shifting to the darkness world and back to the normal world, also shifting from controlling Caleb (Figure 11, top) to Ammiel (Figure 11, bottom), either by pressing "DOWN/S" or "UP/W". While in the darkness world the gravity is inverted, meaning you jump by pressing "DOWN/S" and fall towards the top of the screen. When in there, the level soundtrack volume is drastically lowered, rendering a muffled aspect, an echoing track and sometimes technological sounds.

This is presented in the game as an attempt of self concealment of the character, claiming the darkness world is a place to feel safe in reclusion. The first level of the tutorial "Down the Rabbit Hole" shows the character falling and shutting itself in near the text "Here I feel safe. Trapped inside" and in the following level "I don't want to go outside". Later on, the darkness world is regarded as not only the place of safety, but an alternate reality of power as the text "Here I'm the ruler" can be seen in the last level of the tutorial. However, this safety is not definitive, as the character finds ways to get hurt in the apparent safe world of darkness, by touching blades, which kills the character instantly and resets the level.

You never interact directly with any character in Sym, however late in the game you face characters that share resemblance with the main character. Other shadows appear in the levels of the last chapter "The END", if the player chooses the left door, near the word "HIDE". Their looks are the same of the main character in the normal world. Arguably they could be considered normal people inviting the character to **socialize** with no success, as the second level starts with the sentence "They are trying to stop me" followed by "'Come with us!'" and "'You can still be saved!'" both in quotes, indicating its their voice and not the main character, but the third level of this sequence offers a different perspective, mentioning they are trying to prevent the character from escaping. In this scenario they are likely to be healthcare agents, considering the previous chapter is named "Rehabilitation".



**Figure 11** Normal with Caleb (top) and darkness with Ammiel (bottom).

If the player chooses the path to the right on “The END” chapter, it is possible to find “friends”. They are likely depictions of other people in a similar situation of the main character, considering the resemblance and the fact that they are trapped inside the darkness world. Also they are regarded as friends and throughout the level there are scattered sayings mentioning cries for help from them. Helping other people in a similar condition, thus fostering empathic connections, is one of the possible endings that the character breaks with the extreme **avoidance**. By the end of the cutscene seen after finishing the chapter the message “Now you are ready to build a new world with your new friends” appears. Arguably in this ending the character learned to cope with his condition, while finding others that share the same condition, thus won’t pose a **negative judgement**.

### 5.2.3 Infliction of Harm

With the exception of Sym, none of the games analyzed feature enemies, however all of them depict diverse ways in which harm can befall the characters. In EIGtBok and Sym there are

depictions of physical self harm in the form of cutting. Although self harm is not a particular characteristic of social anxiety, comorbid psychiatric conditions, such as depression and anxiety are factors that can lead to inflicting self harm (Skegg, 2005). All those cases will be examined throughout this theme.

Many pages in **EIGtBok** depict some sort of harm inflicted to the characters. It is the case of Page 1 that features the bunny character falling on some spikes and, upon a click of the player, jumps and falls again on the spikes, saying things like “I am ok!”, “I am an optimist!”, “Hurray!” and “I love this!”, setting the absurd the game intends to use as a means to discuss its topics. A similar situation can be seen on Page 11 (Figure 12, top left), that features the bunny character impaled and saying “Ooooh... Not again. I’m so tired of this” and the objective is to hold on for as long as you can before succumbing. Then, the bunny character wonders about life condition, in a series of **intrusive thoughts** like “I don’t know what to say, am I less valuable now that this has happened to me?”, “Why live?”, “There is no surviving this”, and the player is given a cumulative timer and has some seconds to choose what to respond, often three options, but sometimes one or even none. Every new set of answers reset the answer timer, while the counter keeps progressing. If a wrong option is chosen, the bunny sinks further into the spike, providing a right answer stalls the bunny descent. There is no winning state, it’s a matter of how long the bunny can survive.

Other pages have depictions of the bunny split in half, without limbs, or both and carry relations to unattended cries for help. It is the case of Page 17, the first time the bunny is shown split in half, that the player needs to listen to meaningless advice and try keeping friends and followers as the bunny asks for a little help. Page 21 (Figure 12, top right) depicts the bunny continuously saying it lost its legs and can no longer walk, asking for help. Instead of receiving help, the so called friends say the bunny should give a speech and the player can assemble a slide presentation for this motivational speech. While the bunny is presenting the slides created by the player, it keeps saying it lost its legs and can no longer walk and receives support from a cheering crowd of friends. However this support comes in the form of oblivious appraisal like “You are such an inspiration” and “We need to know more”.



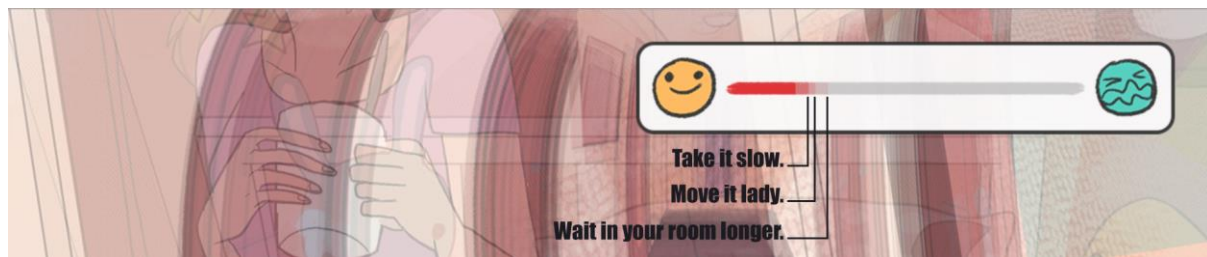
**Figure 12** Pages 11, 21, 22 and 26 (from top left to bottom right).

Page 22 (Figure 12, bottom left) allows the player to choose emojis to describe the bunny feelings and receive reactions from friends. They only support the bunny if it shares optimistic emojis, whereas the neutral emoji results in confuse reactions from friends and the sad emoji results in negative reactions with sentences like “Your friends find you overbearing!” “Your negative tone is scaring your friends!”. After four attempts on any of the four available emojis, the big skull button appears and pressing it makes the bunny give up. At this point, it appears the first opportunity to interact with the suicide helpline by clicking on “HELP.exe”. Then the worms decide to build a boat out of the bunny’s parts and drag it to the end of a river down the waterfall. The player is able to click on the bunnies by the outlook that give empty and dismissive advice, which only stalls the inevitable fall of the bunny and worms. After that, it is shown the last sequence of messages offering true understanding and validation intending to decentivize suicidal thoughts. In Page 26 (Figure 12, bottom right) the player needs to click on the bunny’s limbs, ears and tail, making the bunny lose all those parts. Then a message prompt appears with the text “Stop lying to yourself” and the player is given the options to click on “Ok”, ending this page, or “Denial!”, that repeats the same scene until choosing “Ok” or closing the page.

In **TAEaSB**, choosing actions that cause distress for the character increases a meter and are usually followed by a reflection from the character about the present situation. It is important to highlight that, while the game addresses it as a hunger meter, it seems appropriate to address the meter as depicting anxiety.

A situation related to foreboding potential interaction with other people is what provides information for this claim. For example, when outside the room for the first time, the character enters a **dizzying** moment when facing the hallway and the player is given three options “Move it, lady”, “Take it slow” and “Wait in your room longer”. Choosing “Take it slow” builds the least amount on the meter and is followed by the reflection “I’ll just take a

deep breath and everything will be fine. Yep, everything is totally good.” and upon straightening the vision “There. That’s a little better. I just have to take this one step at a time.”, whereas choosing “Move it lady” does not have the additional reflection and goes straight to “There. That’s a little better. I just have to take this one step at a time.”. Arguably choosing “Move it lady” can be framed as the least time consuming of the three options, therefore building up less hunger, however it increases the meter by a small but higher amount in comparison to choosing “Take it slow” (Figure 13). The difference build up for choosing “Take it slow” and “Move it lady” can be based on the distress of having to just face something dreaded without giving yourself a moment to process the situation. Later in the game, the attempt of socializing, by saying hi to the girls in the kitchen also increases the bar by a significant amount, which is also likely to be related to anxiety instead of hunger.



**Figure 13** Overlay comparing the different build ups for each choice.

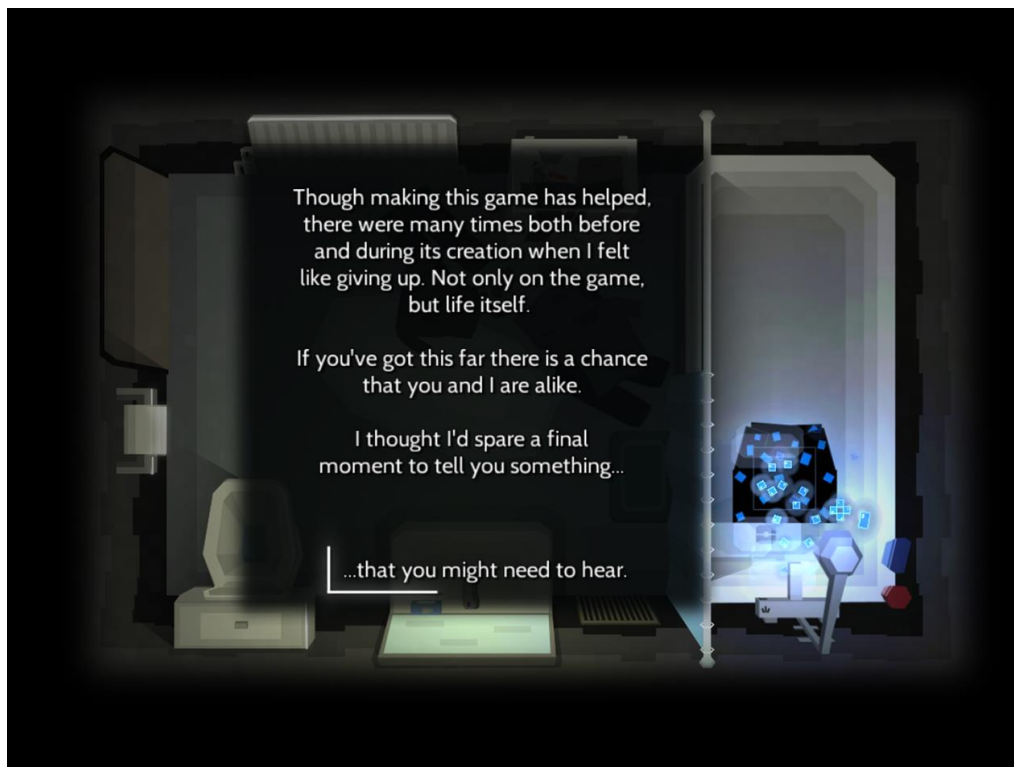
Considering this meter is analog to the traditional health bar present in many games, a statement can be made that harm comes in form of anxiety and, in opposition of a traditional health bar, it can't be recovered during the timespan of the game. It only goes up and your best course of action is to deal with it while still manageable and hope that it is enough to fulfill the goal of successfully making dinner.

There are two situations that can be considered, in the context of the game, more extremes in which you can give up your health and succumb to the anxiety by staying in your room and skipping dinner. One of them is actively deciding to do so, by choosing “One day without food isn't the worst” after deciding to go back to the room, instead of facing the corridor. The other possibility is by going back to the room, but deciding “But...the hunger?”, and then going back to the room a second time when reaching the kitchen door by choosing “Run away!”. The second method makes Samantha give up on eating dinner instantly. Both situations trigger one of the bad endings that feature the character's belly rumbling until she passes out from hunger, showing how **avoidance** of potential social interactions can affect negatively the character **routine** by giving up to attend a vital need.

In **PKoMD** the player is given control of either trying to take best care of the character, or be responsible for additional harm that might befall him. While performing the character's activities, he will often engage in a series of **intrusive thoughts**. While ignoring them prevents the character from losing much mental fortitude, giving into the thoughts decrease the current mental fortitude but provide long term benefits. The dynamic of this balancing suggests that, even though it is harmful to give space to those thoughts, it is relieving not to be fighting all the time allowing for a balanced attempt to care for his mental health, combined with other actions like eating, showering regularly and not sleeping late.

During the first week, in one of the moments of contemplation by the window, the narrator says “Try not to kick yourself when you're down. Self-loathing is a powerful force”, while still

showing to be preoccupied with the mental state of the character. However if the player fails to follow this advice and neglect the character's needs, such as eating, keeping his hygiene, sleeping and also keeps on skipping work, the mental state of the character suffers greatly.



**Figure 14** A heartfelt personal message from the developer.

If the player keeps pushing the extremes of the character's mental state, by the end of the second week the voice of the narrator changes to the personal voice of the author (Figure 14), acknowledging the hardships he endured to make the game and to get through life as well. Through a series of thoughts that can be read in this occasion, he addresses the struggle of anyone that feel resonating with the game and ask to reconsider giving up. This leads to an ending of attempted suicide.

Harm in </reality> is depicted by Ben manifesting an attitude of complete disregard for his physical body once he gets to know Vitalia, due to his **avoidance** of reality and feeling of belonging there. It is suggested that prolonged staying in Vitalia can render unforeseen consequences for the person's health and, coming back after a long time connected, could lead to what they call "reverse immersion shock" that is a strong disorientation and physical distress by the shock of returning to reality. For these safety reasons, Jacob demands that the testers attend to regular breaks after some hours inside Vitalia. During the first visit everything follows accordingly, however Ben is drawn to find out more about what lies in the outreaches of Vitalia and requests the help of Lilya to access forbidden areas. The player has the option of helping him or denying assistance. Either case leads to Ben crossing to the forbidden zone, since if the player refuses to offer Lilya's assistance the story progresses with Ben disclosing to have acquired help from Max, one of the other testers of the Penta.



**Figure 15** Lilya worries about Ben (top), hospital visit (bottom).

After the incident of Ben refusing to log out from Vitalia, on the following day Lilya’s concern grows (Figure 15, top) as Ben remains unconscious. When the testing of Penta resumes, the player is given two options to deal with the situation, exiting Vitalia and taking Ben’s body to the hospital, or attempting to pursue him through the forbidden area. If the player chooses to pursue Ben, they end up having a conversation about their **avoidance** tendencies, as Ben replies Lilya when confronted about his escapism “Running away? Escaping reality? Isn’t what people like us do? Don’t you spend most of your life playing Realms?”, leaving her in shock by how it resounds with her reality. However, Lilya keeps worried about Ben’s safety and tries to persuade him inquiring about one day when the servers would shut down and he’d be forced out “Then what? Brain damage? A life as a vegetable? Or, if you survive, a life where you’ve been rotting in a hospital for ages and need to do physical therapy to even walk again?”, which makes him scared but leads to no result in regard of him logging out. On the other hand, if the player decides to take Ben to the hospital, he keeps unconscious and receives medical assistance. Lilya asks the medical staff to not remove his Penta device, worrying that it might cause him damage (Figure 15, bottom) and learns that it was removed already. This is the first opportunity for the player to learn that the Penta device is not the only way to access Vitalia.

As mentioned before, in **Sym** the player can enter an apparent safe space by shifting to the darkness world. However, in that space it is possible to find spinning blades (Figure 16) that are harmful to the character, which is likely to be an allusion to self harm, by cutting oneself. With that considered, it is possible to infer that the character also suffers from other psychiatric condition, such as depression, which is a possible risk for self harm (Skegg, 2005). One of the first levels that the player can interact with blades shows the text

“BLADES are deadly only in the dark world” (Figure 16), reinforcing that the likelihood of inflicting self harm comes along the withdrawal.



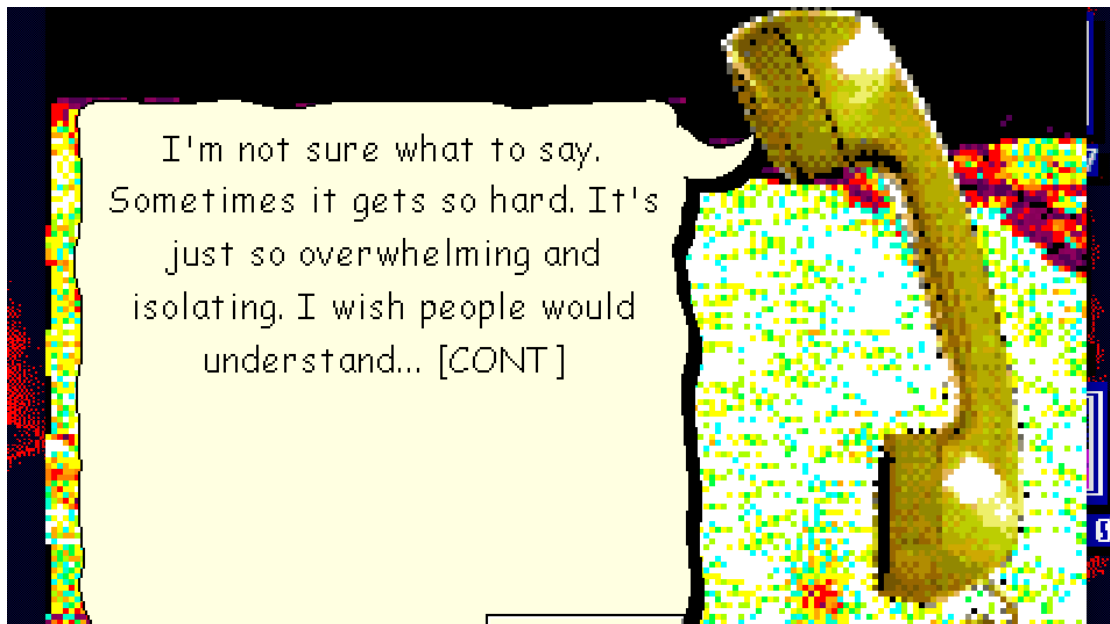
**Figure 16** “BLADES are deadly only in the dark world”.

Considering one of the possible endings of giving in into the isolation for good, it can be seen as a harmful decision that lead to an irreparable state of mind as Ammiel sinks and grow its roots, trapping Caleb in a small space. By the end of the cutscene seen in this ending, the player receives the message “Now you are ready to build a new world just for yourself”, further indicating the isolation is meant to be permanent.

#### **5.2.4 Ominous Tone**

All games analyzed presented a level of ominous tone in the way they are presented or in their narratives, and often related to **intrusive thoughts** and **foreboding**. Some has this characteristic more explicit, as it is the case of Sym and PKoMD, and some progressively become more ominous, as it is the case of EIGtBOK and </reality>. Even the seemingly not ominous TAE AoSB also can be perceived as such. All those cases will be examined throughout this theme.

**EIGtBok** plays in the humorous field and intends to celebrate the ones that struggle and manage to keep on surviving thus far. That considered, many pages leave it clear an underlying ominous tone to the game. Considering the interactions of the pages 11, 17, 21, 22 and 26, mentioned in the infliction of harm theme, along with the suicide helpline (Figure 17), it is likely that the depictions of sliced bunnies are a metaphor for a person feeling “broken”, as a derogatory term often used for people suffering from mental afflictions, and the lack of genuine support the person might be facing, therefore supporting the intended message of the game that surviving all that pain is something to be celebrated.



**Figure 17** Suicide helpline by the end of Page 22.

Page 27, the last one, shows the four worms saying “Now that the beast has died we will live inside it!” and take over the bunny skeleton remains. Then the “skull-worm” says “I believe in second chances” and the player can click on the arrows to move the “skull-worm”, guiding it upwards, as it reads after clicking any arrow “Fly, my friend! Be free! Reach for the sky!”. Flying bunnies try to cut the “skull-worm” by saying it is not permitted to fly and the player can click on them to receive a question that can either be answered positively, clicking on the green check, or negatively, clicking on the negative x. If the player answers positively, a random star rating is awarded, if the player answers negatively, the flying bunny burns and falls. By the end of the ascending, there is the void on top of it all and touching it says that the void embraces you with your current star rating. During Page 27, before the scene that is possible to fly, the player is prompted to “Download the pdf”, being taken to a page all upside down on the author’s website, or “Generate the pdf”, saving the file in your computer. The download button on the page leads to a donation prompt with the description “This cry for help is free but the creator accepts your support by letting you pay what you think is fair for the cry for help.”, but the pdf can also be downloaded regardless of paying. The pdf is called “INSTRUCTIONAL.pdf” and contains an “egg-like” character that asks you to follow it through the penultimate page when it asks you to cut it and make it free, then in the following page has the message “Thank you, kind stranger. Bless you.” and a heart. Even at the bitter and ominous end, the author preserves its humor and the aesthetics of the ridiculous that the game is built upon.

**TAEaSB** might not be ominous at first sight, but the tone presented by the narrator, which is also the main character Samantha Browne, shows an intense **foreboding** of social situations that adds an ominous twist to the seemingly cute aesthetic.

One of the first moments in the game sets up the *impending doom* tone for the narrative. While chatting with CharBot on her computer, there is a window besides the chat playing a video of a couple in a funeral and they are visited by a reaper with a clipboard.

This tone can be seen at Samantha’s inner monologues, constantly **worrying** about being **judged**. During the beginning of the game Samantha gives in a series of **intrusive**

**thoughts** regarding what people would think of her if she would be seen eating oatmeal late at night. This judgement is clearly present when you try to collect three packs of oats, whereas if you decide to collect only one she says it's not enough to be considered dinner and two packs is the best choice because, in her words, "I'm hungry but I'm not a cow" hinting for more judgement involved. This sequence also displays Samantha's **public self-consciousness**, as she worries about how to be perceived by others in case of being seen eating three packs of oatmeal (Figure 18).



**Figure 18** A display of public self-consciousness from Samantha.

When walking on the corridor Samantha plays an internal discussion about not being a people person and her despise about communal kitchens and also goes over an angry reminiscing of a time she had a real life interaction with someone. Reinforcing that the character is affected by people judging her and is taken by situations of constantly **reevaluating self performance in interactions**. Midway through, during the first time walking the corridor, an event happens involving a door sound, making Samantha freak out a bit and be thankful that it was a false alarm of someone coming. After this event plays, she continues her rant on people by saying she does not want to see, hear or talk to anyone. This foregrounds a strong aversion of interpersonal interactions by the character and **avoidance** of situations that might lead to **starting a conversation**. It also makes evident the difficulty of **using public spaces** the character has.

Upon reaching the kitchen door, the character again engages in **foreboding** entering the kitchen as the lights are on. She starts being afraid that someone might be inside and even wonders about something she regards being the worse: "WHAT IF THEY WANT TO EAT WITH ME?!". After that, she is hesitant on entering the kitchen, stuttering while wondering if she should go inside, and it is given the option "Run away!", which leads to Samantha going back to her room.

In **PKoMD** the ominous tone is ever present, due to the character severe depression. During the timespan experienced in the game, the character simply cannot grasp a way out of his situation and is completely hopeless. The ominous tone is accentuated by the narrator, as the

**intrusive thoughts** impersonated, that at first tries to act friendly and worries about his mental state, incentivizing him to take better care of self. However, if the player is not able to provide means for the character to move out of the apartment by the end of the first week, the character suffers a breakdown and the narrator becomes vicious and puts effort into bringing the character down.

When it happens, some texts that once were the white, like the narrator's voice and some of the decisions the character could take, become red, setting the even more ominous tone after the breakdown suffered by the character. This change can even be seen in the the main menu (Figure 19, left), the descriptions of the actions and the names of rooms.



**Figure 19** Second week menu (left), intrusive thoughts of suicide (right).

Regardless of the frequent messages with a friendly, interested and supportive tone from colleagues at work, including the character's ex-girlfriend Amy, the strong **intrusive thoughts** make the character keep on doubting himself and thinking everyone hates him. It is possible to grasp the severity of those thoughts when the character remembers how they would often lead to suicidal thoughts (Figure 19, right). If the player does not take good care of the character's mental fortitude, it can be the case of reaching the point of attempting suicide, but is prevented by someone breaking in and rescuing hm, leading to one of the game's endings.

The ominous tone in **</reality>** is presented through the impending collapse of the world of Vitalia, usually referred as "The sundering" or "The calamity" through the game. Once the story advances, from the middle onwards, the game becomes a journey to save the parallel world of Vitalia from utter destruction (Figure 20, top). For that the characters must interpret a prophecy, which the original meaning was lost to the ages, and attempt to avert the destruction that spreads faster in Vitalia.



**Figure 20** World ends (top), Jacob ponders (middle), bridge collapses (bottom).

Vitalia is presented as a “more than real” version of the world and by the end of the game the player is given the choice to remain there forever, never returning to the “real world”, or returning to the “real world” and abandoning the world of Vitalia for good. For Ben, as aforementioned, this is the only viable option and if he is still in Vitalia by the time of acting to avert the sundering, his choice is always staying. The player is able to decide for Jacob, whether staying or returning to the real world, and during his pondering (Figure 20, middle) he engages in a series of **intrusive thoughts**, expressing how precious Vitalia is for him and wondering if the spirits might not truly like him “Vitalia has always been my precious refuge. A place of comfort, safety, adventure, and learning. But that was only because the spirits accepted me. And cared about me. That was why I loved this place. But now I am not longer sure what they think of me”.

Before the player decides where Lilya will go, the character Max tries to abandon Vitalia for good and not put her life at risk by taking part on the spirit’s endeavor of trying to save the

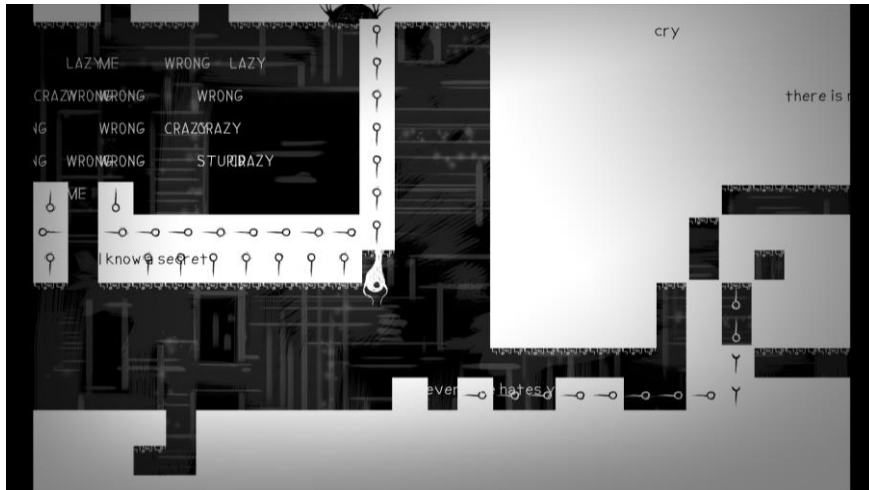
world. She holds a personal grudge against the chosen spirit Yuki, as Max believes Yuki is the responsible for the unexplained deaths of her parents. At this moment, the player finds out that since the worlds are connected, recent catastrophes on Earth are a consequence of actions coming from Vitalia. This is presented through some messages Lilya receives on her virtual reality goggles about a “fire spreading in North Brazil and Colombia”, an “epidemic in Australia” and mentions of people getting mysteriously ill. After this revelation, the player is given the option to reveal Lilya’s birthmark to the spirits or keep it to herself. This decision affects if Yuki will be able to perform the ritual in time to save Vitalia. If the player decides to share the mark with the others, while they are trying to convince Yuki to perform the ritual, Lilya manifests her troubles to **start a conversation**, especially about her birthmark that is a topic she is particularly not comfortable, by thinking “Come on Lilya. Don’t be a chicken. This could be important.” before actually showing the mark. If the player shows the mark the calamity is averted, however if he player does not, Vitalia is destroyed swiftly and in the epilogue it is told that the Earth also is destroyed, despite of the slower pace.

Regardless of reversing or not the sundering, or where the characters decide to stay at, the bridge between Vitalia and the real world collapses (Figure 20, bottom), making the character’s choices of where to stay a decision that affects their lives permanently.

In **Sym** three aspects are mainly responsible for conveying the ominous tone. Its ever present dark atmosphere of high contrast black and white environment with monstrous shadow creatures, the narrative of a journey down that can end up in permanent isolation and the recurrent **intrusive thoughts** narrated through the levels.

The chapter names help piecing together the narrative of the character decline, as they read “Down the Rabbit Hole”, “My Own Little World”, “I Want to Disappear”, “Fear and Loneliness”, “Building Self Confidence”, “Rehabilitation”, “The END” and the chapter selection level contributes by being literally a descent journey. Each chapter entrance lies further down the path.

Messages seen throughout the levels indicate how the character has absolutely no hopes for improvement and offer a perspective on the extreme **avoidance** Josh experiences. The fourth level of “Rehabilitation” chapter (Figure 21) presents **intrusive thoughts** of the character considering himself “lazy”, “crazy”, “wrong”, “stupid”, among other things and, through the flow of tears in the face seen on the right of the image, it is possible to read “Everyone hates me”. Other levels further indicate that the character only sees complete isolation as an answer to the struggles faced.



**Figure 21** Intrusive thoughts are strongly present on this level.

As mentioned in the Infliction of Harm theme, one of the possible endings depicts the confirmation of the negation that Josh presents throughout the story. It's a situation that the character is now "ready to build a new world just for yourself", sealing himself in a permanent state of isolation.

### 5.2.5 Unwanted Attention

In **EIGtBOK** there are some pages that deal with the awkwardness and discomfort of being the **center of attention**. This is the case of pages 10 and 18.

Page 10 starts with the bunnies finding that the little green worm was asked out by a guy and decide to share some hard earned advice, then the worm follows with "Oh no not again...". Before proceeding, a foreword warns the player of potential triggering content of this page, then if the player decides to continue, a counter starts followed by "Girl talk!" and the bunnies start saying their advices. The white bunny will say a longer sentence, followed by a comment from yellow bunny (Figure 22, top left). Three hearts are shown on top of the screen while the bunnies are talking and they shrink and disappear if the player chooses wrong answers. After hearing their advice about abusive relationships and sexual oppression suffered by women the player must cast a spell (Figure 22, top right). It is possible to choose to cast an "Argument", saying a logical thing, "Evade", changing the subject, or "Temporary surrender: take it to heart", completely agreeing with what the bunnies are saying even if the worm would prefer to say otherwise. It is not clear if the worm is meant to be close to the bunnies, or even if they are supposed to be friends. However, regardless of the choice, correct and wrong outcomes are random, showing **difficulty to talk to the people** from the worm, as it can't establish a clear communication with the bunnies. It can also be argued that the bunnies giving the advice are not open to hear what the worm has to say, by being completely dismissive, in the case of casting a wrong spell, or offering a generic asserting, in case of casting a correct spell.



Figure 22 Pages 10 (top left and right) and 18 (bottom left and right).

The Page 18 depicts a situation where the bunny approaches two ghosts that greet the bunny and it responds with “Yay! You’re talking to me? Ok... I can do this...”. This surprise highlights the bunny’s **troubles to start a conversation**, as it appears to be something unlikely that the bunny wouldn’t expect from getting close to the ghosts. Then the counter goes off and it’s “Socialize” time. The two ghosts start carrying an indistinguishable conversation (Figure 22, bottom left) and in the screen is possible to see a timer progressing, indicating how many seconds the conversation is lasting and a meter measuring the level of awkwardness. After a short while, the screen changes to a moment of picking up what to say (Figure 22, bottom right). What the player is supposed to choose is instructed in the bar that quickly depletes and all the options are flashy blinking texts containing one word or sentence related to the instruction. If the bar is depleted, it is considered an awkward silence and choosing a wrong option is considered rude because it is viewed as an attempt to change the subject, both increase the level of awkwardness. If any of the two wrong outcomes happens, the ghosts complain with the bunny, which in turn says something about trying harder and promising it will do better or that the bunny can do it. The level of awkwardness never goes down and there is no win state in this page. After filling the level of awkwardness bar, the player is given how many seconds the social interaction lasted before it got awkward and there is the sentence “No, you don’t talk too much.” reassuring a potential worry of **embarrassing** itself from the bunny.

One of the bad endings of **TAEAoSB** (Figure 23) shows all the people from the dormitory floor giving Samantha annoyed or surprised looks, for she had broken her mug and made a lot of noise. Considering Samantha didn’t even want to be seen eating her oatmeal, this ending is a culmination of many dreads, being **embarrassed**, **humiliated** and, most of all, being the **center of attention**, summing up many of the negative aspects of interpersonal interactions for someone suffering from social anxiety.



**Figure 23** Samantha becomes the center of the attention, surrounded by eyes.

The sequence culminates with the people's faces turning into eyes, reinforcing the symbolism of others watching and judging. Unwanted **eye contact** becomes a haunting thought, as Samantha covers herself from the attention gained and peoples faces are reduced to watching eyes.

In **PKoMD**, one of the incentives given by the narrator for the player to maintain the hygiene of the character is mentioning that, if he does not clean regularly the colleagues at work will notice, therefore attracting unwanted attention. This can be seen as a display of

**public self-consciousness** from the character in which, despite his struggle to keep going, how he is seen by others is still a concern.



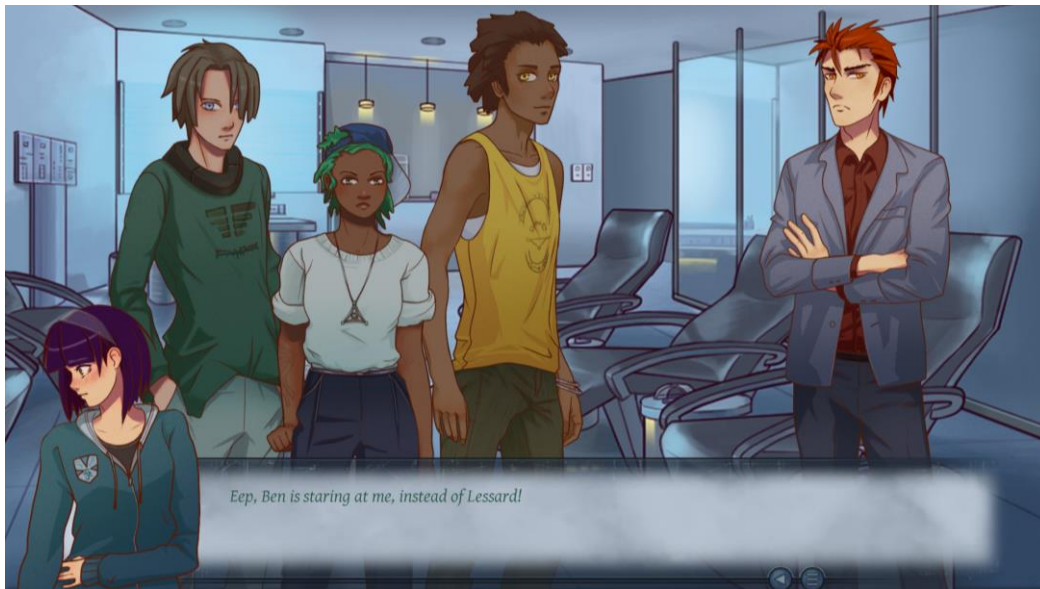
**Figure 24** Aversion of eyes (left), eyes with hope (right).

**Intrusive thoughts** from the player also include a mention of how the character sees hate in other people's eyes (Figure 24, left), along with other mentions of the character thinking he is hated by everyone. It is worth to notice that the only eyes depicted in the game are from the main character, which are most of the time with a negative appearance, while other characters that can be seen through the window have no eyes, likely representing the character aversion of making eye contact with others. If the player manages to move to another apartment, he gets a friendly and cheerful call from Amy, proving that she doesn't hate the character and it is quite the opposite, she would have liked to help with the moving process. This is the only scene that depicts the character with hopeful eyes (Figure 24, right).

Another one of the thoughts from the narrator is about a hypothetical situation in which he would accept an invitation to go out with his colleagues. He mentions "But everyone is talking, and you don't want to be rude... wondering if it would be ok for you to speak", which is likely a mix of both an issue with attracting unwanted attention to self and anxiety over **starting** or taking part in a **conversation** during a **social gathering**.

In **</reality>** Lilya is often conscious about avoiding contact, or attention drawn towards her, although this trait becomes less apparent when she is pulled to the endeavor of preventing the doom of Vitalia, save for the moment she is about to show her birthmark as mentioned before and ahead in this theme. On her first time in InterMense, before beginning the testing procedure of the Penta, Lilya becomes uncomfortable (Figure 25) when she realizes that Ben is staring at her, instead of paying attention to Jacob's briefing. At this moment Jacob should be the **center of attention** and not her, as she thinks "Eep, Ben is staring at me, instead of Lessard!". This worry keeps on going as she shows **private** and **public self-conscious** of her attitudes and **intrusive thoughts** doubting if she's made something wrong "Oh, he looked away. But why?! Was I doing something wrong? I'm just sitting here!", some suspicion of further unwanted eye contact from Jacob "Did Lessard just glare at me?!" and then "No, what am I thinking? I'm imagining things. Why am I paying so

much attention to everyone?!”. Just some instants before this happening, Lilya had an awkward conversation with Ben, as the two of them were the first to arrive and she was left to wait with him. At this moment, she engages in a series of **intrusive thoughts**, like “I have to wait with a stranger? Gah, why did I get here so early?”, manifests physical symptoms as **difficulty to breathe** and thinks “Breathe Lilya. You can do this. Keep it together.”. Then, she regrets her attempt to be polite and start a conversation, thinking “Ugh, maybe I shouldn’t have started that conversation after all... Now the silence just feels more awkward.”, afraid that it would end up attracting further attention to her.



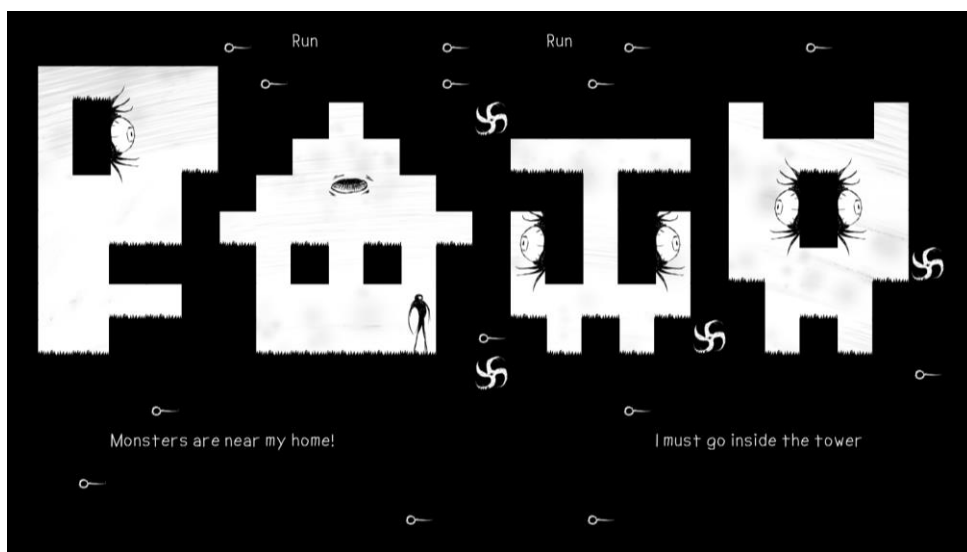
**Figure 25** Lilya is uncomfortable when realizing Ben is staring at her.

The eyes of Ben are also something frequently brought up in </reality>. During the time Lilya is waiting with Ben she wonders “Woah. What’s up with his eyes? Are those contacts? Or some kind of gene mod?”. Later, in Vitalia, the player is given the option for Lilya to ask about Ben’s eyes, or don’t say anything. In either case, Ben talks about his eyes, whether by responding Lilya or acknowledging he knew she was about to ask that. This depicts Ben’s **private self-consciousness** of his physical characteristics and he also attributes his worry of being **considered different**, in part, for his eyes. When Jacob is searching for Ben in Vitalia, the player can choose to make Jacob attempt to bond with Ben, making Ben say “People *seem* to like me, at a surface level. But, they choose not to include me. Not to invite me. Not to think about me. As if I don’t exist. They just don’t seem to *care*. It feels wrong. And lonely.” and that maybe it’s because of his eyes.

As mentioned above, in the Ominous Tone theme, Lilya is reluctant to draw attention to herself, when it comes the time to show her birthmark, at the same time it is difficult for her to **start conversations**. This is something the player can also learn early in the game, when the testing team is waiting at InterMense. Max suddenly approaches Lilya, leaving her uncomfortable with this abrupt approach and attention, as her thinking reaction reads “Eek! She’s talking to me all of a sudden!” while her avatar changes to the scared sprite. At this point, the player is given the option to keep the conversation, or try to bail and snoop around the Penta device room.

Jacob, while talking to the spirit cat Kumori, discloses that he created a persona of “Mr. Lessard, the genius programmer, entrepreneur and calculating scientist” for him, attempting to diverge attention for the lonely person he really is and to keep pushing his plans to save Vitalia, by bringing more humans there before knowing this wasn’t the solution. By wearing this persona, Jacob is able to socialize and talk to the testers, although he still struggles and even manifests a strong **foreboding** when anticipating interactions with the testers “I have a headache just thinking of what to say to them” and Kumori mentions he is overthinking.

In **Sym** there is a recurrent argument about **watchful eyes**, as it reads in the third level of the tutorial “Eyes watching me. Always”. They come in the form of big eyes, always looking but unable to reach the character when concealed in the apparent safety of the darkness world. There are many mentions through the game about the eyes of others and the uneasy feeling caused by them.



**Figure 26** Eyes and the mentions of monsters around the character.

One of the first levels (Figure 26) features the environment negative space resembling monsters, each with a set of those eyes and sentences with the saying “Monsters are near my home! I must go inside the tower before it is too late” hinting a shut in from the character with a monstrous perception of others’ gaze.

### 5.2.6 Limited Agency

If, for Janet Murray (1997), agency is related to a satisfying power in exerting influence in the game, one noticeable characteristic of the analyzed games is the opposite of that. As Brown and Marklund (2015) present, loss of agency is a recurrent feature of horror games that can also be present in games that aren’t often regarded as such. It is important to note that, by identifying this theme, this is presented with no intention to categorize the games as horror, but to foreground an important element of the analyzed games.

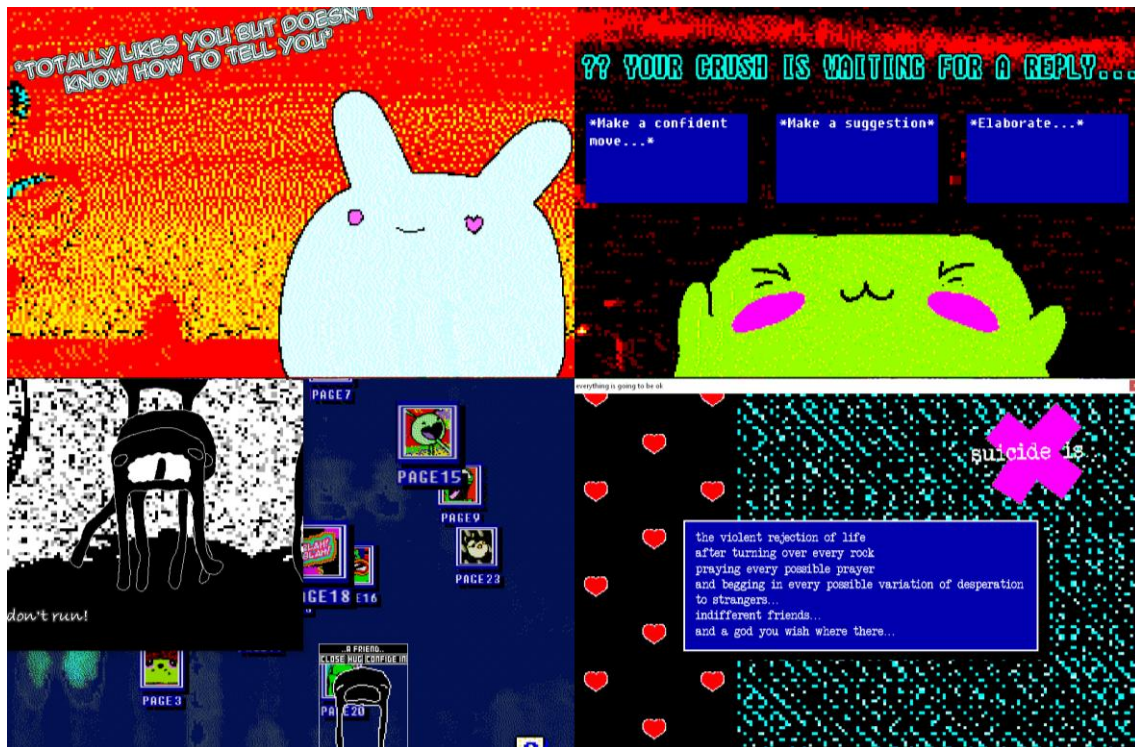
Agency in the games analyzed can have a different limitation range depending on the situation. This will be examined more thoroughly, when exploring this theme, as it seems to have apparent correlation with solitary versus socially related situations. Another characteristic that composes this theme is the uninformed choices the player faces during many situations on the games.

Interactions in **EIGtBok** are limited by their often impossibility to achieve what would be considered a desired result, random outcomes out of player interaction and uninformed choices.

In Page 3 the white bunny asks the help of blue bunny to find love. By clicking on blue bunny it changes to a screen showing its thoughts towards the white bunny that are unable to be expressed (Figure 27, top left), for it is nervous to **start a conversation** about its personal feelings about white bunny. Also in this page it is possible to control white bunny in the search of love and click on green bunnies, the “crushes” of white bunny. Clicking on them opens a new screen in which the player has to decide between three options of what to say to the crush (Figure 27, top right). All the options are vague and there is no real way to make a conscious decision, hence an example of uninformed choice. Another example of that can be seen on Page 10 as well, in which the player needs to cast a spell for green worm and the descriptions are not informative. The same happens in Page 7 when trying to make the green beast feel better by choosing between three options that can’t have a precise meaning inferred to them.

In Page 19, the first screen with the long legged creatures features the “friend.exe” that opens a small “..A FRIEND..” pop up window (Figure 27, bottom left) with a long legged creature and three options “CLOSE”, “HUG” and “CONFIDE IN”. Closing shuts the window, whereas hovering on the hug or confide in options make the long legged creature run away screaming and dragging the window along. This can be seen as a likely metaphor for **expecting the worst** out of social interactions, especially when by the end of this page the bunny gives up on trying to make friends and says it doesn’t need to be loved anymore.

Other forms of limited agency can be seen on Pages 11 and 18. It is not possible to “win” in any of those pages, nor it is possible to improve the situation, as it is a matter of enduring for as long as the player can. In Page 11 the bunny will either keep on falling, if the player chooses wrong answers, or simply keep on the same place, if the player chooses the right answer. In Page 18, the conversation doesn’t get any less awkward, as any progress in the awkward level bar is not reversible. In Page 21, when you are composing the slides, you have many resources to express your creativity. However, when it comes the time to give the speech, regardless of what you write for each slide, the bunny will keep on saying it lost its legs and can no longer move and the audience will remain oblivious to the bunny struggle. After frustrating social interactions from Page 10 and unheard cries for help from Page 11, it is possible to gain access to personal writings as poems from the author (Figure 27, bottom right). Those are a change on the expressionless communication made so far on other pages, and are likely a metaphor of how the author is able to better express when not having to deal with social interaction.



**Figure 27** Pages 3 (top left and right), 19 (bottom left) and 11 (bottom right).

Interactions in TAEaSB follow the pattern of clicking on the options to choose the desired outcome of presented events. Sometimes you have to click anywhere on the screen to advance. It is in one of those moments that if you click specifically on the handkerchief holder you blow your nose. However, there are two particular situations, both in the kitchen, that contrary to what is presented throughout the game, remaining still or clicking around lead to different outcomes. One of them is standing still while waiting for the water to boil in the kettle, that leads to a more relaxed reflection before continuing the sequence, whereas clicking anywhere during that moment or using skip mode triggers Samantha’s inner thoughts, **reevaluating her performance** in the previous situation and builds up anxiety. The other is while choosing to “Hide in the corner” after pouring water on the oatmeal, in which the character engages in a inner thought while a timer is counting. If the player does not give in into overthinking, no anxiety is built up, whereas letting the thoughts flow can lead to a series of anxiety build ups while the timer is running.

You are always presented with a small number of options to address a situation and, aside from blowing the nose and the kitchen situations, have no other way to influence the game. This restricted set of interactions contributes to making the player impersonate Samantha, as the choices are contextually giving her perspective on the situations. A player cannot exert its “free will” to shape the character’s actions and you have nothing to do when things go out of control.

The amount of interactions available in TAEaSB also changes when the character is alone, without the possibility of anyone interfering, in comparison to when social interaction can take place.



**Figure 28** Attempt to be polite (top) and choosing oatmeal flavors (bottom).

Inside the kitchen there are two girls talking at the central table (Figure 28, top) and Samantha’s reaction further affirm her indisposition towards people as she says “Nightmare confirmed.”. Samantha wonders if she should say hi to the girls and the player is given the option to try saying hi or heading straight to prepare her food, ignoring the girls. Choosing to greet them makes Samantha increase anxiety, she stutters and the girls don’t respond, staring at her appearing to be weirded by the interjection. Then Samantha carries a sequence of **intrusive thoughts**, both **reevaluating her performance** and displaying **public self-consciousness** by deeming possible things to say inadequate to make the situation better, anticipating that the girls would judge her.

When Samantha is alone, in different situations, she can go through a series of interactions, showing a steep contrast to available interactions when other people are involved:

#### **Alone - Inside her room**

- Chat on the computer
- Stay in bed longer
- Blow her nose
- Collect oatmeal
  - Decide oatmeal flavor
  - Decide oatmeal amount
- Collect the spoon
- Collect keys

### Alone - In the corridor

- Decide upon how to handle the situation
- Enter kitchen
- Back off and return to bedroom

### Alone - In the kitchen

- Heat water
  - Avoid doing anything (don't click around or enter skip mode)
  - Fidget (click around) and give in into anxious thoughts
  - Open oats packages
- Clean the kitchen
- Hide in the corner
  - Wait patiently (don't click around or enter skip mode)
  - Give in into anxious thoughts (click around)
- Take the oatmeal right away
- Further heat the oatmeal in the microwave
  - Keep heating
  - Stir it (opens up for three additional stirring rounds)
- Take the oatmeal barehanded
- Take the oatmeal using the shirt to avoid burning the hands

### In company - Inside her room

- Talk to CharBot on the computer

### In company - In the kitchen

- Say hi to the girls there
- Ignore them and don't say anything
- Say automatic passive-aggressive lines to a girl checking on you in the kitchen
- Say automatic passive-aggressive lines to the girls, when leaving the kitchen

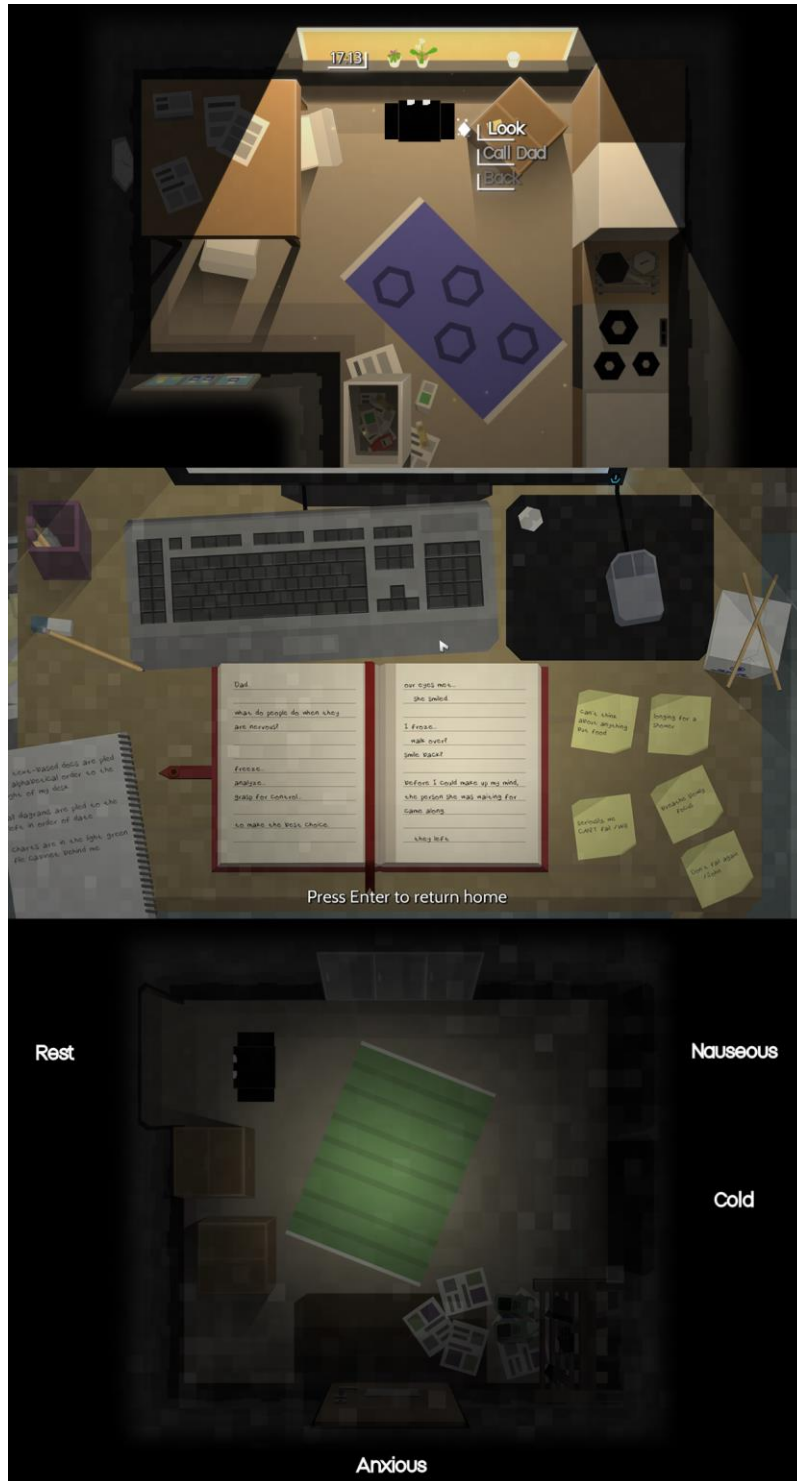
If you leave the kitchen with the hot mug, Samantha speaks “Shhh. Don't you dare say anything to me.” This is likely to be speech, rather than a thought, because if you leave the kitchen holding the mug with your shirt Samantha says “I'm leaving, so you can have your precious kitchen back...”. Both situations foreground the character's struggles with **talking to other people**, as they carry the same passive-aggressive tone. The automatic lines Samantha abruptly throws at the girls can also be argued to be a sign of **tension** regarding interpersonal interactions, as it can be seen as a statement that the character has a harder time to perform social norms.

The game also deals constantly with uninformed choices, as the options aren't exactly clear regarding their outcomes. This is made particularly clear in the beginning, when giving in some thoughts increases anxiety, and reinforced when deciding which and how many packs of oatmeal to take (Figure 28, bottom). Choosing to eat the Blueberries and Cream oats increases the anxiety meter as Samantha responds the attempt with “Meh, I don't think so. Not today.” and you are left to choose between the two other oats package. Choosing to eat the Maple and Walnuts oats increases the anxiety meter as Samantha responds with “BLAHHHH. I guess. I mean it's not my favorite but it'll do.” and picks the package. If the

player decided to try collecting the blueberries and cream package before, the anxiety meter increases a second time when selecting maple and walnuts. It is still possible to increase anxiety again by choosing one or three packs, also contributing to showing the character's **public self-consciousness**, as she worries about how to be perceived by others according to how many packs the player decides to collect. Samantha judges it too little or too much, however choosing a second "wrong" automatically ends up selecting two packages with no additional anxiety increment. Choosing to eat Apples and Cinnamon oats is the only positive response possible in that moment of gameplay, not contributing to anxiety increment. This does not exempt the fact that anxiety can still be increased by choosing one or three packs.

Collecting or not the keys also relates to a series of uninformed choices and can lead to different endings. For example, by choosing "No, uhhhhh..." in front of the door and then "What about the things?!" after Samantha wonders if she has everything needed is the only way to collect the keys. Any other options will make her leave the room without the keys, perhaps also hinting for a characteristic of Samantha's character as a forgetful person. Going outside the room without collecting the keys can lead to two anxiety spike endings. One being when Samantha stands in front of the kitchen door and the player decides not to enter thus returning to Samantha's room by selecting "Run away!", leading to the character being frustrated for having no food, no means to contact anyone, sitting outside and concluding that once in the room she will never leave again, potentially increasing the character's tendency of **avoidance** due to a traumatic event. The other one is when the food is successfully made and transported back, leaving Samantha with the food ready, but outside the room waiting for someone to come by. Both scenarios are regarded as bad endings, followed by the ending screen stating that the player failed to feed Samantha.

When starting **PKoMD** it is possible to choose between the modes "The Story", in which numbers are hidden and don't affect available choices, "The Game", in which numbers are shown and affect available choices, and "The Experience", in which numbers are hidden and still affect available choices. For this analysis the "Story" mode won't be considered, as it is a means to facilitate players to witness the game outcomes without having to deal with the restrictions of the game system.



**Figure 29** Unavailable option (top), fidgeting (middle), blocked paths (bottom).

The main mechanics of PKoMD are interacting with objects and deciding which action to take from a list. Other situations, such as some textual descriptions of situations at work also are chosen from a small list. As mentioned before in the Infliction of Harm theme, the player has to balance the character's mental fortitude, as some actions require a certain level of mental fortitude to be performed. When unavailable, those options are grayed out (Figure 29, top), making them visible but impossible to perform. During the first week it is possible that the unavailable options are related to difficulty to **start conversations**, such as calling

the character's father, which requires 80 of mental fortitude, chatting on the computer, which requires 60 of mental fortitude and interactions at work like attempting to talk to Amy while seeing her in the cafeteria. If the player goes through the second week, many options will be unavailable, due to the character mental breakdown, and will have their texts changed to a more ominous descriptions such as "What's the point?" when trying to do the dishes that are piling on the floor already.

From the entrance hall it is possible to go to the office where the main character works. In the office space it is only possible to read notes written by the character on his to-do list and personal diary, post-it notes left by his coworkers and fidget with many objects, like the chopsticks, pencil, mouse, turning the monitor on and off (Figure 29, middle). However, none of those actions produce any result, although they can be considered an option to play with anxiety through fidgeting. The option to go home is readily available by pressing Enter. Sometimes, in the work environment the player is presented with choices that dictate the outcomes of some situations related to work assignments or interactions with coworkers. It is possible that options are visible but unavailable, depending on the current mental fortitude of the main character. Although they require the character to have enough mental fortitude to perform, interacting with others are a possibility to increase mental fortitude.

The game displays the current time and performing actions take some time that vary greatly. This can be considered an uninformed choice, as the player can't have precise control of the schedule, even by having constant access to the current time. This is amplified during the second week. Although the player could have figured how long it takes to perform each action, this is not valid anymore for the second week, since performing some actions can cause the character to "lose time", leading the actions to last for hours instead of only some minutes.

During the second week there are also other situations that the character can't perform simple actions like going to the kitchen, or the bathroom, left only with the option to go to the bedroom and, while there, the way out is also blocked, hence the only option is to sleep through (Figure 29, bottom). The names of the rooms, which are visible when approaching the areas, also change to ominous words during the second week.

</reality> and **Sym** both have a lesser degree of limited agency from the interaction perspective. In </reality> the player can save and load the game at any moment and it is possible to rewind the story, making it easy and fast to test many possibilities in the game. Also, every choice the player has to make comes with a descriptive text, providing context to that choice. In Sym it is possible to consider the first part of "The END" chapter as an uninformed choice, since the messages in the level "HIDE" and "LONELINESS" don't provide enough context to be an informed choice. Especially considering that the latter leads to the ending where the character finds new friends.

## 6 Informants' Perspective - Experiential Workshop

As mentioned in the Research Methodology chapter on the section *4.2 Experiential Workshop*, the workshops were conducted through video conference, on Skype and Google Hangouts. The sessions were consensually recorded for later transcriptions and translations from Portuguese to English. Themes were identified by the researcher based on recurrent, or emphasized topics an informant presented, or from repeating a topic from a previous informant.

The procedure of the workshop is comprised by an interview, followed by a doodling activity and a moment to reflect about their creation. For the sake of a more fluid reading, the results are documented starting by a presentation of themes identified during both the interview and reflection moments and then followed by the description of the doodles created. The doodles descriptions are then separated between *The Unpleasant Social Experience Scene* and *The Pleasant Social Experience Scene*, save for Informant 1 that had the workshop following the opposite order of representations.

From the conversation and reflection about the doodles created, a set of themes could be identified from topics the informant emphasized or recurrently mentioned. Themes are shown in bold as the text presents them, since some of the themes showed interconnections it would be of little benefit to completely separate them.

The themes identified on the interview, coupled with the doodlings created and reflection lead to a diverse and nuanced perspective, providing additional information to compare with the games analyzed for this project. Such perspective highlights that the method employed has the potential to uncover aspects that will enhance the research of social anxiety in games. This will be further elaborated later in chapter *7 Discussing Games and Informants Perspectives*.

### 6.1 Informant 1

The workshop transcript can be read on the **Appendix B**. However, only the translated version is available on this document.

Informant 1 posed that **eye contact** was a good thing, considering it a form of communication, along with the body language of the person participating in the interaction, that allows for a better understanding of the other person's intentions. The lack, thereof, of impersonated contact makes up for a anxiety inducing communication. The informant mentioned this kind of communication to be stressful, as it is hard to have a good understanding of the person's opinions and what the person really intends to communicate. Different from what the informant acknowledges as the expected for social anxiety, **online communication** is harder for the informant, in comparison to real life interactions. It could be either an email, that you might have no idea of the content, or a message arriving at the phone. However, being able to preview and formulate an understanding of what the message is about mitigates the stress caused by the unexpected contact.

The informant, then, presented **vulnerability** as an important factor and this can be perceived in two different ways. When you expose your ideas, opinions and share who you are, you place yourself into a vulnerable position, open for anyone's **judgement**, which is a situation that induces a great deal of anxiety. On the other hand, by approaching the

situation from a **curiosity** point of view, this vulnerability wanes. As it was stated above, personal situations, in which the informant is able to establish a more reliable connection to the other, make for a mutual exposition and the vulnerability of all the involved makes up for a comfortable situation. It is possible to understand what the other thinks and is, as you share what you think and are. This **exchange of experiences** mitigates the vulnerability and allows for a sense of acceptance and true sharing, turning it into a positive situation.

To deal with anxiety situations, the informant mentioned to have developed a drive to **face the problems**, instead of avoiding them. From the informant's perspective things are very hard until they are stop being hard and become feasible. In days of disposition, the informant takes the opportunity to do the most possible, preventing anxiety to take over. Approaching from a curiosity point of view also helps on those situations, framing the annoyance as "where this will lead me?", instead of being afraid of the uncertainty. Adopting healthier habits, such as exercising, eating healthier, having a routine with activities that help venting, are some measures the informant took that are helping to prevent anxiety to go out of control.

The informant mentioned that during peaks of anxiety the default response is wanting to **disappear**, as a natural reaction. Confining to safe spaces and removing themselves from the situation. However, avoiding to face the situations and just waiting for time to pass, while in denial and withdrawal, only leaves the informant more depressed and anxious. Although the informant mentioned not to have had anxiety crises for a while, it was described as the brain entering an **obsessive thinking**. Usually, in such situations, the informant mentioned to rely on the help of another person to break the mental loop of obsessive thinking.

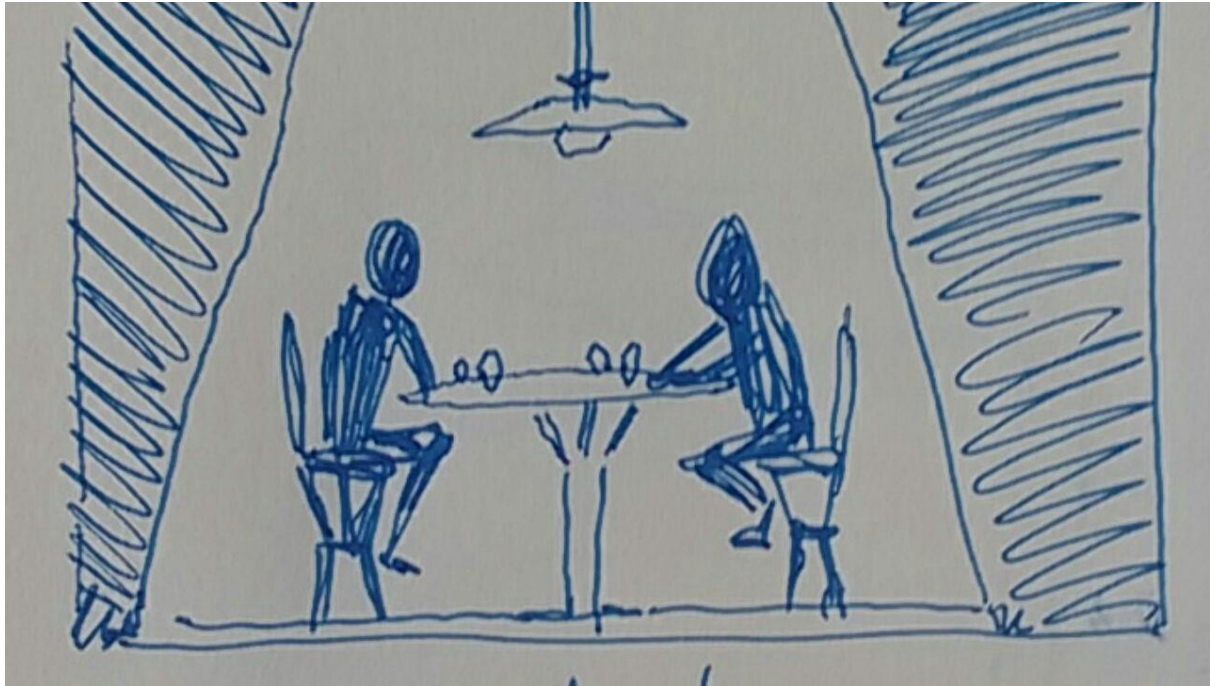
### **The Pleasant Social Experience Scene**

This scene (Figure 30) features two people sitting at a table, under a spotlight, and darkness surrounds them. The same light that shines creates safety, leaving darkness outside the border. There is **safety** to show how one feel, how one sees the world. It is part of a journey of people knowing each other in depth and one must give something in order to receive something from the other. Intimacy allows a truthful experience of sharing. As the informant expressed:

When you are sharing something and you say "This is how I see. This is how I feel", then the other person say "This is how I see. This is how I feel". This exchange is what allows for vulnerability in this case.

This sharing opens the people for a positive vulnerability, as one is seen and acknowledged by the other, making sure it is ok and there is nothing wrong. It's the act of sharing something true and being acknowledged by the other. Then the person can rest assured that there is no problem and nothing to be afraid of, it is to feel **accepted**.

Regarding game aspects, the informant imagined this situation as a playing metaphor for the sharing aspect. Possibly a token, representing a memory, in which you must actively share something personal from yourself and then receive something in return for that. This idea is intended to be a metaphor for the informant's life experience of sharing intimacy.



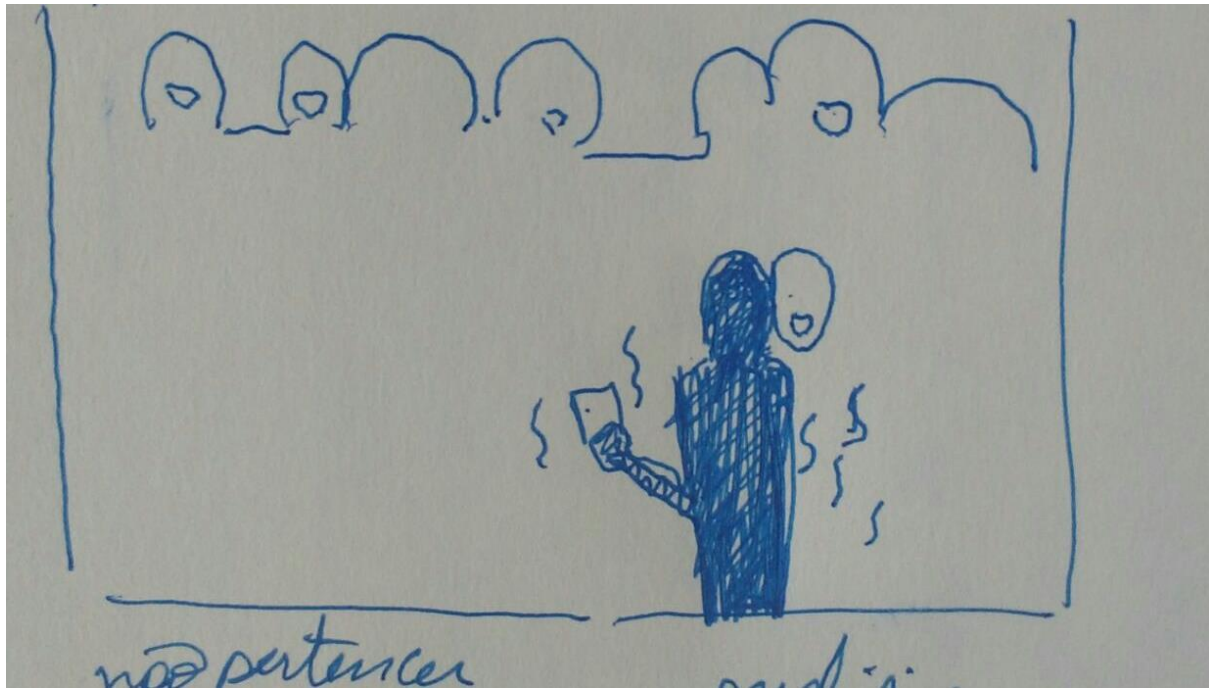
**Figure 30** Doodle of the pleasant social scene made by the Informant 1.

### **The Unpleasant Social Experience Scene**

The scene represented (Figure 31) is something that recurrently happened on the life of the informant. It is about being in a gathering, whether a party or any friends reunion, and being struck by a piece of information. This information can come from a message on the phone, or something else that is triggering, but once it happens it takes the person an emotional field completely different from the people around. Such distance from the current situation leads to a feeling of **isolation**, because it is expected that the person should be sharing the activity with the others. Instead of that, what actually happens is that the person is turned towards absolute introspection, leading to paralysis. It also comes with denial of those feelings. In the words of the informant:

The sensation is of complete paralysis. Because you are trying to deny what you are feeling, that you, in a certain way, put a label of "wrong". Or you somehow try to deny, but at the same time you can't run away from that, because you need to deal with what is bothering you. So, this is the sensation I have. My reaction is really a flight or fight on those moments. It's wanting to get the car and go home. Flee. Disappear.

However, despite of trying to deny what's going on, you want to escape the situation and just can't, because you need to deal with what is bothering you. When it comes down to this, the intention is to seek for physical isolation in order to regain comfort on a seemingly safe space, because the presence of other people amplifies stress.



**Figure 31** Doodle of unpleasant social scene made by Informant 1.

This time, regarding imagining a game or interactions related to the scene imagined, the informant couldn't think of specific interactions that would represent properly as a game. However, the informant believes it must be related to the feeling of not belonging and should the person try to belong it wouldn't not possible. Also, attempts to ignore what is happening lead to no result.

## 6.2 Informant 2

The workshop transcript for the second informant can be read on the **Appendix C**. However, only the translated version is available on this document.

For Informant 2, having difficulties with socializing was always a part of their life, with an ever present hardship of making friends and talking, in general. Recently, however, the informant acquired consciousness and **accepted** that this is, indeed, a part of who the informant is and the anxiety won't be erased. Although the informant mentioned to still not understand completely their condition and how it feels, it was also acknowledged that the anxiety each time has less space to grow. What can be done is work with it, which is something the informant is taking care of. As it can be seen when asked about ways to cope, the informant mentioned to having sought professional help and started taking anxiolytic and antidepressant medication and explained how they improved to deal with social anxiety:

They help a lot, because they make it way easier not to emphasize so much on that. They don't make you become someone else. You don't automatically become someone hip and cool that easily talk to people. But the experience I had with them is that they give you more strength. You didn't have this energy before.

**Energy** is an important factor for the informant regarding socialization. For the informant, talking to people is always an active effort and never flows naturally. Every interaction requires careful thinking and it is something that drains energy. The informant went on and

said that even some endeared friends might end up draining energy, for their opinions and attitudes are often permeated by **conflict**. And, according to the informant, conflict is a key aspect to this kind of situation. Such situations can be when the person is always discussing and keeps questioning the informant, or when the informant doesn't feel at ease to express freely, lead to energy drain. To the informant this kind of situation always drains a lot of energy. On the other hand, when the friend is laid back and accepting it's way easier to the informant. When the informant was asked if avoiding conflict was a guiding decision on their interactions the answer was:

In my interactions... that's the problem. I don't seek to avoid conflict, in fact I go heads on towards them. But they drain my energy.

As the informant recognizes, **unfamiliarity** is what makes up for the most troublesome kind of interaction. It is a situation the informant doesn't know what to expect, or which patterns to recognize. This unfamiliarity extends to relatives. According to the informant recollection, their mother always liked to visit relatives and forced the informant to greet and say goodbye to each one every time. Those situations were always the most terrifying for the informant. However, as it was then reflected upon, it's not like the informant didn't know how to deal with such situations. It was a matter of strongly not wanting to, no matter what.

When asked about situations that the informant doesn't feel like facing, but has no option, the informant told that it used be permeated by **obsessive thinking** that would even manifest physical symptoms, such as heart palpitation and feeling feverish. The informant would be rehearsing in their mind what could possibly happen, taking hours to sleep while going through every dialog and social interaction, intending to be prepared with what to respond. Nowadays the informant mentioned trying to only shrug and face the situations, instead of stressing so much and it is a concrete sign of improvement.

Regarding recognizable patterns, the informant mentioned that **visual contact** is an important factor in interpersonal interactions. It allows to read signs on the other person's face, along with hints of what is, in fact, going on. This works regardless of being interactions in person or through video, as the key aspect is being able to have a real time visual reading of the other person. When asked about other forms of non presential communication, the informant considered messaging to be impersonal enough to be free from social pressures and acknowledged **telephone** as the most dreadful of all forms of communication. According to the informant perspective, on the telephone the person is left completely on the dark, while not benefitting from the impersonal factors present on instant messaging. To emphasize how bad the case with telephone is, the informant disclosed that had already reached the extreme of paying other people to make phone calls in their place.

### **The Unpleasant Social Experience Scene**

The scene represented by Informant 2 (Figure 32) for the unpleasant situation depicts a character that needs to get from point A to point B, but there is a big obstacle in the way preventing this from happening. There is no way around this obstacle and the only way to reach the end is by keep pushing it until the top and this is **draining** at every second. Then, the informant mentioned this is a metaphorical situation that often happen with them and every new turn the obstacle is less imposing, as it can be perceived on the explanation:

It is something that still happens with me. But each time the obstacle, the boulder, gets a little more easier to push. I think it gets less a little less heavy. Before it used to be heavier and enormous, frightening and overwhelming.



**Figure 32** Doodle of the unpleasant social scene made by Informant 2.

### **The Pleasant Social Experience Scene**

When the informant was asked what waited on the other side, the informant showed the drawing made to represent the comfortable situation (Figure 33). At this point it was not possible to make an inference if that if it meant a reward for reaching point B of the unpleasant situation, or if it was a depiction of something separate but correlated of what comfort would mean, therefore being a winning condition. Regardless of which would be more accurate, as such precision lies beside the point of the workshop, the informant engaged in telling a story about the scene and this is the kind of information intended to be revealed by the workshop activities.

As the informant highlights it is more a series of sensations, provided by the experiencing the comfortable situation, rather than a exactly a game. It's a big bean bag with the character laid in the middle, it is warm and it feels alright. According to the informant, it is rare to reach such situations, but they do happen.



**Figure 33** Doodle of the pleasant social scene made by Informant 2.

The informant wouldn't know to estimate precisely why it is hard to achieve this level of comfort and acknowledges that, with rare exceptions, talking to people is something unnatural. Some situations, though, with certain people can facilitate achieving comfort, and in turn lead to **replenishing energy**. It is the case with the informant's significant other, that is someone the informant mentioned to have good communication with. Then the informant ended by saying that when it is not required to spend energy on the interactions it is something that feels good, laughing.

### 6.3 Informant 3

The workshop transcript for the third informant can be read on the **Appendix D**. However, only the translated version is available on this document.

Informant 3 recalls never feeling **comfortable** with other people, the same way the informant never felt comfortable with themselves. During childhood, the informant mentioned to have been a withdrawn kid in a school without anything in common with the other kids. When further elaborating these memories, the informant wouldn't know if it was an internal perception, if it was the unfavorable environment, or if it were both, leading to negative loop. As an introspective person, the informant told to have, since early age, leaned towards playing video games, reading and other individual activities, while having a great difficulty to perform interpersonal interactions.

Interpersonal interactions always seemed **artificial** for the informant. Although they seemed to appear to come naturally for other people, when the informant tried to do the same it felt artificial, as if it required the informant to think too much about something that was supposed to happen naturally, leading to **strangeness** and making the situation worse. The informant viewed it as a delicate situation, because trying to make sure if the interaction was being perceived as artificial or not, could raise awareness to something that would go unnoticed otherwise, thus leading to an uncomfortable situation because of that.

The severity of the social anxiety faced by Informant 3 changed along the years. During a period of severe illness, the informant stopped doing even the simplest everyday activities, lacking **courage** to do things such as taking a bus, or going to the bakery. It was related to an extreme fear of **judgement**, as stated by the informant:

I had no courage. I had no courage to take a bus. I had no courage to go to the bakery for buying bread, because I thought the baker would judge me and that it would be weird talking to him. And I would go back home with a bread basket and the doorman would look at me and say “there they go eating bread again”.

Nowadays, despite of the discomfort, the informant mentioned trying to do things anyways. This was a sign of improvement, as the informant realized waiting to get better was proving to be unhealthy and “getting better” didn’t exist. Instead, it was a matter of **accepting** it as part of self and finding ways to cope. When the informant explained about coping, it was also mentioned the recurring characteristic of **intrusive thoughts**, as it can be seen on this excerpt:

“I have an intrusive thought that I’m a horrible person and everyone hates me”. Before I could listen to this thought, but now I can decide to say “Ok, but that’s just my thought. If that person has an issue with me, I’ll leave it to the person to come and talk to me about it”, instead of trying to administer everything for everyone all the time.

Despite acknowledging this improvement and being able to look back and see positive things were achieved, such as making new friends, the informant said the thoughts are still there in the end, making the informant second guess each interaction and thinking they were disastrous. The informant also mentioned to often get anxious, afraid of saying something wrong, or talking too much and ends up talking even more, creating a loop of distress.

In the regards of forms of interaction, the informant mentioned that virtual communication tends to be more comfortable, as you are reduced to a screen and **not being seen** most of the time and it allows everyone involved to think before typing. According to the informant, a significant amount of the closest friends were made online, while nowadays the people the informant talks online are also known in person, making the distinction less significant. For the informant, **telephone** is a practical and alleviating form of communication, with potential to be less anxiety inducing than long message exchanges, allowing for fast resolutions. On the topic of trying to plan to meet friends, the informant talked about a recent conversation with a friend:

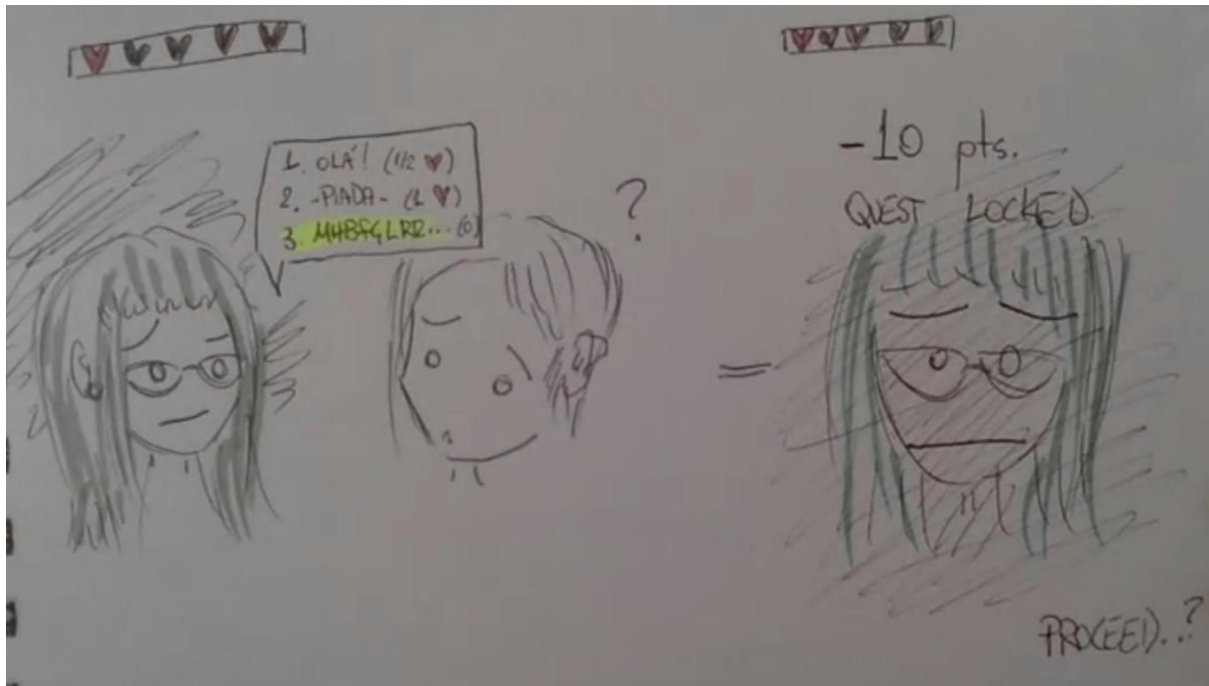
(...) with me it’s like a lottery. If you try to plan ahead, it could be that I might have accepted when I was having a good day. Then the planned day comes and I’m having a bad day, my social battery is depleted. I’ll cancel it. Now, if the person tries to set something in the last moment, I can get nervous thinking “But I didn’t even prepare psychologically for that!” and not accept.

When asked about the social battery, the informant mentioned is more like a **battery** overall. It is something that requires alone time to recharge, but it can happen that the informant is alone at home, feeling awful, and a visit from a friend can end up being recharging. However, in general, being among people is depleting for the informant,

especially when it's people with no **intimacy**. Even if it involves an endeared person, without a safe escape plan, the informant gets so nervous that can't face it.

### The Unpleasant Social Experience Scene

Both representations made by Informant 3 depicted scenes that would be part of the same game concept. The character interacts with other people by deciding what to say to the other person. However, those actions cost energy, which is represented by the hearts bar that would be present on top of the screen. Considering the character is already with a low energy, the only viable option ends up being the most weird one. As it can be seen on Figure 34, the other character is left with a “what” face after the main character says the weird line and, even though it has no impact on energy, opportunities are lost.



**Figure 34** Doodle of the unpleasant social scene made by Informant 3.

In the words of Informant 3, while talking about the situations depicted in the uncomfortable scene:

I'm afraid of being always about to say or do something that will ruin everything, let's say. Of the people say "Oh, now I know! You were just pretending to be a cool person. Now I remember why you are an execrable person. You weirdo!".

This correlates to one of the most prominent themes identified throughout the workshop with Informant 3. A constant insecurity that people would deem the informant as a freak, coupled with a “low battery state”, render the weird option the only thing possible to think, whereas the others lie unavailable.

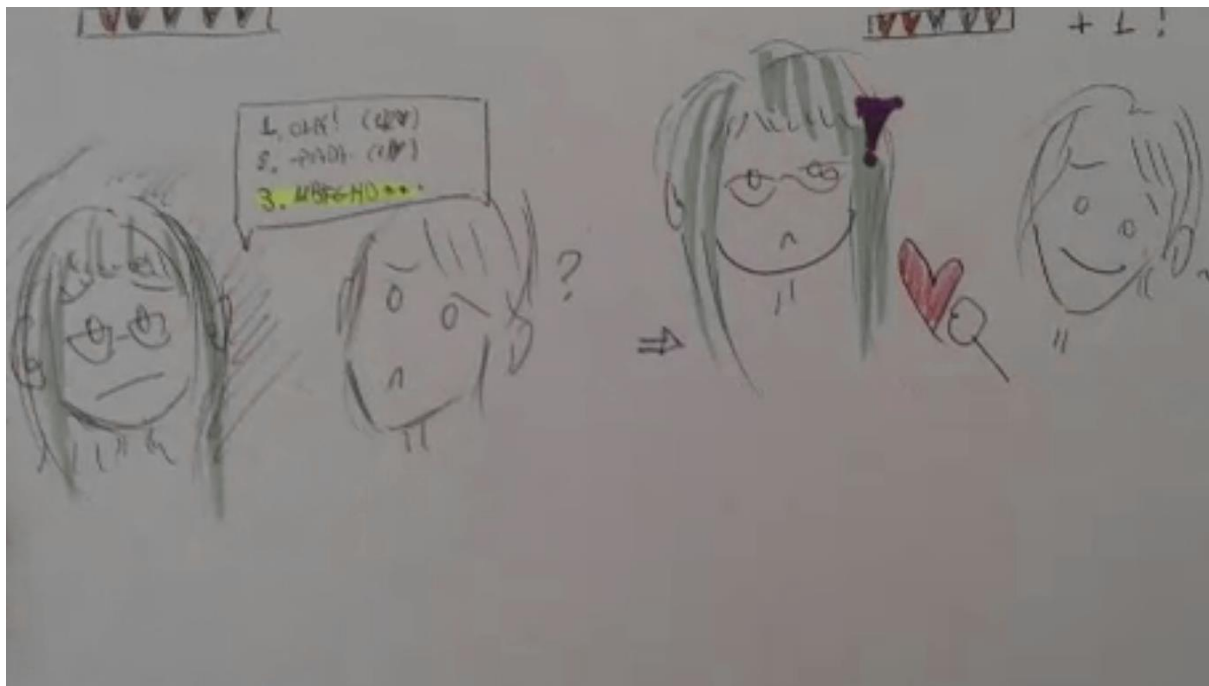
When asked about what the “PROCEED..?”, written in the right corner of the uncomfortable representation, intends to mean, Informant 3 complemented:

It's that moment of taking a deep breath and thinking "This is so exhausting. Should I go on? Should I leave it? Should I give up on making a friend? Should I give up on... Or should I take a deep breath and go back from zero?". Sometimes it feels like you're always starting over.

After explaining about the meaning intended with the proceed word, the informant elaborated the origins of the feeling of constantly starting over. In the middle of the teenage years, the informant was institutionalized in a psychiatric hospital and spent the following years going in and out of hospitals, while other people were carrying their "normal lives". This lead to a loss of learning and living "normal lifelike" experiences, which, in the informant's words, gives the feeling of being "an undercover alien walking among people". The informant also mentioned that this adverse feeling improved with the years, when learning that being different is not inherently bad, but the feeling of never ever having fit anywhere was and it is still present.

### **The Pleasant Social Experience Scene**

Regarding the pleasant situation (Figure 35), the informant stated that it would be the the exact same situation, but the twist comes when you're taken by thoughts of everything going wrong and realize there is no wrong answer. From that you won't be penalized and ends up being recharged.



**Figure 1** Doodle of the pleasant social scene made by Informant 3.

After mentioning the sensation of being recharged, the informant talked about other games that grant recharging experiences. It is the case with Stardew Valley (ConcernedApe, 2016) and Animal Crossing: Pocket Camp (Nintendo EPD, 2017), that the informant told to have invested uncountable hours in both games. When addressing conversations the informant usually have with their brother, which is fond of games accounted as hard, and later explaining why games like Animal Crossing: Pocket Camp provides a satisfying experience, the informant says:

Struggling is something I already have to endure in real life. In video games what I really want is that things be simple, you perform an action and get something in return.

(...)

Those creatures love me! They are always there with a word of kindness. I can't fail with them, I won't say anything stupid. It's very simple, I give them something and they love me back \*laughs\*.

The informant also mentioned that, in certain situations of not feeling well and with low battery, it is possible that having social contact with friends provide a recharging experience, even when such outcomes might not be expected. When asked if the informant have found a group that provided absolute comfort, the informant told that with maturity comes the realization that there is no such thing as absolute comfort. The key factor is acceptance. People that, in the informant words will say "Really? What did you mean? Calm down, take a deep breath." instead of being weirded and running away. Over time the informant realized that there are people up for that in their life.

## 7 Discussing Games' and Informants' Perspectives

Conducting a close reading on the five games: Everything Is Going to Be Ok, The Average Everyday Adventures of Samantha Browne, Pleake Knock on My Door, </reality> and Sym revealed a significant amount of information on how the structure and textual analysis relate to social anxiety literature, as it is reported on chapter 5 *Games' Perspective - Close Reading*. The same can be said about acquiring the perspective of informants, through the Experiential Workshop, as reported on chapter 6 *Informants' Perspective - Experiential Workshop*.

The last part of this work concerns discussing both perspectives, first individually, then compared through the lens of game design, by identifying game design patterns (Björk & Holopainen, 2005) to formulate the discussion. More information about game design patterns can be found on the *Background* section 2.1.3 *Game Design Patterns* and about how the method was applied to the work on the *Research Methodology* section 4.3 *Game Design Patterns for Discussing Perspectives*.

### 7.1 Patterns Identified Within Analyzed Games

To facilitate the the identification of game design patterns from the games' perspectives, a concept matrix (Table 2) was made to synthesize resources employed by each game to communicate each theme, as thoroughly written in chapter 5 *Games' Perspectives - Close Reading*.

**Table 2** Concept matrix of the analyzed games

Themes	EIGtBOK	TAEAoSB	PKoMD	</reality>	Sym
Real Life Anchoring	<p>Depictions of social media</p> <p>Routinary common activities</p>	<p>Common locations</p> <p>Routinary common activities</p> <p>Game goal related to an ordinary task</p>	<p>Common locations</p> <p>Routinary common activities</p> <p>Game goal related to an ordinary task</p>	<p>Real world geographic locations</p> <p>Balancing family relationship</p>	<p>Undergoing medical treatment</p> <p>Learning to cope</p>
Safe vs. Unsafe Spaces	<p>Barely no safe space</p> <p>Haunting thoughts</p> <p>Attempt to avert suicide of others</p>	<p>Social spaces as unsafe spaces</p> <p>Safety in loneliness</p>	<p>Barely no safe space</p> <p>Haunting thoughts</p> <p>Space becoming ominous</p> <p>Attempt to avert suicide of others</p>	<p>Isolation and escapism</p> <p>Space that allows social interaction</p> <p>Space of belonging</p> <p>Risk of calamity</p>	<p>Isolation and escapism</p> <p>Space that prevents social interaction</p> <p>Space that allows connection</p>

Infliction of Harm	Self harm Acknowledging suicidal thoughts	Disregard for bodily health; Physical symptoms of anxiety	Partial control of mental and bodily health Attempt to suicide	Disregard for bodily health	Self harm Irreversible negative outcomes
Ominous Tone	Recurrent intrusive thoughts Exploring extremes of suicide	Ominous narrator Recurrent intrusive thoughts Foreboding of social interactions	Ominous narrator Recurrent intrusive thoughts Exploring extremes of suicide	Calamity on a potential safe space Irreversible outcomes Foreboding of social interactions	Dark aesthetics Journey down Ominous narrator Irreversible negative outcomes Self-loathing
Unwanted Attention	Difficulties to start an interaction Be placed in the center of attention Being embarrassed in front of others	Aversion of eye contact; Be placed in the center of attention Being embarrassed in front of others	Keeping hygiene Aversion of eye contact Lack of eye depiction in others	Aversion of eye contact Be placed in the center of attention Starting an interaction Awareness of appearance Social persona	Watchful eyes Shutting in
Limited Agency	Less options to explore when in social situations Inability to perform desired actions Inability to "win" Uninformed choices Uncontrolled or random outcomes	Less options to explore when in social situations Negative spontaneous interaction Uninformed choices that can lead to anxiety Inability to control anxiety level	Unavailable actions Inability to leave room Uninformed choices related to losing time	Nothing of relevance	Uninformed choice when deciding action by the end of the game

Most of the game design patterns identified here are borrowed from the extensive list of Björk and Holopainen (2005) and therefore will preserve their original Names, Core Definitions and General Descriptions, with adaptations to the latter when necessary. However, since the objective is to identify the game design patterns that contribute to social

anxiety representation in the games, the examples from the General Descriptions will be described according to how the patterns are presented in each game to achieve that. To clarify correlations of the game design patterns with the content presented in the Close Reading analysis, Relations will also include what themes the patterns are related to.

### 7.1.1 Narrative Structure

*The structures of the stories that are unfolded by playing the game.*

Having stories in games gives players both motivations for the existence of goals and challenges in the game, and rewards for completing the goals by weaving the consequences of players' actions into an unfolding story. This *Narrative Structure* does not have to be completely fixed; many games for example allow many different kinds of endings or let players achieve goals in many different ways without affecting the overall structure of the story. (Björk & Holopainen, 2005)

**Using the pattern:** All the five games analyzed present a *Narrative Structure* that, through gameplay, allow a story to be told either explicitly as it is in most cases, or implicitly as it is the case of EIGtBok and Sym. Through the *Narrative Structure* the player learns that the goal in TAEASB is to successfully make oatmeal without being noticed, whereas in PKoMD the character is supposed to move to another place while suffering from severe depression, and in </reality> as the main character discovers a parallel reality also comes the realization that a looming threat puts both realities at risk.

In the case of EIGtBok, the *Narrative Structure* is less apparent than the other three games aforementioned, in a sense that a story is implicitly constructed and abstractly conveyed by playing each page. However it is still possible to realize a progression, as later pages start to show more severity in the events depicted in each page, therefore allowing to infer that the situation aggravates throughout the game. Sym presents a similar case, yet less abstract, in which a story is not explicitly conveyed but can be implied through the chapter title sequence (“Down the Rabbit Hole”, “My Own Little World”, “I Want to Disappear”, “Fear and Loneliness”, “Building Self Confidence”, “Rehabilitation”, “The END”) and snippets of thoughts that can be read on each level of the game, hinting that it is likely the story of a person undergoing a treatment.

As the story unfolds in TAEASB the player can know more about the main character, Samantha Browne, through her inner monologues and some actions the player is allowed to execute, which reveal more of how the social anxiety of the character affects her life. In PKoMD, along the progressing story, there is a temporal structure of hours and days, which allows the player to feel the routine of the character and how his depression and anxiety is affecting his health, routine and performance at work. His condition can be improved or worsened according to actions the player can perform in the game. In </reality> as the story unfolds the player learns more about the main character and how her social anxiety affects her routine and relationship with her family, however through actions the player can perform it is possible to make friends, or enemies, as the story progresses. EIGtBok deals with many themes throughout the game story and, in later pages, progresses to address more severe topics such as suicide. In Sym, as the story, new game elements are introduced and in the last chapter it is possible to either meet characters trying to pull the main character from concealment, making him shut himself for good, or meet characters in the same situation,

allowing to make new friends through empathic bonding and implicitly improving the condition of extreme withdrawal of the main character.

**Relations:** Instantiates *Identification*, *Extra-Game Consequences*, *Tension* and *Shifting Worlds*; modulates *Consistent Reality Logic*; instantiated by *Leaps of Faith* and *Irreversible Actions*; modulated by *Ability Losses*; related to Real Life Anchoring, Safe vs. Unsafe Spaces, Infliction of Harm, Ominous Tone, Unwanted Attention and Limited Agency themes.

### 7.1.2 Emotional Immersion

*Being emotionally affected by the events that occur in a game.*

Games can raise strong emotions in players. This can be because of stories present in the games, but just as likely because of emotional investments players have in the outcome of the game or its characters. (adapted from Björk & Holopainen, 2005)

**Using the pattern:** Most of the Emotional Immersion in the analyzed games comes from development of characters, either from *Identification* with the struggles they suffer or from personal investment into achieving their goals in the game. Although EIGtBOK doesn't have fixed characters, the characters played and interacted with impersonate many of the topics covered in the game, such as depression, trauma, social anxiety, etc, contributing to *Emotional Immersion* in the game.

*Emotional Immersion* can be also be created through pursuing the game goals, as it is the case of TAEASB, PKoMD and </reality>. The sensation of pursuing a goal can enhance any anticipation players have, as they become immersed in the story and invested in the outcomes that might occur in the game.

*Penalties* can also provide peaks of immersion along with continuous *Tension*, which is the case of PKoMD that if the player does not take good care of the main character it can incur in *Penalties* to his mental fortitude, even leading to *Ability Losses*. </reality> also employs *Penalties* as a motor for *Emotional Immersion*, through the risk of losing permanent access to “the real world” or the world of Vitalia, or having both worlds destroyed if the player doesn't partake in the efforts to save the world of Vitalia.

Allowing players to have more explicit information of potential outcomes of actions, as it happens in </reality> with the description of each choice, can disrupt the *Emotional Immersion* and lower *Tension* as the player is reminded about the game model.

The dark and lonely atmosphere is also a factor that sets the mood in Sym and contributes to *Emotional Immersion*, as it helps to deliver the *Narrative Structure* of the metaphorical journey down the severe depression and withdrawal intended for the game.

**Relations:** Instantiated by *Narrative Structures*, *Penalties*, *Tension* and *Identification*; related to Real Life Anchoring and Ominous Tone themes.

### 7.1.3 Identification

*The characters or parts of the game with which players identify.*

For players to feel any attachment to a game, they need something within the game to care about. This does not have to be a concrete game element but can just as well be a goal or type of action, but these also need some concrete game element through which players can try to

achieve the goals or actions. Thereby, players need to have some game elements that they have *Identification* with so that they can plan or experience the gameplay through them. (Björk & Holopainen, 2005)

**Using the pattern:** All the analyzed games intend to provide *Identification* to some extent and *Consistent Reality Logic* is one of the patterns that facilitate it. In EIGtBOK the *Identification* comes from relatable situations presented on many pages, as such as Page 10 offers a trigger warning disclaimer before entering a situation of *Tension* that deals with the topic of abusive relationships, or Page 19 depicting difficulties to make friends.

It is likely that a shy or socially anxious person, or someone close to such person, will relate to TAEASB presentation of Samantha Browne having a hard time to perform the simple task of cooking dinner in a communal area of a dormitory residence. The same can be considered in </reality> that the main character Lilya makes really clear that she has a hard time talking to people in real life and feels more comfortable to interact with her friends online.

PKoMD employs a very personal approach to *Identification*, even changing the narrator voice to be author of the game if the player actions lead the character to give in into the depression. It is also present mental fortitude system that requires the player to pursue improvement, otherwise the character will face consequences which can prevent him from performing some actions or going places, mimicking effects of severe depression and anxiety, keeping gameplay in constant *Tension* from trying to avoid *Penalties* in the mental health of the character.

The *Identification* in Sym is hinted by the *Narrative Structure* underlying process of learning to cope with mental illness, which can be either facilitated or prevented by the player actions.

**Relations:** Instantiates *Emotional Immersion*; modulates *Consistent Reality Logic*, *Tension* and *Penalties*; instantiated by *Narrative Structure*; related to Real Life Anchoring and Ominous Tone themes.

#### 7.1.4 Consistent Reality Logic

*Consistent Reality Logic governs that the game elements, the player actions and their consequences, and the game events are consistent.*

For a game to be consistent, it means, first, that there are no contradictions or irregularities in the functioning of the game. One fundamental layer of consistency concerns the degree to which our intuitive and natural ways of being in the real world are transformed into the metaphors used in the game itself. This means that all games have an internal logic that mimics reality or at least relates to how we understand reality through categories and relations. (adapted from Björk & Holopainen, 2005)

**Using the pattern:** Some of the games employ *Consistent Reality Logic* in their gameplay as a means of enhancing *Emotional Immersion*. This can be done by employing lifelike elements throughout the gameplay.

EIGtBOK has many situations of using mimickings of social media, like twitter or streaming channels, to convey the absurd of the content presented. This serves as a concrete counterweight for the abstraction of the game, reminding the player that situations depicted

do correlate to reality, even though presented in outrageous ways. TAEaSB also employs such elements like instant messaging and soap opera streaming, or allowing the player to perform menial actions such as blowing the nose, setting a consistent environment for the mundane game goal of having the main character eat dinner.

PKoMD intends to simulate a slice of the routine of a character suffering from depression and the gameplay employs *Consistent Reality Logic* to the available actions of the player, ranging from making the character eat, shower and sleep, to the *Ability Loss* from not having enough mental fortitude to perform some actions.

Even though </reality> presents a story of fantasy, it also employs recognizable elements of *Consistent Reality Logic* in its story, such as depictions of the character playing an MMORPG and using common “internet language” with her friends, real world locations and also family dramas.

**Relations:** Instantiates *Emotional Immersion* and *Extra-Game Consequences*; modulates *Penalties* and *Ability Losses*; modulated by *Identification* and *Narrative Structure*; related to Real Life Anchoring theme.

### 7.1.5 Safe Havens

*Safe Havens are locations in the game world where game elements under the players' control are safe from the actions of other players or the game events.* (Björk & Holopainen, 2005)

**Using the pattern:** *Safe Havens* in the analyzed games are more a metaphorical protection or a provider of comfort, rather than the original description of the pattern might imply. EIGtBok *Safe Havens* can be considered the rare moments when a character in the game can receive some comfort, as it is the case of Page 7, or when the game addresses the severity of the topics approached in the game and offers a personal and caring message intending to avert suicidal thoughts. In PKoMD, some of the few soothing moments happen when the character is staring at the window, although they can also be disrupted by intrusive thoughts. Similar to EIGtBok, PKoMD is also considerate to people that might be facing the same struggles, offering messages intended to avert suicidal thoughts.

Samantha’s bedroom in TAEaSB is her *Safe Haven* where she can express herself and not worry about being seen by other people, or having to interact with them. A similar occurrence happens in </reality>, that presents Lilya as a person much more lively when talking through a virtual chat.

In Sym the *Safe Haven* pattern can be considered the ability of the character to go to the darkness world, hiding himself from the world, however, as the story progresses, the player can come to the realization that the darkness world is not as safe as intended, hinting to consequences to the withdrawal. This change of realities is also present in </reality>, as Lilya is presented as a character more lively through virtual communication, or some of the characters that find the world of Vitalia their *Safe Havens* where they are accepted, in contrast to their lonely and faded lives in the real world.

**Relations:** Instantiates *Evade*; related to Safe vs. Unsafe Spaces, Ominous Tone and Unwanted Attention themes.

### 7.1.6 Evade

*This is the goal to avoid being captured or hit.*

Games can have dangerous elements to the player character and are best to be avoided. This encourages players to try and *Evade* these or suffer the consequences. (adapted from Björk & Holopainen, 2005)

**Using the pattern:** Sym is the only game that employs a concrete act of *Evade* as a goal, by requiring the player to avoid touching the enemies and other threats, such as blades, found throughout the game.

However, *Evade* can also be considered a metaphorical goal in TAEASB, in which the main character has a clear goal of not being seen by other people while attempting to make herself dinner. PKoMD and Sym also presents this metaphorical meaning, given the fact that the characters' thoughts tell that they are seeking to *Evade* contact with the world and the player can either facilitate or avert this process. All those situations contribute to promoting a feeling of *Tension* throughout gameplay.

Although the goal presented in </reality> is to save the world of Vitalia, the player is also presented sub goals related to *Evading*, as it can be seen when the character Max tries to convince Lilya not to save Vitalia, because she alleges it is a dangerous place. If the player chooses to stay in Vitalia for good, regardless of the outcome of saving it, it means *Evading* reality.

**Relations:** Instantiates *Tension*; instantiated by *Safe Havens* and *Shifting Worlds*; related to Safe vs. Unsafe Spaces and Unwanted Attention themes.

### 7.1.7 Shifting Worlds

*The game space changes to a different Game World with rules that contradict the ordinary laws of nature, or the usual rules of social conduct from the Game World.*

The player character, or other game elements, can move to a different Game World. This different world carries resemblance to the original, but can present different aspects such as rules, i.e. inverted gravity or mirrored controls, or present different aesthetics. Shifting between worlds can be an ability from the character or controlled by a game event.

**Using the pattern:** In TAEASB, a slight *Shift of Worlds* happen when Samantha is in her room and is about to pick up a spoon. The game perspective changes to what is similar to a TV show presenting a special spoon. This moment of creativity is only possible when she is in her *Safe Haven*. When out of her *Safe Haven*, a *Shift of Worlds* happens taking the character to a negative space of shame, as it is the case when dropping the hot mug in the corridor attracting attention of the whole dormitory floor. The game perspective changes to Samantha being surrounded by judgemental faces that then become eyes haunting her. Both situations in TAEASB have the *Shift of Worlds* happen through the *Narrative Structure*.

In </reality> the main *Narrative Structure* element is *Shifting Worlds* from reality to Vitalia. It is an alternative reality that the player character and other characters are able to access. After having a chance to know Vitalia, one of the characters, Ben, wants to permanently *Shift Worlds* to there, *Evading* the real world forever. One of the game events allows the player, in control of Jacob, to facilitate or prevent Ben to access Vitalia. By the end

of the game the player can also choose if the main character Lilya and Jacob will remain in Vitalia, or go back to the real world. Regardless of the decisions made, in the epilogue the player is told that *Shifting Worlds* is no longer possible, as the bridge connecting the two worlds collapsed.

Sym is played on the mind of the main character Josh and one of the possible game actions is to *Shift Worlds* between the normal (his perception) and the darkness world (created to avoid his fears). In the darkness world the character is apparently safe, as he seeks to *Evade* human contact. However, as the game progresses this withdrawal is shown not to be really safe or healthy. The challenge of the game lies in finding balance through *Shifting Worlds* and conducting the character to a way out of this withdrawal or making him shut in irreversibly.

Of these three games only Sym allows the character to control when to *Shift Worlds*, whereas in TAEASB and </reality> it is controlled by scripted game events.

**Relations:** Instantiates *Evade*; modulates *Safe Havens*; instantiated by *Narrative Structure*; related to Safe vs. Unsafe Spaces and Unwanted Attention themes.

### 7.1.8 Tension

*The feeling of caring about the outcome of actions or events in a game without having full control over them.*

*Tension* occurs in games that have uncertain outcomes, and players are emotionally invested in these outcomes, but cannot fully control them. *Tension* can be either due to several sorts of interest in the outcome for players: if they are trying to make one of the outcomes occur; if the outcome affect characters in the game that the players care for; or if the outcome has real-world effects. (adapted from Björk & Holopainen, 2005)

**Using the pattern:** Situations of *Tension* can be generated when there is *Uncertainty of Information*. In EIGtBok, many pages offer limited or *Uncertain Information* with *Random* outcomes regarding options the player can choose from. Choosing a wrong one might lead to a *Penalty*, therefore increasing *Tension* when deciding which option to choose. In TAEASB some of the choices contain *Uncertain Information* if they would increase the character's anxiety or not. An example is the case when choosing which oatmeal flavor to prepare. In PKoMD, each action the player performs can generate *Tension*, as they take time to be executed and there is *Uncertainty of Information* on how long they will really take the next time when performed, or if they will have a negative impact on the mental fortitude.

Both EIGtBok and PKoMD acknowledge potential real-world effects these games can have and provide words of comfort for players that might contemplate suicidal thoughts, making them moments of *Tension* as well.

In </reality>, allowing players to have more explicit information of potential outcomes of actions, with descriptions of each choice a player can choose, *Tension* is lowered, since the player can formulate a notion of what might happen with each choice.

**Relations:** Instantiates *Emotional Immersion*; instantiated by *Penalties*, *Evade*, *Narrative Structures*, *Uncertainty of Information* and *Randomness*; related to *Infliction of Harm*, *Ominous Tone* and *Unwanted Attention* themes.

### 7.1.9 Irreversible Actions

*Actions whose effect on the game state cannot be undone.*

All actions in a game affect the game state but many may be countered by another action, for example moving in one direction and then moving the same distance in the opposite direction. The actions that do not have other actions that can revert the game state back to its original state are *Irreversible Actions*. (Björk & Holopainen, 2005)

**Using the pattern:** In EIGtBOK, some pages don't allow the consequences of the players actions to be reverted. This is the case of Page 11, where wrong choices will make the bunny sink into the spike and right choices can only stall the inevitable fall, and Page 18, that wrong choices or not choosing at all increase the level of awkwardness, and right choices only make the conversation go until it inevitably reaches the limit of awkwardness.

In TAEASB, choices you make that increase the character anxiety are not reversible, as the game doesn't allow the player to rewind actions, as well as the game does not offer any way to reduce her anxiety.

In PKoMD, although it is possible to increase or reduce the mental fortitude, depending on the choices of the player and which actions are performed, once an action is performed it is not reversible. The *Narrative Structure* of PKoMD follows and the player is not even able to start a new game (unless removing the data files of the game from the computer) until the current game session<sup>5</sup> is finished. Any time the player suspends a play session, when returning the game will resume from the exact same state as left previously. PKoMD also presents some of the character's intrusive thoughts while performing some actions. Listening to the intrusive thoughts is a way to gain long term mental fortitude at the expense of losing immediate mental fortitude. If the player ignores the intrusive thoughts, they might not lose current mental fortitude, but will be prevented to gain later on and might lead to some irreversible scenarios.

For the aforementioned reasons, the three games can be considered to present *Non-Renewable Resources* as well. Due to the *Uncertainty of Information* in some of the *Irreversible Actions* configure *Leaps of Faith*.

**Relations:** Instantiates Narrative Structures and *Leaps of Faith*; instantiated by *Uncertainty of Information* and *Non-Renewable Resources*; related to Infliction of Harm and Ominous Tone theme.

### 7.1.10 Extra-Game Consequences

*Consequences that are due to actions within games or based on game states that do not affect the game state or how the game state is perceived.*

Not all effects based on actions connected to games need to affect the game state of the game itself. These effects are Extra-Game Consequences which can either simply give players additional experiences, or translate the results of a game into real-world consequences. (adapted from Björk & Holopainen, 2005)

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<sup>5</sup> From Björk and Holopainen (2005) game session refers to a complete act of playing a game from start to reaching the ending goal, whereas a play session refers to momentary act of playing a game. A game session can be comprised of many play sessions.

**Using the pattern:** Both EIGtBOK and PKoMD acknowledge that upon dealing with topics like severe depression and anxiety and being clear that the games bear *Consistent Reality Logic* they needed to provide messages attempting to avert suicidal thoughts, as the games could be read in a negative way and risk to have irreversible unwanted consequences for players in the real-world.

**Relations:** Instantiated by *Narrative Structure* and *Consistent Reality Logic*; related to Infliction of Harm theme.

### 7.1.11 Uncertainty of Information

*The information available to the player may have different levels of reliability*

Many games give players information but of a kind, or through a medium, that makes their correctness uncertain. This is not the same as not knowing the specific details of a part of the game state or even knowing that a part of the game state exists. It is rather that the player cannot trust the information completely due to the manner in which he or she received the information. (Björk & Holopainen, 2005)

**Using the pattern:** With the exception of *</reality>*, all the other games offer some level of *Uncertainty of Information*.

Some pages In EIGtBOK, offer choices with *Uncertainty of Information*. It is the case of Page 10, in which the *Randomness* of the outcome makes the choices' descriptions unreliable as the player can't consciously decide, adding *Tension* to the situation. A similar situation occurs on Page 3 and 7, in which the player is given options to choose from, but they are all strange sentences with *Uncertain Information* and the outcomes are *Random*.

In TAEASB some of the player choices can lead to increasing anxiety or reaching a negative end game state. Those options, however, contain *Uncertain Information* since their descriptions do not allow the player to make such conclusions, as it is the case of choosing between three flavors of oatmeal, that can increase anxiety if the player picks one that Samantha doesn't want to eat, or deciding to go back to your room a second time, that triggers a negative end game state of skipping dinner.

Something similar to the two cases above happens in PKoMD. The player has *Uncertainty of Information* regarding how much time it will take to perform some actions, especially when playing the second week that the character can "lose time", and how much mental fortitude he will either gain or lose. These two effects might seem *Random*, despite of being scripted, but they add *Tension* as the player is constantly unsure of what is going to be the outcome of their actions.

It is possible, however, to play PKoMD in the game mode "The Game", which provides numbers informing the current mental fortitude and how much is required to perform certain actions. In this mode the player is also informed of how much mental fortitude was gained immediately after performing an action and the long term gains. By playing in "The Story" or "The Experience" game modes the numbers are hidden, keeping the pattern of *Uncertainty of Information*.

In Sym, in the last chapter "The END", the player must choose which door to enter in the first level, either the one besides the word "HIDE" or the one besides the word

“LONELINESS”, providing *Uncertainty of Information* to make a decision that impacts the outcome of the game.

**Relations:** Instantiates *Tension* and *Irreversible Actions*; modulates *Leaps of Faith*; modulated by *Randomness*; related to Limited Agency theme.

### 7.1.12 Leaps of Faith

*Making an action without any guaranteed, or visible, chance of success.*

Not all actions in games have predictable outcomes. When a player can see many potential ways of failing an action and no clear ways of how to succeed, performing the action anyway is a *Leap of Faith*. (Björk & Holopainen, 2005)

**Using the pattern:** The combination of *Uncertainty of Information* and *Irreversible Actions* makes some games offer *Leaps of Faith* when performing certain actions.

This is the case in EIGtBOK on Pages 3, 7, 10 and 11 that require the player to make choices based *Uncertain Informations* and that can lead to negative outcomes, leading the player to perform a *Leap of Faith* in their actions.

A similar case happens on TAE AoSB, in which each choice has a description but usually does not provide insight on the potential outcome. For example, when deciding if Samantha should enter the kitchen the player is given two options “Probably.” and “Run Away!”. Choosing “Run Away!” makes Samantha go back to her room, but choosing “Probably.” makes her enter the kitchen not knowing if someone will be inside, which is something the character didn’t want to happen, therefore increasing anxiety.

Actions performed in PKoMD make time pass, gain or lose immediate mental fortitude and long term mental fortitude, but since the amounts are unknown until the player tries performing those actions, they are a case of *Leaps of Faith*. That happens even when playing on “The Game” mode, although to a lesser extent, since it is possible to know the current mental fortitude and the requirement of certain actions. While playing “The Experience” they are always a case of *Leap of Faith*, since the player is never precisely informed of the current mental fortitude, neither the requirement of certain actions and needs to try their best to balance the character’s mental fortitude.

**Relations:** Instantiates *Irreversible Actions*, *Tension* and *Narrative Structures*; modulated by *Uncertainty of Information*; related to Limited Agency theme.

### 7.1.13 Ability Losses

*The loss of ability to perform an action in the game.*

Games do not have to let players have the same possibility of actions the whole game. Such Ability Losses may be the cause of Penalties for negative actions. (adapted from Björk & Holopainen, 2005)

**Using the pattern:** PKoMD and </reality> present some form of *Ability Loss* through play. In PKoMD it can be the *Penalty* for not being able to maintain enough mental fortitude, rendering the character unable to perform certain actions like taking a quick shower (leaving only the long shower option available), calling dad, chatting on the computer, social interactions at work and sometimes not being able to even access areas in the apartment and

being forced to sleep. Calling dad and chatting on the computer are unavailable at the initial game state, as the character starts with a lower than required mental fortitude. In the case of PKoMD, *Ability Losses* supports the *Consistent Reality Logic* proposed by the game system and creative intention, instead of being in potential conflict, as it is stated in the original pattern (Björk and Holopainen, 2005).

</reality> has the *Ability Loss* conveyed through its *Narrative Structure*, as characters might not be able to access Vitalia or the real world by the end of the game, as the bridge connecting the two worlds shatters. Choices throughout the game dictate if Lilya, Jacob and Ben will spend their lives in Vitalia or back in the real world. The outcomes are then presented during the epilogue.

**Relations:** Instantiates *Penalties*; modulates *Narrative Structure* and *Consistent Reality Logic*; related to Limited Agency theme.

#### 7.1.14 Penalties

*Players are inflicted with something perceived as negative or stripped of an advantage, due to failure to meet a requirement in the game.*

Players can receive Penalties as consequences of actions and events they have, or might have not, initiated. It is more common to describe such Penalties as consequences of events. (adapted from Björk & Holopainen, 2005)

**Using the pattern:** Performing actions that could be considered wrong, even though the game does not present any as wrong, in TAEASB can increase the character's anxiety, therefore be considered a *Penalty*.

In the case of PKoMD a player can suffer *Penalties* for not taking good care of the character's mental fortitude, which can incur in *Ability Losses* by being prevented to perform certain actions in the game.

In Sym the *Penalty* for losing a life is restarting the level and, as it can happen frequently, a player might be reduced of *Emotional Immersion* in the game and be detached of its *Narrative Structure*. For this reason, it can be considered that *Penalties* can be potentially in conflict with *Narrative Structures*.

**Relations:** Instantiates *Tension* and *Emotional Immersion*; instantiated by *Ability Losses*; modulated by *Consistent Reality Logic* and *Identification*; potentially in conflict with *Narrative Structures*; related to Limited Agency theme.

#### 7.1.15 Non-Renewable Resources

*The amount of resources available in the game is determined at the start of the game and these resources cannot be renewed once they are exhausted.*

Some resources in games exist at the beginning of game sessions and are not replaced as they are used. These Non-Renewable Resources thereby have a fundamentally higher value than resources that are replenished, and the use of Non-Renewable Resources is a greater commitment than the use of other resources. (Björk & Holopainen, 2005)

**Using the pattern:** EIGtBok, TAEASB and PKoMD present some form of *Non-Renewable Resource*. In the case of EIGtBok, Page 11 presents a bunny falling into a spike as

it is in its last bits of hope to keep it together. The player then is presented a series of choices to answer the desperation of the bunny. Choosing a wrong option makes the bunny sink into the spike, while choosing the right one simply keeps the bunny at the same place, therefore making hope a *Non-Renewable Resource* in this page. Page 18 of EIGtBOK presents a meter of awkwardness of the conversation. Choosing a wrong answer, or not choosing anything, increases the levels of awkwardness, however choosing the right one simply keeps awkwardness meter at the same level, therefore making it a *Non-Renewable Resource*.

In TAEAoSB the anxiety meter of Samantha is a *Non-Renewable Resource* as it can only go up. Regardless of what the player choose, the anxiety won't decrease during the game.

In PKoMD the player needs to account for the time taken to perform actions, and both the time and actions are *Irreversible*. Also actions can only be performed a limited amount of times each day, therefore time and actions can be considered *Non-Renewable Resources*.

**Relations:** Instantiates *Irreversible Actions*; related to Limited Agency theme.

### 7.1.16 Randomness

*Effects or events in the game cannot be exactly predicted.*

Randomness is the process of making effects and events unpredictable in games. It does not necessarily make games totally unpredictable, as the *Randomness* usually has a structure where players can know the chances for certain effects and events. (adapted from Björk & Holopainen, 2005)

**Using the pattern:** EIGtBOK present many situations that *Randomness* is applied. It is the case of Page 3 when trying to say something to make your “crush” fall in love with you, Page 7 when trying to say something to comfort the beast, Page 10 when casting an argument spell to respond to the friends' advices, and Page 11 when trying to comfort the hopeless bunny. In all those situations the outcomes are Random as well as there is *Uncertainty of Information*.

Although outcomes in PKoMD are scripted, they give a feeling of *Randomness* because of the *Uncertainty of Information* regarding how much mental fortitude he will either gain or lose when performing an action, and how much time it will take to perform some actions, especially during the second week that the character can “lose time”. Despite not being *Random*, they add *Tension* as the player is constantly unsure of what is going to be the outcome of their actions as if they were *Random*.

**Relations:** Instantiates *Tension*; modulates *Narrative Structure* and *Uncertainty of Information*; related to Limited Agency theme.

## 7.2 Adding Informants Perspectives

The knowledge gathered from the Experiential Workshop indicates that representations of social anxiety have more layers of complexity, which could be perceived through the interviews and visual representation of game concepts. In this section the game concepts will be examined through identified game design patterns, focusing on the informants' reasoning behind their representational decisions.

The sections below will discuss the game design patterns found in the game scenes created by the informants. When referring to a previously mentioned game design pattern, the Core

Definition and General Description will be omitted and redirected to the corresponding pattern found in the previous section *7.1 Patterns Identified Within Analyzed Games*.

### 7.2.1 Book-Keeping Tokens

*Game elements that do not represent concrete objects in the game world but instead holds specific parts of the game state.*

Game states that at least partially represent abstract values require that games to have some way to store the information. This can be done by using computers or humans that have to remember the information, but when computers are not available many games have *Book-Keeping Tokens* to let players focus on the gameplay rather than the manipulation of objects to keep track of the game state. (Björk & Holopainen, 2005)

**Using the pattern:** The pleasant game scene from Informant 1 employs *Book-Keeping Tokens* as a means to provide the intended interaction between players. They are used as a metaphor for memories that players are able to exchange during gameplay.

During the process of truly knowing the other person, a player must give up one of their tokens, along with a personal memory, in order to gain something in return from the other player. Since the act of giving up a token and sharing a memory does not produce an immediate effect, it is bound to generate *Delayed Reciprocity*, as well as the exchanging of memories is mediated by *Consistent Reality Logic* and *Extra-Game Information*.

**Relations:** Modulates *Delayed Reciprocity*; modulated by *Consistent Reality Logic* and *Extra-Game Information*; related to Real Life Anchoring theme.

### 7.2.2 Extra-Game Information

*Information provided within the game that concerns subjects outside the Game World.* (Björk & Holopainen, 2005)

**Using the pattern:** Contrary to what is proposed on the original *Extra-Game Information* game design pattern (Björk & Holopainen, 2005), this pattern is not used in a way to affect immersion negatively by directing the players' attention outside the game world.

According to Informant 1 pleasant scene, the very shift from the game boundaries to the personal space of each individual is what promotes immersion and allow a positive state of vulnerability. It also grants *Consistent Reality Logic* to the game, as it relies on personal information.

The *Delayed Reciprocity* combined to the fact that one player must share something personal increases the *Tension*, however it is likely to be alleviated from receiving a similar share in return from the other player. It is a balance of safety, as a player has the expectation to receive acceptance and a similar share of personal information from the other player and it could turn unsafe if not reciprocal.

**Relations:** Instantiates *Tension* and *Delayed Reciprocity*; modulates *Book-Keeping Tokens*; related to Real Life Anchoring and Safe vs. Unsafe Spaces themes.

### 7.2.3 Delayed Reciprocity

*There is a time delay in social exchange situations, i.e. the whole exchange is not immediate, something is given now and the return is to be paid back some time in the future.*

*Delayed Reciprocity* is common in exchange situations which involve exchanging non tangible goods such as favors, information or specific actions. *Delayed Reciprocity* does not in its basic form require that players agree beforehand on the exact nature of the exchange, but it can also be spontaneous and without mutual agreements. (Björk & Holopainen, 2005)

**Using the pattern:** In the pleasant scene from Informant 1, the action of giving up a token, exchanging a memory, does not lead to an immediate result or consequence, therefore being a case of *Delayed Reciprocity*. It can lead to *Tension* from the expectation of a reciprocal result.

**Relations:** Instantiates *Tension*; instantiated by *Extra-Game Information*; modulated by *Book-Keeping Tokens*; related to Real Life Anchoring and Safe vs. Unsafe Spaces themes.

### 7.2.4 Safe Havens

Refer to section 7.1.5 *Safe Havens* for description.

**Using the pattern:** The unpleasant scene from Informant 1 does not present a *Safe Haven*, but it does set the search for it as a goal. The character involuntarily *Shift Worlds* and is sent to a different emotional field and seeks physical isolation to be able to recompose. However, *Evading* the situation is not the answer, as Informant 1 presents that the real solution is facing it.

The pleasant scene from Informant 2 presents a *Safe Haven* for the character. It could be either a reward from overcoming the *Obstacle* from the unpleasant scene, or a sought place free from social contact. That situation allows the character to replenish *Social Energy* and, in some cases can also coexist with social contact.

**Relations:** Instantiates *Evade*; instantiated by *Obstacles* and *Inaccessible Areas*; modulates *Social Energy*, modulated by *Shifting Worlds*; related to Safe vs. Unsafe Spaces and Unwanted Attention themes.

### 7.2.5 Shifting Worlds

*The game space changes to a different Game World with rules that contradict the ordinary laws of nature, or the usual rules of social conduct from the Game World.*

The player character, or other game elements, can move to a different Game World. This different world carries resemblance to the original, but can present different aspects such as rules, i.e. inverted gravity or mirrored controls, or present different aesthetics. Shifting between worlds can be an ability from the character or controlled by a game event.

**Using the pattern:** The unpleasant game scene from Informant 1 presents the character *Shifting Worlds* when receiving a triggering information. In this case the shift is caused by an event not controlled by the character and, although it doesn't send them to a different physical space, it sends them to a different emotional field. That means the character might

be physically there, but the attention is completely elsewhere, meaning the original situation becomes a metaphorically *Inaccessible Area*.

This causes the character to seek *Evading* the current situation through physical isolation, which might at first act as a *Safe Haven*, but it is not a sustainable situation.

**Relations:** Instantiates *Evade* and *Inaccessible Areas*; modulates *Safe Havens*; related to Safe vs. Unsafe Spaces and Unwanted Attention themes.

### 7.2.6 Evade

Refer to section 7.1.6 *Evade* for description.

**Using the pattern:** Informant 1 presents *Evading* as a metaphorical craving to avoid the current unpleasant situation. In the case of the unpleasant scene from Informant 1 it becomes the goal of the character, once *Shifting Worlds* to a different emotional field and the desire for physical isolation takes place. However, Informant 1 explains that being in this different emotional field is what sets the player to seek refuge on an apparent *Safe Haven* of isolation, but *Evading* the what is bothering the character does not solve the issue. This situation builds up *Tension*.

**Relations:** Instantiates *Tension*; instantiated by *Safe Havens* and *Shifting Worlds*; related to Safe vs. Unsafe Spaces and Unwanted Attention themes.

### 7.2.7 Tension

Refer to 7.1.8 *Tension* in the previous section.

**Using the pattern:** *Tension* in the pleasant scene from Informant 1 comes sharing real life *Extra-Game Information*, in the form of personal memories, and the *Delayed Reciprocity* of expecting the other to be accepting and participative in the exchange.

*Shifting Worlds* on the unpleasant scene from Informant 1 generates *Tension*, because the character assumes they shouldn't be there and is divided by the duality of wanting to *Evade* the whole situation and knowing it is required to be faced.

In the case of Informant 3 scenes it comes from the uncertainty of having to choose the weird option, due to the *Ability Loss* of choosing the desired ones. The character is left on suspension from not knowing how the other character will react. It could either incur in a *Penalty*, if the other character reacts badly, or it can lead to replenishing the *Social Energy* if the other character is accepting and not judgemental.

**Relations:** Instantiated by *Extra-Game Information*, *Delayed Reciprocity*, *Evade*, *Penalties* and *Social Energy*; modulated by *Budgeted Action Points*; related to Real Life Anchoring, Safe vs. Unsafe Spaces, Unwanted Attention and Limited Agency themes.

### 7.2.8 Inaccessible Areas

*Inaccessible Areas are parts of the Game World the player can perceive but cannot currently enter, such as areas behind locked doors or high ledges.*

Although the area is inaccessible for the player, it may be possible to view the area or affect it in ways other than through movement actions, for example, by shooting or throwing things at it, and the area may not be inaccessible to other types of game elements that are not under

player control. It may be possible for the player to enter the area later in the game, for example, by finding the key to the locked door. (adapted from Björk & Holopainen, 2005)

**Using the pattern:** It can be considered that in the Informant 1 unpleasant scene once the character *Shifts Worlds* and is sent to a different emotional field, the original social situation becomes an *Inaccessible Area*.

The unpleasant scene of Informant 2 presents an *Obstacle*, which is the metaphor for the a draining social situation, that prevents the character from reaching the end where a *Safe Haven* could lie. The only form of accessing the area is by pushing the *Obstacle*.

**Relations:** Instantiates *Safe Haven*; instantiated by *Obstacle*; related to Safe vs. Unsafe Spaces, Unwanted Attention and Limited Agency themes.

### 7.2.9 Obstacles

*Obstacles are game elements that hinder the players from taking the shortest route between two places.*

Often the Obstacles can be moved, destroyed, or avoided by specific actions but until this has been done (and it has become possible to do so), the Obstacles slow or block the players' progress in the game. (Björk & Holopainen, 2005)

**Using the pattern:** For Informant 2, the *Obstacle* is a metaphor for a draining social situation, as it is represented in the unpleasant scene. A big boulder stands in the way of the character. To push it means to have the energy, which in turn is meant to represent the *Social Energy*, drained at every second. However it is the only solution for the situation and the way to achieve the end goal of reaching a potential *Safe Haven*.

**Relations:** Instantiates *Inaccessible Areas* and *Safe Havens*; modulates *Social Energy*; related to Safe vs. Unsafe Spaces and Limited Agency themes.

### 7.2.10 Budgeted Action Points

*Points that are used by players to do actions during their turns.*

Budgeted Action Points are a way to let players decide from turn to turn which actions they want to perform. Usually they not only let players have alternatives to choose from but also allow them to perform the same actions several times if wished but at the expense of then not being able to do other actions. (Björk & Holopainen, 2005)

**Using the pattern:** Both unpleasant and pleasant scenes from Informant 3 present the the *Budgeted Action Points* pattern. Actions the character is allowed to perform require a certain amount of *Social Energy*. Options that are more likely positive and desirable have a *Social Energy* requirement and choosing them reduces the current amount. The only option always available, that does not require the character to spend *Social Energy* is a weird option, that could incur into a *Penalty*.

According to Informant 3, this is a lifelike representation of their difficulty to engage in social interaction, just as their social battery is usually low, making them situations of constant *Tension*.

**Relations:** Instantiates *Ability Losses*; instantiated by *Consistent Reality Logic*; modulates *Tension*; modulated by *Social Energy*; related to Real Life Anchoring and Limited Agency theme.

### 7.2.11 Consistent Reality Logic

Refer to section 7.1.4 *Consistent Reality Logic* for description.

**Using the pattern:** *Extra-Game Information* from Informant 1 provides *Consistent Reality Logic* to the pleasant game scene, once it requires players to exchange their personal memories.

In the case of the two scenes of Informant 3 the *Consistent Reality Logic* comes from being a direct metaphor for the Informant's difficult to engage in social situations, characterized by the *Ability Loss* of interacting in a way that is considered socially "normal" due to low *Social Energy*.

**Relations:** Instantiates *Ability Losses* and *Social Energy*; instantiated by *Extra-Game Information*; related to Real Life Anchoring and Limited Agency themes.

### 7.2.12 Ability Losses

Refer to section 7.1.13 *Ability Losses* for description.

**Using the pattern:** Both scenes from Informant 3 present the possibility of *Ability Loss*, caused by low levels of *Social Energy*. Actions require a certain amount of *Social Energy* to be spent in order to be performed and, by not having enough, can become unavailable. It is part of the *Consistent Reality Logic* that operates Informant 3's social interactions.

**Relations:** Instantiates *Penalty*; instantiated by *Consistent Reality Logic* and *Social Energy*; related to Real Life Anchoring and Limited Agency themes.

### 7.2.13 Penalties

Refer to section 7.1.14 *Penalties* for description.

**Using the pattern:** On both scenes of Informant 3, if the player has no option available, due to lack of *Social Energy* or own volition, and chooses the weird dialogue option it can lead to a *Penalty*. This *Penalty* can mean losing the opportunity to make a friend, for example. However, if the person is accepting towards the weirdness, this social interaction can end up replenishing the *Social Energy*.

**Relations:** Instantiates *Tension*; instantiated by *Ability Losses*; modulates *Social Energy*; modulated by *Consistent Reality Logic*; related to Real Life Anchoring and Limited Agency themes.

### 7.2.14 Social Energy

*Social Energy can be defined as the amount of social interaction a player can withstand.*

Social Energy is a specific resource used in the game to allow actions related to social interaction to happen.

**Using the pattern:** For Informant 2, the *Safe Haven* found in the pleasant game scene represents a source of replenishing *Social Energy*. This replenishment can be considered a reward after draining the energy by pushing the metaphorical *Obstacle* of a social situation.

For the unpleasant and pleasant scenes of Informant 3, the *Social Energy* is what determines the available *Budgeted Action Points* and can, therefore, incur in the *Ability Loss*, if the *Social Energy* is too low. Choosing the weird dialogue option, that does not spend *Social Energy*, does not reduce it, but can lead to a *Penalty*. The balance between spending *Social Energy* and risk of *Penalties* provides *Tension*.

Both Informants 2 and 3 present the *Social Energy* in their game scenes as a metaphor for the energy they have in real life to deal with social interactions and that helps them be more or less successful, keeping a relation of *Consistent Reality Logic*.

**Relations:** Instantiates *Tension* and *Ability Losses*; modulates *Budgeted Action Points*; instantiated by *Consistent Reality Logic*; modulated by *Obstacles*, *Penalties* and *Safe Havens*; related to Real Life Anchoring, Safe vs. Unsafe Spaces and Limited Agency themes.

### 7.3 Final Considerations

Analyzing the results of the close reading, the games' perspective, attempting to identify game design patterns revealed a significant amount of patterns that contribute to representations of social anxiety in those games. An equally significant amount of game design patterns was also identified from analyzing the informants' perspectives. Although the game design patterns identified from the informants' perspectives weren't as thoroughly described, in comparison to the patterns from games' perspectives, for they were based on brief descriptions of hypothetical game scenes, they did provide a rich set of information. From the informants' perspectives different game design patterns were employed, as well as they provided other reasoning for some patterns used in the games. New game design patterns were found in the games' and informants' perspectives, as it is the case of *Shifting Worlds*, which applies to both, and *Social Energy*, which applies to the informants'.

Gathering perspective from informants that suffer from social anxiety allowed to broaden horizons on how a person can perceive the condition on a personal level. This, combined to their creative vision expanded the range of game design patterns identified. From their perspectives it could be identified the patterns of *Book-Keeping Tokens*, *Extra-Game Information*, *Delayed Reciprocity* on Informant 1 pleasant game scene; *Inaccessible Areas* on both Informant 1 and 2 unpleasant game scenes and *Obstacles* on Informant 2 unpleasant scene, *Budgeted Action Points* on the two of Informant 3 scenes and *Social Energy* in the two scenes of both Informant 2 and 3.

It is very likely that all the game scenes presented by the informants would also contain the game design pattern of *Narrative Structures*, however due to the short structural length of their descriptions it wasn't possible to include it as an identified pattern. However it can be hypothesized that all the game concepts, if they were to be fully developed, would include a *Narrative Structure* pattern.

The informants' perspectives also allowed to have a different view on some of the game design patterns that were also present in the analyzed games, adding more nuances to

previously identified patterns. This is the case of *Safe Havens*, *Evade*, *Shifting Worlds* and *Ability Losses*.

In the case of *Safe Havens* it is presented in EIGtBOK and PKoMD as a situation in the game that some comfort can be achieved, this soothing situation can be seen as similar to Informant 2 pleasant scene, although it can be argued that for a different reasoning. The comfort achieved in the *Safe Haven* for Informant 2 is a rare sensation and comes from being alone and cozy, but as the informant mentioned it can also be achieved through social interaction with a few people that can provide replenishment of the *Social Energy*.

Both TAEAoSB and </reality> offer a different take on *Safe Havens*, where it is a place safe from in person social contact where the characters can express freely. This can be seen as related to Informant 3 discussion about preferences of virtual or in person communication, in which the informant mentioned that being removed to a screen makes it a safer experience as it does not involve visual contact.

*Safe Haven* for Informant 1 can be considered related to how it is presented in Sym or </reality>, as it also involves a *Shifting Worlds* and *Evading*. The character in the unpleasant scene of Informant 1 has the search for a *Safe Haven* as a goal, after involuntarily *Shifting Worlds* and be sent to a different emotional field seeking physical isolation to be able to recompose. Different than how it is in Sym, save for the ending where the character likely find a way out, and </reality>, according to Informant 1 *Evading* is not the answer. The real solution is facing it.

The scenes from Informant 3 and PKoMD have similarities regarding *Ability Losses* as well as the informant's view on *Social Energy* is similar to the mental fortitude of PKoMD. In the case of Informant 3's scenes each social interaction requires *Social Energy* to be spent in order to be performed, whereas the mental fortitude from PKoMD determines whether the character is able to perform certain routinary actions as well as social interaction. It could be argued that the mental fortitude is a system that embraces the concept of depression, focusing on the inability to perform potentially desired actions, whereas the use of *Social Energy* from Informant 3 is focused on their difficulty to have social interactions, as they most of the time tend to drain their *Social Energy*. Despite of that, Informant 3 also mentioned that social interaction can also happen to be a source of replenishing *Social Energy*, when interactions are based on acceptance, which tend to be a good surprise.

Despite not being directly related to any specific game design pattern, it is interesting to mention a comparison of perspectives, that might have gone unnoticed otherwise, regarding eye iconography.

Similar to what was found on social anxiety literature review, eye contact as unwanted attention was addressed by some of the games, as it is the case of TAEAoSB and Sym. However, having informants perspectives offered a different take on this subject. As Informant 1 described during the interview and from the pleasant situation game representation, eye contact can offer advantages to interactions, allowing for a deeper and meaningful exchange of experiences. Informant 2 mentioned that being able to read facial expressions of someone, therefore tangentially related to eye contact, allows to read signs and facial patterns, making it a safer interaction. Both Informants 1 and 2 addressed to have troubles with non presential interactions, Informant 1 by online communication such as email or messages that are not possible to preview the content, Informant 2 by having to talk

on the phone. On the other hand, Informant 3 mentioned to have an easier time by virtual interactions, as the lack of facial contact makes it a safer space and telephone interactions even have potential to be relieving.

## 8 Conclusions

### 8.1 Summary

This work allows to learn from the creative vision of people who authored (games' perspectives) and people who imagined (informants' perspectives) social anxiety in games. Since those perspectives come from people who have first hand experiences with social anxiety, they are full of nuance and also a reliable source to consider adequate, in terms of not being stereotypical depictions of social anxiety disorder. Analyzing those perspectives through the lens of game design by identifying game design patterns employed on the games and on the informants' game concepts, then comparing the pattern relations from the two perspectives allowed to collect a rich body of knowledge regarding social anxiety in games. The process of this work and knowledge acquired can be applied to future research, aiming to have an even deeper understanding of social anxiety in games, as well as informing ways to explore for other developers aiming to create games based on non stereotypical representations.

### 8.2 Discussion

Employing the process of analyzing autobiographical games about social anxiety and gathering perspectives from people who experience it at first hand allowed to have a widely varied range of sides to consider about how the condition can be represented in games. The fact that the findings of this work are based upon the experiences of those who suffer from the condition makes the results more reliable in terms of presenting honest, non-stereotypical, representations of social anxiety.

Even though many game design patterns could be identified, this collection is by no means a definite language of social anxiety in games. This can be considered an initial mapping of a language that should be thoroughly examined and expanded. As Björk and Holopainen (2005) mentioned, game design patterns are supposed to be flexible and should evolve over time, and are not meant to be a static prescriptive guide. The authors encourage others to find new patterns and different uses for existent ones.

When conducting the search for games to be analyzed, given the criteria established, some games ended up being left out of a list. That is the case of *The Beginner's Guide* (Everything Unlimited Ltd, 2015) and *Celeste* (Matt Makes Games, 2018). Both these games explore the topics of depression and anxiety. However, due to their marketing strategy, it wasn't possible to assert that with the material provided by the authors, for example the descriptions of the games from their websites. Although it was possible to find information that the games explored topics that would make them qualify, since the criteria excluded content acquisition from other sources outside the festival (IGF and IndieCade) pages, the Steam store description, or content found on the game pages, the two games ended up not being included. The search for games also revealed an issue with curation of festival games, since the IndieCade 2016 Selection had a game about depression and anxiety called *Blue Cat*, which is unavailable as the developer's page doesn't exist anymore.

Regarding the method of collecting informants' perspectives, while comorbidities were considered for the sampling, they kept unmentioned when presenting the results to preserve their identities. They were also not taken into consideration when writing about their

perspectives. This was done intentionally, because it was not the objective of this work to seek a “pure expression of social anxiety”. On the contrary, reaching for the perspective of informants, embracing their uniqueness, provided invaluable insight. However it would be interesting to examine influences of other mental conditions, thus providing a more robust understanding of such representations.

It is interesting to highlight that, while wrapping up the session of Informant 1, the informant spontaneously mentioned and shared personal drawings and illustrations developed during periods of anxiety crises. Unfortunately, since they didn’t withstand reverse search, they couldn’t be included in the report as they could render the informant identity traceable. Such findings support the importance of reaching out to informants perspectives to better understand how social anxiety can manifest in a personal way. Conducting the Experiential Workshop with even more informants will certainly lead to invaluable information that would allow a better understanding of how to honestly represent social anxiety in games.

### **8.3 Future Work**

The knowledge acquired in this project can be employed on the development process of a game intending to depict social anxiety. The extensive list of game design patterns based on games about the condition and valuable input from people who experience it first hand envision social anxiety, serves as creative material to inspire new games that better represent social anxiety, therefore contributing to reduce stigma in society.

However, if one should develop a game about social anxiety validation with people who suffer from it is required, in order to assess if such game resonates with their experience in a meaningful way. It is also important to validate with people who don’t suffer from social anxiety or don’t know if they do, with the objective of assessing their awareness and interest on the subject after having played the game. This can help in keeping the process of using the study and practice of game design as a mediator of others experiences, therefore contributing to a diversity of experiences and respectful representations.

Future contributions might include establishing direct contact with the developers of games with the topic of social anxiety, with the intention to understand more of their creative vision and design processes. This can be used to better understand how they arrived at the representations of the mental conditions in the games they created. If one day research will arrive at a game language for social anxiety, or other mental disorders, this is an important step to be conducted.

## References

- Alexander, C., et al., 1977. *A Pattern Language: Towns, Buildings, Construction*. Oxford, UK: Oxford University Press.
- alienmelon, 2017. *Everything Is Going to Be Ok*. [computer program] Available at: <https://alienmelon.itch.io/everything-is-going-to-be-ok> [accessed February 18, 2018].
- Anthropy, A., 2015. *Empathy Game*. [auntiepixelante.com](http://auntiepixelante.com) [blog] 30 September. Available at: <http://auntiepixelante.com/empathygame/> [accessed 18 January 2018].
- Atrax Games, 2015. *Sym*. [computer program] Mastertronic. Available at: <http://www.atraxgames.com/sym/> [accessed February 18, 2018].
- Auntie Pixelante, 2012. *Dys4ia*. [computer program] itch.io. Available at <https://w.itch.io/dys4ia> [accessed 19 January 2018].
- Beesdo K., Bittner A., Pine D. S., Stein, M. B., Höfler M., Lieb R., Wittchen H-U., 2007. Incidence of social anxiety disorder and the consistent risk for secondary depression in the first three decades of life. In: Arch Gen Psychiatry, [e-journal], 64(8), pp. 903-912. <https://doi.org/10.1001/archpsyc.64.8.903>.
- Belman, J. & Flanagan, M., 2009. Designing Games to Foster Empathy. *Cognitive Technology*, 14(2), 2009, pp. 5-15.
- Bizzocchi, J. & Tanenbaum, J., 2011. Well read: applying close reading techniques to gameplay experiences. In D. Drew (Ed.), *Well played 3.0*, pp. 262-290. ETC Press.
- Björk, S. & Holopainen, J., 2005. *Patterns in Game Design*. Hingham, MA, USA: Charles River Media.
- Brown, A. & Marklund, B. B., 2015. Animal Crossing: New Leaf and the Diversity of Horror in Video Games. In: DiGRA (Digital Games Research Association) '15, *Proceedings of DiGRA 2015: Diversity of play: Games – Cultures – Identities*, 12, May, 2015. Digital Games Research Association.
- Brown, A., 2015. Awkward: the importance of reflexivity in using ethnographic methods. In: L. Petri & B. Staffan (eds), *Game Research Methods*, pp. 77-92. ETC Press.
- Carr, D., 2017. Methodology, Representation, and Games. In: *Games and Culture*, [e-journal], online first, 6 Sep 2017. <http://doi.org/10.1177/1555412017728641>.
- ConcernedApe, 2016. *Stardew Valley*. Chucklefish Games. [computer program] Available at: <https://stardewvalley.net/> [accessed May 17, 2018].
- Consalvo, M. and Dutton, N., 2006. Game Analysis: Developing a methodological toolkit for the qualitative study of games. *Game Studies*. 6(1). Available at: [http://gamestudies.org/0601/articles/consalvo\\_dutton](http://gamestudies.org/0601/articles/consalvo_dutton).
- Copeland, S. & Moor, A., 2018. Community Digital Storytelling for Collective Intelligence: towards a Storytelling Cycle of Trust. In: *AI & Society*, [e-journal] 33(1), pp. 101–111. <https://doi.org/10.1007/s00146-017-0744-1>.

- Dyer, R., 1993. *The matter of images: Essays on representations*. London, England: Routledge.
- Everything Unlimited Ltd, 2015. *The Beginner's Guide*. [computer program] Available at: <http://www.thebeginnersgui.de/> [accessed February 18, 2018].
- Fancy Fish Games, 2017. *</reality>*. [computer program] Available at: <http://fancyfishgames.com/reality/> [accessed February 18, 2018].
- Flanagan, M., 2001. *[rootings]*. [computer program] Available at: <http://maryflanagan.com/work/rootings/> [accessed February 6, 2018].
- Flanagan, M., 2003. *[domestic]*. [computer program] Available at: <http://maryflanagan.com/work/domestic/> [accessed February 6, 2018].
- Gall, M. D., Gall, J. P. & Borg, W. R., 2003. *Educational research: An introduction* (7th ed.). Boston, MA: A & B Publications.
- Harrer, S. & Schoenau-Fog, H., 2015. Inviting Grief into Games: The Game Design Process as Personal Dialogue. In: DiGRA (Digital Games Research Association) '15, *Proceedings of DiGRA 2015: Diversity of play: Games – Cultures – Identities*, 12, May, 2015.
- Kazdin, A. E., 2000. *Encyclopedia of psychology*. Washington, D.C.: American Psychological Association; Oxford University Press, New York, 2000.
- Kleinknecht, R. A., Dinnel, D. L., Kleinknecht, E. E., Hiruma, N., Harada, N., 1997. Cultural Factors in Social Anxiety: A Comparison of Social Phobia Symptoms and Taijin Kyofusho. In: *Journal of Anxiety Disorders*, [e-journal] 11(2), pp. 157-177. [https://doi.org/10.1016/S0887-6185\(97\)00004-2](https://doi.org/10.1016/S0887-6185(97)00004-2).
- Lemonsucker Games, 2016. *The Average Everyday Adventures of Samantha Browne*. [computer program] Available at: <http://choosetheoatmeal.com/> [accessed February 18, 2018].
- Levall Games, 2017. *Please Knock on My Door*. [computer program] Available at: <http://pleaseknockgame.com/> [accessed February 18, 2018].
- Lindsey, P., 2014. *Gaming's favorite villain is mental illness, and this needs to stop*. [online] Polygon. Available at: <https://www.polygon.com/2014/7/21/5923095/mental-health-gaming-silent-hill> [accessed January 18, 2018].
- Matt Makes Games, 2018. *Celeste*. [computer program] Available at: <http://www.celestegame.com/> [accessed May 22, 2018].
- Mayo Clinic, 2017. Social anxiety disorder (social phobia). [online] (29 August 2017) Available at: <https://www.mayoclinic.org/diseases-conditions/social-anxiety-disorder/symptoms-causes/syc-20353561> [accessed March 15, 2018].
- McNamara, C., 2009. *General guidelines for conducting interviews*. Available at: <https://managementhelp.org/businessresearch/interviews.htm> [accessed April 3, 2018].
- Murray J. H., 1997. *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. New York, NY: The Free Press.

- Nintendo EPD, 2017. *Animal Crossing: Pocket Camp*. Nintendo. [computer program] Available at: <https://ac-pocketcamp.com/en-US/site> [accessed May 17, 2018].
- Numinous Games, 2016. *That Dragon, Cancer*. [computer program] Available at: <http://www.thatdragoncancer.com/> [accessed February 6, 2018].
- Perugi G., Tusin G., Nascimben A., Maremma I., Akiskal H.S., 2003. Il disturbo bipolare II: spettro clinico e sindromi correlate Bipolar II disorder: clinical spectrum and related syndromes. In: *Journal of Psychopathology*, [online], 9(3), September 2003. Available at: <http://www.jpsychopathol.it/issues/2003/vol9-3/perugi.htm>.
- Petkus A. J., Wetherell J. L., Stein M. B., Chavira D. A., Craske M. G., Sherbourne C., Sullivan G., Bystritsky A. & Roy-Byrne P., 2017. Age Differences in Death and Suicidal Ideation in Anxious Primary Care Patients. In: *Clinical Gerontologist*, [e-journal] <https://doi.org/10.1080/07317115.2017.1356893>.
- Poremba, C., 2007. Play with me: Exploring the autobiographical through digital games. In: DiGRA (Digital Games Research Association) '07, *Proceedings of the 2007 DiGRA International Conference: Situated Play*, 4, September, 2007, The University of Tokyo.
- Salter, A., 2016. Playing at Empathy: Representing and Experiencing Emotional Growth through Twine Games. In: *2016 IEEE International Conference on Serious Games and Applications for Health (SeGAH)*. [e-journal], 11-13 May 2016. Orlando, FL, USA. <https://doi.org/10.1109/SeGAH.2016.7586272>.
- Sanchez R., Brown E., Kocher K., and DeRosier M., 2017. Improving Children's Mental Health with a Digital Social Skills Development Game: A Randomized Controlled Efficacy Trial of Adventures aboard the S.S. GRIN. *Games for Health Journal*, [e-journal] 6(1), pp. 19-27. <https://doi.org/10.1089/g4h.2015.0108>.
- Schott, G., 2017. That Dragon, Cancer: Contemplating life and death in a medium that has frequently trivialized both. In: DiGRA (Digital Games Research Association) '17, *Proceedings of the 2017 DiGRA International Conference*, 14(1), July, 2017, Melbourne, Australia: Digital Games Research Association.
- Scottish Executive Social Research, 2005. Literature Review of the NEET Group. Scotland: Scottish Executive Enterprise and Lifelong Learning. [online] Available at: <http://www.gov.scot/Resource/Doc/77843/0018812.pdf> [accessed May 24, 2018]
- Shapiro, S. & Rotter, M., 2016. Graphic Depictions: Portrayals of Mental Illness in Video Games. In: *Journal of Forensic Sciences*, [e-journal] 61, pp. 1592–1595. <http://doi.org/10.1111/1556-4029.13214>.
- Skegg, K., 2005. Self Harm. In: *Lancet*, [e-journal] 366(9495), pp. 1471-1483. [http://doi.org/10.1016/S0140-6736\(05\)67600-3](http://doi.org/10.1016/S0140-6736(05)67600-3).
- Social Anxiety Association, 2017. Social Anxiety Fact Sheet: What is Social Anxiety Disorder? Symptoms, Treatment, Prevalence, Medications, Insight, Prognosis. [online] Available at: <http://socialphobia.org/social-anxiety-disorder-definition-symptoms-treatment-therapy-medications-insight-prognosis> [accessed March 21, 2018].

- Starr, L. R. & Davila, J., 2008. Differentiating Interpersonal Correlates of Depressive Symptoms and Social Anxiety in Adolescence: Implications for Models of Comorbidity. In: *Journal of Clinical Child & Adolescent Psychology*, [e-journal] 37(2), pp. 337-349. <http://doi.org/10.1080/15374410801955854>.
- Takishima-Lacasa, J. Y., Higa-McMillan, C. K., Ebesutani, C., Smith, R. L., 2014. Self-Consciousness and Social Anxiety in Youth: The Revised Self-Consciousness Scales for Children. In: *Psychological Assessment*, [e-journal] 26(4), pp. 1292-1306. <http://dx.doi.org/10.1037/a0037386>.
- The QuinnsPiracy, 2013. *Depression Quest*. [computer program] itch.io. Available at <https://the-quinnsPiracy.itch.io/depressionquest> [accessed January 18, 2018].
- Titone M. K., Freed R. D., O'Garro-Moore J. K., Gepty A., Ng T. H., Stange J. P., Abramson L. Y., Alloy L. B., 2018. The role of lifetime anxiety history in the course of bipolar spectrum disorders. In: *Psychiatry Research*, [e-journal], 264, pp. 202-209. <http://doi.org/10.1016/j.psychres.2018.03.087>.
- Turner, D. W., III, 2010. Qualitative interview design: A practical guide for novice investigators. *The Qualitative Report*, 15(3), pp. 754-760. Available at: <https://nsuworks.nova.edu/tqr/vol15/iss3/19/> [accessed April 3, 2018].
- University of Toronto, 2005. Guidelines for Ethical Conduct in Participant Observation. Toronto: Social Sciences and Humanities Research Ethics Board (SSH REB). [online] Available at: <http://www.research.utoronto.ca/wp-content/uploads/2009/03/Participant-Observation-Guidelines.pdf> [accessed April 26, 2018].
- van Elferen, I., 2012. *Gothic Music: The Sounds Of The Uncanny*. University of Wales Press: Cardiff, 2012. eBook Collection (EBSCOhost), EBSCOhost, [accessed March 14, 2018].
- Vetenskapsrådet, 2002. Forskningsetiska Principer inom Humanistisk-Samhällsvetenskaplig Forskning, Vetenskapsrådet, [online] Available at: <http://www.codex.vr.se/texts/HSFR.pdf> [accessed April 20, 2018].
- Werning, S., 2017. The Persona In Autobiographical Game-making As A Playful Performance Of The Self. In: *Persona Studies 2017*, [e-journal] 3(1), pp. 28-42. <http://dx.doi.org/10.21153/ps2017vol3no1art650>.
- Wilkinson, N., Ang, R. P. & Goh, D. H., 2008. Online Video Game Therapy for Mental Health Concerns: A Review. *International Journal of Social Psychiatry*, [e-journal] 54(4), 370-382. <http://doi.org/10.1177/0020764008091659>.

## Appendix A - Consent Forms

The following images are from the Google Forms and signature required versions of the consent form. Both of them are in Portuguese, as provided to the informants.

### Consentimento de Participação

\* Required

#### Tese de mestrado em Serious Games "Exploring Underrepresented Narratives: Social Anxiety in Games"

Essa atividade faz parte da pesquisa de mestrado para o programa de Serious Games na Universidade de Skövde intitulada Exploring Underrepresented Narratives: Social Anxiety in Games.

Essa atividade é composta por três etapas. A primeira é uma conversa visando entender a relação da fobia social na vida do participante. A segunda é a criação de um rascunho baseado no imaginário do participante a partir de experiências vividas. Por último, uma reflexão sobre o que foi criado na etapa anterior. A atividade em questão tem o intuito de adquirir entendimento das perspectivas dos participantes acerca da fobia social, não havendo qualquer espécie de juízo de valor. Em nenhum momento a atividade envolverá avaliação de sua performance.

Não há qualquer tipo de recompensa financeira envolvida na participação da atividade, porém sua participação é de vital importância e contribuirá para o estudo de como jogos podem explorar fobia social de forma mais adequada e representativa.

Dada a natureza do projeto em questão, abordaremos assuntos de cunho pessoal potencialmente sensíveis e é possível que tais tópicos possam causar desconforto. A participação nessa atividade não é, de forma alguma, obrigatória e, caso não se sinta à vontade para seguir adiante, você pode optar por não continuar. Você tem a liberdade de parar a qualquer momento sem se preocupar e sem necessidade de apresentar justificativa.

A estimativa é que a duração total da atividade seja em torno de uma hora, podendo haver variações para mais ou para menos.

Sua identidade será mantida em sigilo e todos os dados referentes à participação serão anônimos. O material levantado será mantido sob os cuidados do pesquisador e em hipótese alguma compartilhado com terceiros.

Ao concordar com esse termo, você informa ter compreendido o conteúdo da atividade e está de acordo em participar da pesquisa. \*

- Concordo
- Não concordo

SUBMIT

**Figure 2** Consent form sent to informants through a Google Forms direct link.



**CONSENTIMENTO DE PARTICIPAÇÃO NA TESE "EXPLORING UNDERREPRESENTED NARRATIVES: SOCIAL ANXIETY IN GAMES"**

A atividade *Experiential Workshop*, da qual você participou como informante, faz parte da pesquisa de mestrado para o programa de Serious Games na Universidade de Skövde intitulada *Exploring Underrepresented Narratives: Social Anxiety in Games*.

Este documento tem como objetivo confirmar o consentimento do informante acerca do uso das imagens desenvolvidas durante a atividade e autorizar o pesquisador a incluir o relatório da atividade, a fim de contribuir na discussão sobre fobia social em jogos.

Dada a natureza do projeto em questão, em que são abordados assuntos de cunho pessoal potencialmente sensíveis, é compreensível que não se sinta confortável em fazer parte do relatório. Você tem a liberdade de não consentir, sem necessidade de apresentar justificativa. Em não consentindo, os dados fornecidos não serão de forma alguma utilizados no documento. Caso concorde, sua identidade será mantida em sigilo e todos os dados referentes à participação serão anônimos.

Em ambos os casos, os arquivos de áudio e vídeo referentes a atividade serão mantidos sob os cuidados do pesquisador e em hipótese alguma compartilhado com terceiros.

É feito claro que não há qualquer tipo de recompensa financeira envolvida na participação da atividade, porém sua participação é de vital importância e contribuirá para o estudo de como jogos podem explorar fobia social de forma mais adequada e representativa.

Ao assinar esse termo, você informa ter compreendido a extensão da participação no projeto e concorda autorizar o uso das imagens produzidas durante a atividade, bem como o relato desenvolvido pelo pesquisador, no documento da tese *Exploring Underrepresented Narratives: Social Anxiety in Games*.

PARTICIPANTE:

NOME	ASSINATURA	DATA
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PESQUISADOR:

TIAGO S. R. ALVES		07/05/2018
NOME	ASSINATURA	DATA

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**Figure 3** Consent form printed, signed and scanned by the researcher.

## Appendix B - Informant1 Workshop Transcription

This is the translated transcription of the Experiential Workshop with Informant 1.

**Table 3** Transcription of the Experiential Workshop from Infromant 1.

Speaker	Text
	<b>*Intro*</b>
Researcher	So, let's start. Do you feel comfortable to talk now? If you'd like to reschedule (...)
Informant 1	No problem, We can start it!
Researcher	Just as reminder, if anytime you feel like quitting, feel free to do so. There is no problem in that.
Informant 1	Mind that the sound is stuttering a bit. Like, I don't know. Maybe if you speak closer, I don't know.
Researcher	Does pulling my computer closer help in any way?
Informant 1	I think so. Try longer sentences, let's see.
Researcher	O rato roeu a roupa do rei de roma [classical Portuguese tongue twister]
Informant 1	I think it's fine now.
Researcher	As we were talking before, the purpose of the activity is to gather your life perspective related to social anxiety.
	This is part of a study aiming to contribute to game language in representing social anxiety through games.
	It is still an undocumented field, therefore the purpose of my thesis.
Informant 1	Ok.
Researcher	The workshop is comprised of a conversation, an artistic activity, in which you're going to represent something - more details when we get there, so there won't be any spoilers.
Informant 1	Ok.
Researcher	Then a reflection that you will describe your creation.
	Do you have any question?
Informant 1	Not for now.

Researcher	Ok. After the activity, when we are done, feel free to ask anything about the project or anything else. You're welcome to do so.
Informant 1	Ok.
	<b>*Interview*</b>
Researcher	Alright. When did you realize socializing, or other social situations, could be something hard?
Informant 1	Hm (...) I think there were two phase. There was the initial one in the first childhood, when it was hard because of shyness, that I didn't know how to deal with people.
	But this was a process that I learned to deal and how to talk to people, then it stopped being a problem.
	There was a phase later, in early adult life, in which a new kind of social struggle (...)
Universe	<b>*BSOD*</b>
Informant 1	From where do you want me to catch up?
Researcher	You were talking about in your adulthood it was more like an anxiety (...)
Informant 1	Got it.
Researcher	Shortly after that my computer gave up on living.
Informant 1	Ok. Hmm (...)
	It's hard to pinpoint exactly when, because it was something that was taking over my life, you know? Little by little.
	It started as a means to avoid certain things I didn't like.
	Like, having to expose ideas myself, os have to sell ideas or deal with people I didn't know on environments I didn't know.
	It's weird because, for example, at the same time I have a certain way with that. I overcame the shyness that was before.
	For example, it's not hard for me to get to someone I don't know on an conference, find something in common and start talking.
	But for some other things it's like absolutely impossible to go and say some things. I don't know.

	Online or emails. Emails are something that makes me really nervous.
	It's hard to tell, like, because in parallel there is a side that's absolutely ok.
	And there is a side that triggers anxiety crisis in a way I can't describe properly.
	I don't know. I think it's something recent, started showing probably because I started reinforcing a series of fears and a associations in my head.
	That if I avoid a kind of situation, or a kind of people then it's alright.
	Then nothing will happen to trigger this anxiety reaction.
	Is it that you want to know? I don't really know.
Researcher	Yes. I want to know about your life and how this works for you. I want to understand.
Informant 1	Uhum.
Researcher	You mentioned about identifying sides of what is what, what triggers anxiety.
	How is this identifying process? Can you identify rationally this distinction?
Informant 1	More or less. More or less.
	There is a distinction, but I don't know clearly what defines it.
	And I think. I thought, at least, that, oddly, in situations that I can be physically present with people,
	in which I can read their body language, have contact, look at the person and really know what's going on, I don't feel uncomfortable.
	I feel way more uncomfortable when I am, for example, sitting to write an email for a client I never knew and that I cant read through text properly
	how the person feels and what's their opinion.
	Everything is related to what is the real opinion has towards what I am exposing.
	So it is like "Oh, is this person criticizing me or not? Is this person, I don't know... what are the emotions coming along the message?"
	It is way easier for me to read those situations live than through text.
	And I've heard a lot the opposite, as matter of fact. People say "Oh, I have a lot of social anxiety, but on the internet I don't"
	For me it's the other way around *giggles* so I don't really know why.

	Then I also think it is because, for example, when I have the opportunity to show curiosity by something interesting from the other person
	I am in a way more comfortable position.
	I am in a position to ask questions, of someone trying to find out, get informed. So it is like an ok position.
	Now when I need to go up front and say somethin like "Oh, this is my story. This is my point of view" then it is way harder.
	So I think there is a matter of being active/passive, you know. Of dialogue.
Researcher	Do you think that this situation you described has something to do with fostering connection with people?
Informant 1	In the sense of... Hm... More or less. I think it is about (...)
	Because the other one is also a form of connection. I don't have problems with this connection. In fact, I like it, but then I'm not vulnerable.
	I think it's a matter of vulnerability. The moment I present myself and say "This is who I am. I am defending my ideas" and you are exposing that to other people
	Then this gets to something. At least this is the theory I close to, recently then.
	*risos* it was a process.
Researcher	Do you usually reflect on that often in your life?
Informant 1	Yes. A lot.
Researcher	You also commented that this changed over time and some things were reinforced, while others weren't.
	Meanwhile, did you find any coping mechanism?
Informant 1	To deal with the (?)
Researcher	Social anxiety.
Informant 1	Sort of. Normally I need to force myself to do things, otherwise I don't.
	And they are very hard until there is a time they're not.
	Suddenly I realize that, if I wake up in a good mood and I see I don't mind, I try to do most I can, like send and email.
	What I think it helps is to start from a point of view of curiosity, instead of fear.

	It's like, instead of being very afraid of what is going to happen, be open to what is going to happen and think "No, wait! Let's see what would come out of this"
	And be sure that you will be alright.
	Because anxiety is, actually, nothing more than your brain trying to protect you of something that it thinks it's going to kill you.
	And that probably isn't going to kill you. It's just because we don't live anymore in an environment that doesn't... that...
Researcher	Is hostile.
Informant 1	That puts us in risky situations. Yes, exactly.
	So it creates associations like "No way! If someone doesn't like you, you're going to die because of that and no one will like you anymore and you'll be isolated"
	Anyways, it's your brain trying to go other ways.
	So, when I try not to go from that way, when I try not to get attached to that, when I try to go from a curiosity situation is when I get more results.
	And then there are all those little things like taking deep breaths and just do the thing. Trying to disconnect a little from the present situation, see it from the outside. From afar.
	Pretend that already happened and you are just remembering.
	I don't know, I've tried many approaches to see if I can trick myself and do something.
	What people say it helps is therapy of exposition, right? You have to do the maximum possible of things that bother you and you will be well, nothing will happen.
	So I think, I'm hoping, that with time this will go away.
Researcher	Have you noticed improvements on recent times?
Informant 1	I think so. But it's more because I'm trying to reinforce other things on me. Things that build confidence, that make me feel it's only a thing, you know?
	So, I have a routine, times for me to try to (...)
	a time for meal, a time for me to write and think to myself, try to take all of that from my head and put on paper.
	I have been trying to exercise, today *look at the window and the bad weather outside* not so much, but...

	Things like that really help you to have a more wholesome life, they help you feel more in control of the situation.
	Then if a little things goes out of control it's not your entire life to go downhill.
	I feel that, at least, recently I'm not having anxiety crises.
	I am avoiding some things I needed to do, that are related to that, but they are not like (...) they aren't a big problem at the moment.
	So I think it's a little different from when I used to have anxiety crises to the point an email would be sitting for two weeks in my inbox and I still wouldn't even have opened it.
	Because I'm afraid to open them, who knows what would be inside.
	I was reading a reddit forum, I think it was that, in which someone was saying "My inbox is like Pandora's box. I'm afraid to open because I don't know what will come out of it"
	I thought it was interesting, because that's just how I feel sometimes.
Researcher	All sorts of things can come out from an email.
Informant 1	Yes. From an email, or any other messaging tool. Because it's like I'm safe on my own,
	but as soon as other people can have access to me and demand I'm there and talk to them I feel vulnerable and, like, they can show up talking to me at any moment.
	So it's, like, sort of uncomfortable in this sense.
Researcher	Are messaging apps are more annoying when you get a notification, or by simply existing and allowing people to reach you?
Informant 1	No, it's when a notification arrives. It's when it shows.
	Every now and then, like, mainly when it's someone you barely talk, you know?
	Then there lies an email, an enormous message, that makes you think "Oh, I need to deal with that. I don't know what it is. I don't know what this person might want from me"
	Then it lies for one, two days, until I read and reply. Sometimes it's just a silly thing, just a person wanting to talk or any small thing like that.
	But my mind already assumes the worst. That I don't know what it is.
	I don't know.

	So, I think it's more the thing that appears out of nowhere.
Researcher	Does it make any difference when you can peek into the message content through the preview?
Informant 1	Yes. It's the reason I like to leave enabled.
	Then I can read, at least, the beginning of the message and have a vague idea of what it's about.
	But I haven't opened and the person doesn't know I peeked, so there is all this thing about the other person not knowing and not expecting that you have read something.
	You can at least claim you haven't read.
	So, there is something there.
Researcher	Does it create a relation of safety?
Informant 1	A little bit. But it's a fake safe, right.
	Because you are just avoiding whatever you had to do.
	You are just removing yourself from the equation.
Researcher	I see. Well, I think we can begin to transit to the second part.
	It is supposed to be a bit more zen.
	So, if you'd like to close your eyes...
Informant 1	Ok.
	<b>*Artistic Activity*</b>
Researcher	Try to think of a social situation that you consider ideal.
	I can be something utopic. It doesn't need to be bound to reality.
	Consider that social situations do exist and imagine what would be the ideal.
	You don't need to speak about it. You can keep it to yourself and open you eyes when you feel like it.
Informant 1	Ok.
Researcher	And if you to take a short break, at your will.

Informant 1	Don't worry. It's fine.
Researcher	Alright.
Informant 1	If anything, I'll tell you.
Researcher	Alright.
	Now the objective is to focus on a social situation you consider to be good
	and try to reflect on what you were thinking on that situation. Things that have happened to you.
	What else were you feeling.
	What made you feel comfortable on that moment.
	If there was still any worry in your mind during that moment.
	And now try to imagine that as a game scene.
	This is what the representation activity is about.
	Important notes: you don't need to worry about the implementability of anything.
Informant 1	*laughs*
Researcher	Really.
Informant 1	It's a theoretical game.
Researcher	Yes! A theoretical game.
Informant 1	*laughs*
Researcher	And then you will represent a scene about that, without bothering if it would make sense or not to be in a real game.
	What matters is what you had thought, how you see it.
	And you're not being evaluated on that. This is not the purpose of the activity.
	The purpose is trying to understand your views on the topic.
Informant 1	Do you want me to draw, or do you want me to describe how I imagine it?
Researcher	If you could draw and then send me a photo would be the ideal.
	And it doesn't need to be too elaborate. Just a registry of your ideas based on the things

	you thought and focused upon.
	And that's it. The materials you feel like using and have available (...)
Informant 1	Uhum. I have a clear idea in my mind. I can get you.
	I don't know if you want me to explain now, or if you want me to do that and send you later.
Researcher	It can be the second option.
Informant 1	Ok.
Researcher	By the way, I wanted to ask what you would prefer. Would it be better to hung up and then(...)
Informant 1	This is going to take a little while. Or I can make a sketch and show you.
Researcher	A sketch is enough. Something you can use to talk about.
Informant 1	Right. I'll go grab a paper.
Researcher	Alright.
	When you're done we'll do something similar, but with a different focus.
	Still as a part of the same activity, then we'll talk about it.
Informant 1	Let me do something here. It's better if I do it now.
Researcher	Alright.
Informant 1	*starts drawing*
	*finishes drawing*
	Ok. Obviously I didn't stop to think about (...) do you want me to show you now?
Researcher	Not now. If you want to take a picture now, it's ok.
	But then you show all at once.
Informant 1	It requires me to explain. Oh, ok. I'll send you later. Alright.
Researcher	Alright. Now try to focus on a situation that had been particularly hard. A social situation.
	Try to connect with what you were thinking on the occasion.

	What else were you feeling.
	What bothered you in that situation.
	If you had wished for something in specific on that moment.
	And if you could see any way out of that.
	When you manage to connect to your memories, make a representation again.
	You can use the same sheet, or use a new one.
Informant 1	Do you want a representation of the sensation, or do you want as an aspect of a game?
Researcher	A representation of that sensation as a game aspect, if possible.
	But the most important is to be able to describe the scene. How does it work, what are its dynamics. How interactions representing that for you would be.
Informant 1	*starts drawing*
	I think this one I'll need to more describe you in its sensations rather than transforming it into dynamics.
	Because then I think this is your job *laughs*
	Because I don't quite know. I can describe how it feels like and then you interpret better.
	Just taking some notes here.
	*finishes drawing*
	Ok.
Researcher	You can take a picture and send me (...)
Informant 1	I can do that. I can take it now. I didn't understand you wanted it now.
Researcher	This way I can see what you are referring to.
Informant 1	Yes.
	Ok. Let me (...) I'll send you on Telegram.
Researcher	Alright. It's the equivalent of showing in real life.

	<b>*Reflection*</b>
Informant 1	It went through. Ok.
	This is the first. Hang on, just a moment.
	The thing is that this one has a matter of intimacy.
	I have put a strong light spot and darkness outside, because this is something like you being in your own field.
	You create a bubble, an atmosphere, there that you feel safe.
	I think that it is something like when you manage to (...) when you are exchanging something you say "This is how I see it. This is how I feel".
	And the the other person says "This is how I see it. This is how I feel"
	And this exchange is what allows for vulnerability in this case.
	Because you can feel safe, while isolated, but it doesn't satisfy you.
	When you are isolated you are afraid.
	But the moment someone looks at you and say "It's alright", you know?
	Then it comes to be something you see as "This is normal. There is nothing wrong with me", you know?
Researcher	And is this situation involving people you already knew?
Informant 1	Yes. The scenes I imagined, the situations I imagined from my life, were with people I knew already. Let's say I had on the path of better knowing those people.
	Of sharing something real and feel I'm being seen.
	Of the other person seeing who you really are and you feel like "I feel good about it. I don't feel afraid. There is nothing to worry". You feel accepted.
	Any more question about this one?
	I don't really know what those exchanges would be.
	I imagined tokens, or something like that. That would represent "here there is a memory attached to that" and you go and tell something about that.
	Could be a card game of some sort.
	But the point is that to get something you must give something.

	It has this aspect of vulnerability.
Researcher	Would it be a metaphor for exchanging life experiences?
Informant 1	Yes. I didn't go in depth with a game metaphor. I was thinking more about the experience I know *laughs*
Researcher	But this is what's important! Good!
Informant 1	Ok *laughs* thanks!
	Ok. The other (...) let me take a picture here.
	This one I had a harder time to imagine as a game situation, but it happened several times.
	I mean, being in a social situation in which, it doesn't need to be a party, you just need to be with a group of people and then something, an information, hits you.
	It can be through the phone, or you remember something, something triggers you, something like that.
	And then you are taken to an emotional field completely different from everyone around you.
	And you feel very isolated in this sense, because you feel you were supposed to be, in a certain way, you were supposed to be sharing this activity with the others.
	But you are, in fact, completely turned to the inside, thinking of something else.
	Then the sensation is of complete paralysis. Because you are trying to deny what you are feeling, that you, in a certain way, put a label of "wrong".
	Or you somehow try to deny, but at the same time you can't run away from that, because you need to deal with what is bothering you.
	So, this is the sensation I have. My reaction is really a flight or fight on those moments.
	It's wanting to get the car and go home. Flee. Disappear.
	Yes. My first reaction is go to bed and flee. Stay under the blankets.
	And there is much of this physical isolation for me.
	Like, feeling safe in a confined space, you know? Isolating myself, whether by covering under the blankets, or closing the door.
	I am annoyed by open doors. I close all doors around me.

	Then it creates a space of comfort around me. My sensation is to seek this comfort.
	It could be running away to the nearest bathroom and hide inside.
	But yes (...) people around seem to give more strength to whatever is bothering at those times.
	Anyways, I don't know exactly how this would translate into a dynamic, but I know there is a lot about feeling you don't belong to that group you are at that moment.
	And that, even if you try to belong, you can't. Even if you ignore what's happening, you can't. And so on.
Researcher	Interesting. I even had a set of questions to ask, but you filled with so many details (...)
Informant 1	But you can ask anything you want in this sense.
	Sometimes I go rounds, but eventually land on something.
Researcher	No way! It was a really in-depth explanation.
	When you mentioned something about flight or fight and that your first reaction would be flight, have you been in a situation that you've chosen the other?The fight.
Informant 1	It's not common for me. But it's more because I don't see myself in situations of anger, for example.
	I'm a melancholic person by nature. I get sad, I don't get angry. I get upset, not angry.
	I have situations of arguing, start to fight with someone, but then it is too specific.
	It's more like something is bothering me and someone starts to pick on me and then I lose my patience, you know? This kind of thing.
	But it's nothing personal and I think it's much more the feeling of (...) the main feeling I have is wanting to disappear.
	Is of not wanting to exist.
	I remember someone posted a comic about a potion of disappearance.
	"Disappear for some [indistinguishable] from reality. You disappear without any pain or anything. Time stops. Your responsibilities aren't there anymore"
	It's like a dream. But that doesn't exist, so (...)
	So the only thing that happens is that time passes and you get more nervous about what you were supposed to be dealing with.

Researcher	On those situations, when it's possible to rely on safer spaces, reclusion, does time passes and it alleviates a little? When you reach a safe zone.
Informant 1	No. If I just let time pass, the more time passes the more nervous I get.
	Because normally they are things I need to act upon, do something. Then I just get more depressed, more upset with the situation.
	But if I, instead of staying under a blanket for 13 hours thinking that I wish I didn't exist, that sometimes happen, I go and do something else, get distracted (...)
	Normally works of fiction help, like reading, playing something.
	It can be cooking, take a walk. But I need to stop, get my head away from this thing.
	I need to do something. Remember life is bigger than just that, whatever it is that is bothering me.
	And I need to relax, normally. It is like you are obsessed over something. You stay like that, like you were playing over a single note.
	All the time it's that thing. And it's obvious you won't arrive at any conclusion if you don't try other perspectives.
	But it is hard to see that from the inside. You enter a loop that makes you obsess over a thing.
	It's what they call ruminant thinking. Ruminant seems like it's a cow *laughs*
	You keep ruminating the idea. You stay over that matter all the time, so it only gets worse. In fact, you need to let go.
	Sometimes I need someone else to remind me of that, because I have a hard time doing that on my own.
Researcher	What is this struggle related to? Is this related to not being completely conscious of what's happening, how to get out of it?
Informant 1	I don't know if it's a lack of consciousness. I think it's a chemical process of the brain. I don't really know.
	But it is something many people describe in situations of social anxiety and depression. Something that sets your brain in loop.
	Of course that, the more conscious you are on how your brain operates, that's why people suggest meditation, you get more conscious of what's happening.
	And of course this helps getting you out.

	It's hard to tell you are not conscious, because sometimes you know what you should be doing. like "I know I'll read that email and after that I'll be alright", you know?
	I know that if I solve that now it's way better than spending 24 hours thinking about that and then do it.
Researcher	Is it in a little push the other person can collaborate with?
Informant 1	I think the other person contributes more with other perspectives. To take you away from that loop, not necessarily in doing what you were supposed to do.
	It's more like, hm... (...) I don't know, it's an obsessive thinking. You stay in a loop.
	I don't know if it's a matter of consciousness or not. I think someone that better understands this topic would know better.
	For example, I never talked to doctor about that specifically. So it's not like if I would know, like, what should I do or not in that case.
Researcher	I see. Thanks a lot for your participation and for sharing so many aspects of your life.
Informant 1	No problem! I hope it had made some sense, because I feel I'm talking but in the end I'm like "nhe blebleb"
	Do you know when you (...) because it's not like if I had assembled that in sentences before in my life. Save for, I don't know, my notebook.
	I never spoken about that out loud. So I don't know if I made any sense, if it was possible to understand what I'm talking about *laughs*
Researcher	I believe it was possible to understand well everything and, for sure, it would help greatly with the project.

## Appendix C - Informant2 Workshop Transcription

This is the translated transcription of the Experiential Workshop with Informant 2.

**Table 4** Informant1 transcription of the Experiential Workshop.

Speaker	Text
	<b>*Intro*</b>
Researcher	Do you confirm to have agreed to the consent form?
Informant 2	I do.
Researcher	Alright. Do you feel comfortable to talk now? If you wish to reschedule it's fine.
Informant 2	Nods assertively.

Researcher	Going again through the purpose of the activity, it is to understand better how you experience or had experienced social anxiety.
	This is not an evaluation. In no moment your performance will be measured, or anything of the sorts. This is just for exploratory and understanding purposes.
Informant 2	Ok.
Researcher	The workshop will be a brief conversation, then a visual representation activity, followed by a reflection about what you have created.
	And by the end, if you have any kind of feedback, be welcome to share.
	Anytime you'd like to ask something, be comfortable to do so.
	If, for any reason, you'd wish to stop, you can do it without providing any justification.
Informant 2	Ok.
Researcher	Do you have any doubt?
Informant 2	No.
Researcher	Ok. Later, if you'd like to get in touch, you can leave a message, email, anything.
Informant 2	I guess I have all your contacts *smile*..
Researcher	Ok. So, let's start.
	<b>*Interview*</b>
Researcher	How did you find that socializing was a hard experience?
Informant 2	I don't think I ever "found out".
	It was just part of me since I was little.
	I always had troubles to make friends. Always have troubles to talk. Always had trouble to talk on the phone.
	So it was something I just accepted about myself.
	The name, social anxiety, was something I only found out way later. Some 5 years ago.
Researcher	How was the situation you found out about it?
Informant 2	I think that, possibly, making the [project related to the theme]
Researcher	About making friends, talking, talking on the phone. Is some of these particularly harder than the others?
Informant 2	Telephone. Telephone is the worst.
	Because through messages it seems impersonal enough not to have as many social pressures.
	Talk in person, or through video, you can see the signs on the person's face, little hints to understand what's going on.
	But on the phone you are completely in the dark.
	Now I'm way better in regards to that, but it used to be a big problem.
	I was even used to paid people to call places for me.

Researcher	Sorry, I got a bit lost in my line of thought right now.
Informant 2	*laughs*
Researcher	About what you've said. How do you see differences between messages and video, in comparison to in person interactions?
Informant 2	Video and in person basically not.
	My biggest issue is with people I still don't know.
	Because, again, I think I don't know what to expect and I don't know what patterns to identify.
	I think this is the biggest issue.
	I'm still trying to figure out better what I have and how I feel.
	But, from what I realized, my biggest issue is with people I don't know, first contacts, those kind of things.
Researcher	Do you think it still persists in the same way, or has it changed over time?
Informant 2	It is still inside here. But, in every turn, it has less space to get out.
	But it is still inside here. Deep down. Always.
	I think it will never go away, but it's ok.
Researcher	Do you feel alright with that nowadays?
Informant 2	Yes. I understand it is a part of me and there is no ways to erase it.
	I can work with that, but it is still a part of me.
Researcher	Did you find ways to cope with that?
Informant 2	I started going to psychiatrist.
	He prescribed me some anxiolytic and antidepressants, which is also another thing.
	I'm on those meds for about two years now.
	And the meds help a lot, because they make it way easier for you not to give so much emphasis to that.
	They don't make you become another person. You don't automatically become hip, cool and easily talk to people.
	But from my experience they give you more strength.
	That you didn't have this energy before.
Researcher	How do you feel when you didn't have that energy? And, possibly, had to deal with a social situation?
	By the way, before this question, have you even been to an unavoidable social situation?
Informant 2	Many! A zillion times!
	My mom always like to visit relatives.
	This was always one of the most terrifying things for me.
	Because, even though they were people I knew, they were people I was no intimacy.

	My mom was the kind of person that would demand things like "Go say hello to that relative. Go say hello to each of them. Go say goodbye to each of them"
	And this was extremely stressful for me.
	I was always forced to deal with those situations, over and over again, even hating them.
	And it wasn't like I thought I wasn't able to deal with them.
	I know I'm capable. I just don't want.
	No way I want that! *laughs*
Researcher	So, when you don't want and have to. How do you do?
Informant 2	I try... Before I would rehearse in my mind things that could happen.
	I would take hours to sleep thinking of each possible dialogue and social interactions that could happen and how would I respond, so that I would always be ready.
	Today I just say to myself "oh, well... let's go"
	And this, for me, is a proof of how much this has improved already.
	I don't stress over it, thinking about it and feeling heart palpitations and my face getting hot like if I was feverish.
Researcher	Did you ever feel your face go numb in those situations?
Informant 2	Honestly, I'm really bad at perceiving myself.
	It's something I've been improving.
	But it would usually take weeks for me to realize I was feeling pain somewhere, things like that.
	So, maybe I have felt that and never noticed.
Researcher	Well, you answered a lot with your stories.
	We can start the next part.
Informant 2	Alright.
Researcher	Do you have your materials close by?
	Would you like to take a short break?
Informant 2	No no.
	<b>*Artistic Activity*</b>
Researcher	Right. Now try to connect with your memories. Relax.
	Think and try to focus on a social situation that had been particularly hard.
	You don't need to answer anything now. Just imagine what you were thinking on the occasion.
	Try to reconnect back with what you were feeling on the situation.
	What bothered you.

	If you had any desire on that moment. If you could see a way out of that situation.
	And try to represent visually, in a scene, as if it was a game scene.
	A situation in which you would have any kind of interaction, like if it was a game.
Informant 2	And then I have to draw that?
Researcher	Yes. The way you'd prefer. Pencil, pen, watercolor, collage.
	The intention is to represent how you imagine that situation.
	Take your time.
	[finishes activity]
	Oh! Let me take a screenshot here, the resolution is good.
	Let me paste on Photoshops.
	I was going to ask for a picture, but since he resolution is fine... That doesn't always happen.
Informant 2	That's good, we gotta use the opportunity.
Researcher	Uhum.
	Let me save here.
	Right. No I'd like you to take the same procedure of reconnecting with your memories.
	Focus on a situation that you have considered particularly good.
	That had been pleasant in any way.
	Try to remember what you were thinking on that situation.
	What else were you feeling.
	What made you feel comfortable in that situation and if, even comfortable, there was still any worry.
	And then the same thing, try to represent it visually. Imagine it like a game.
Informant 2	I think I'll get a black pen. Hold on.
Researcher	Uhum!
	[finishes activity]
	Let me take a screenshot again.
	Right. Done.
	<b>*Reflection*</b>
Researcher	Could you describe the first one, please?
Informant 2	Ok!
	The first one is like if you had to go from point A to point B, but there is a big obstacle in the way and you can't solve it.
	You can only push it upwards until you get to the top and it is a situation that drains

	you at each second.
Researcher	And in this situation did you imagine yourself doing that? Is it a metaphor for things you've gone through?
Informant 2	It's something that happens to me, but each time the obstacle, the stone, gets a little easier to push.
	I think it gets a little less heavy.
	It used to be way heavier and enormous, frightening and overwhelming.
Researcher	And what happens when you reach the other side?
Informant 2	On the other side there is this [shows the other doodle]
	It is not exactly a game, it's a bean bag and you right in the middle. Warm and nice.
	It's very rare to reach this situation, but it does exist.
Researcher	Why do you think it's rare to reach this situation?
Informant 2	It's hard to reach a point of comfort with people, with some people, to this level.
Researcher	Would you know why it is so hard?
Informant 2	I have no idea.
	I just know that, with rare exceptions, talking to people is an active effort and something not natural.
	It is something I need to think every interaction in real time and it drains energy for me.
Researcher	Are there people that make it easier or harder?
Informant 2	Yes! Absolutely!
	For example, with [significant other name] it is very easy. We have a good communication and talking to them drains no energy, even replenishes.
	I have some endeared friends that when talking to them it drains energy.
	Generally because they like arguing, etc. And for me this drains energy. Always drains energy.
	There are some other friends I like a lot that aren't so... I think the big issue is conflict.
	If the conversation is a little conflictual, or if the person keeps questioning me, or if I don't feel comfortable to express myself, it will drain energy.
	Whereas if it is with some more laid back people, that accept things, that are ok, it's way easier.
Researcher	Do you seek to avoid conflict on your interactions?
Informant 2	In my interactions... That's the point. I don't seek to avoid conflict, in fact I jump heads on into them.
	But they drain my energy.
Researcher	Then when you don't need to spend that energy (...)
Informant 2	It's good *laughs*
	[uses and example of a recent public discussion, which is a conflict that the informant

	could have chosen not to take part but didn't think twice before going heads on]
	[starts relaxation moment]

## **Appendix D - Informant3 Workshop Transcription**

This is the translated transcription of the Experiential Workshop with Informant 3.

**Table 5** Informant2 transcription of the Experiential Workshop.

<b>Speaker</b>	<b>Text</b>
	<b>*Intro*</b>
Researcher	Do you confirm to have agreed with the consent form?
Informant 3	Yes.
Researcher	Do you feel comfortable to talk now?
Informant 3	Absolutely.
Researcher	About the activity purpose...
	It is about understanding a little of your perspective on social anxiety and contribute to a study aiming to understand social anxiety representation in games.
Informant 3	Yes.
Researcher	The workshop comprises of a brief talk, then a visual representation activity and, lastly, a reflection about what you create.
Informant 3	Right.
Researcher	Do have any questions?
Informant 3	None!
Researcher	Ok. If for any reason you wish to stop, either a pause or dropping the activity, be welcome. It wouldn't be a problem and everything will keep fine.
Informant 3	Ok.
	<b>*Interview*</b>

Researcher	When did you realize socializing could be something hard?
Informant 3	Well, I can't remember to have ever felt comfortable with people. Ever.
	The same way I can't remember to have ever felt comfortable with, I don't know, myself *laughs*
	I was a introvert chubby kid, in a rich private school that I had absolutely nothing in common with anyone.
	I don't know if it was an internal feeling, or if it was just the environment I was in, or both things feeding each other.
	But I remember to, ever since I was little, be more immersed in video games, books, any activity and have a much harder time to live with people.
	Even so that every interaction seemed a little artificial.
Researcher	How would you describe those interactions and this difficulty in social interactions?
Informant 3	Seeing from my perspective it always seemed like the people would do things naturally, whereas when I'd try to if would seem artificial.
	Like if I had to think thoroughly about something that should come naturally and this would end up bringing strangeness to the situation that would just make it all worse.
	You asked two questions. What was the other?
Researcher	Two questions, the first question or two questions in one?
Informant 3	Two questions. It was a question somewhat composite.
Researcher	I think it was more like how you would describe your difficulties in those social situations.
	Hold on that I got a bit lost here.
Informant 3	Alright. It's just that I thought I hadn't fully answered, but if you thought I did we could go ahead.

Researcher	Do you think you didn't fully answer?
Informant 3	I have the impression that you've made a more composite question. But it could be just an impression I had, I don't know.
Researcher	This sensation of being an artificial interaction. Did you ever get any confirmation from someone you interacted with?
Informant 3	Well, I feel that asking about it ends up backfiring, because sometimes the person didn't even realize and the moment you ask, you create some discomfort.
	And then it gets, in fact, uncomfortable.
	So it is hard to know, because maybe the impression I'm having does not correspond to the reality, but once you try reassuring it causes some stress, right.
	And it's that thing. If you want a lot of validation all the time people get annoyed.
Researcher	Do you think the way this anxiety manifested in you life, or how you dealt with it, changed over time?
Informant 3	For sure. For some years I simply stopped doing things.
	I had no courage. No courage to even take a bus.
	I had no courage to buy bread at the bakery, because I thought the baker would judge me, that it would be weird to talk to him.
	That when I'd go back to the building with the bread basket the doorman would look at me and say "there they go eating bread again"
	Some absurd things on this level.
	And I was very sick at that time and I completely... I became a zombie.
	Now, despite of the discomfort, I do things.
	But the discomfort is always there.

Researcher	Is it like therapy of exposition, that you need to force yourself despite of the discomfort?
Informant 3	Yes, but I wouldn't say therapy of exposition.
	I would say that, for many years, I had the perspective that I would "get better"
	And now I came to the conclusion that I won't get better. That that's that.
	Maybe I do get better. In a way I got better at some things, but the point is that it wasn't healthy for me to be expecting to get better and preventing myself from doing things while the fear wouldn't go away.
	It is that thing "Don't be afraid, go. Are you afraid? Go anyways" *laughs*
	It was more like developing tools for dealing with it rather than think it would stop being a problem.
Researcher	Would you know how to describe, in more details, those tools to deal with it?
Informant 3	When I say tools it is in a broad sense. It's more like, for example, "I have an intrusive thought that I'm a horrible person and everyone hates me"
	When first I could hear this thought, now I can opt to say
	"Ok, but that's just my thought. If that person has some problem with me, I'll leave to the person to come and talk to me about it"
	Instead of trying to administrate everything for everyone all the time.
Researcher	And then, when you manage to follow this mindset things flow better?
Informant 3	They do. And, like, in the long run, when you look back you realize they are flowing.
	You think "Wow! I've made new friends", or something like that. But it doesn't change the fact that, after every interaction, there is that moment when I get home and think "Gee! That was a disaster!"
Researcher	Does this thinking persist in every situation?

Informant 3	In everything. Yes.
	I think that everyone hates me. I think that who does not hate me is about to find out that does hate me *laughs*
	I get anxious with saying something wrong, with talking too much and then I end up talking more which turns into a vicious cycle
	That I'm worried about not talking too much and then I talk too much and feel guilty, more worried and then talk even more.
Researcher	Considering you mentioned this is a persistent characteristic in you life, I suppose you have been in social situations that you couldn't avoid, right?
Informant 3	Yes.
Researcher	How was any of those happenings?
Informant 3	You mean one that didn't go well, or... Because social situations we can't avoid every day.
	Like, my anxiety is on that level I told you.
	It's in greeting the doorman, buying bread. It's not only in a situation that I need to talk to a lot of people, or introduce me in a new group of friends.
	It's literally everything that requires interaction.
	So it is every day. Everyday I go through some of that *laughs*
Researcher	Do you feel any difference between in person and online situations?
Informant 3	Some. I think being able to removed to a screen alleviates a bit, because you are not seen most of the time.
	You can stop and think before typing. The person will type.
	But, when I was younger, 90% of my closer friendships were made online *laughs*

	Today I feel the people I talk online the most are also people I know in person.
	So I don't know if it makes much of a difference.
Researcher	Is telephone, specifically, a problem?
Informant 3	For me it isn't. I know a lot of people that hates to talk on the phone.
	I, honestly, think it's more practical and even pleasant sometimes.
	You will set up a time to meet someone, for me it causes much more anxiety to stay 40 minutes over messages like "Wait, I'll check it. Get right back at you. Oh, I don't know what"
	While, if you make a call, you solve it instantly.
Researcher	Then it eliminates the pendency of that matter.
Informant 3	Nods assertively.
	I was talking to a friend one of these days and saying it's a very serious problem. People must think I drag too much to out, because with me it's like a lottery
	If you try to plan ahead, it could be that I might have accepted when I was having a good day.
	Then the planned day comes and I'm having a bad day, my social battery is depleted. I'll cancel it.
	Now, if the person tries to set something in the last moment, I can get nervous thinking "But I didn't even prepare psychologically for that!" and not accept *laughs*
	It's hard to navigate that.
Researcher	You talked about social battery. Do you have something that helps recharging your social battery?
Informant 3	Only time alone.

	Or, sometimes... Actually it depends
	I don't consider it to be a social battery, but a battery overall.
	Sometimes you are home alone, feeling awful, then a friend comes and can help you recharge.
	But, generally, being with people exhaust me a lot. Particularly people I'm not too intimate.
	Even if I like the person, I get so nervous that, if I don't have a definite time, a escape plan, I can't face it.
	"What if we run out of subjects to talk? Whatif I don't know what?"
Researcher	There was a time that [name of friend in common] was living with you. How was living with that person?
Informant 3	I got super worried when they came and said it.
	They had already talked about borrowing the couch for a way shorter time, alternating with other friends.
	But the situation didn't go as planned and they sent a message asking "Can I stay some months there?"
	And, like, I said "Of course!" at the time, because they are my best friend and I have no doubt they would have done the same for me.
	But, inside, I was panicking. Thinking "I'll have anxiety cises. I'll freak out with [friend's name]. Our friendship will be over"
	In the end i was smooth. But I think it was smooth because the [name of friend] s a very laid back person.
	They know me very well. So there were days I came home crying hysterically and they would just [patting gesture] "It's ok. It's ok"
	The fact they don't make a big deal out of it as well.

	They comfort but it's not like "Woooooow!" such an awe over that.
	Seems it ends up helping a bit, seems that no matter what you do they will always consider everything ok.
	I even missed them, when they left.
	Every now and then I say "Don't you wanna visit and stay a few days?" *laughs*
Researcher	Have you seen each other a lot lately?
Informant 3	I haven't seen them since I came back from my trip.
	They are too wrecked with work and, everytime I try meeting, they cancel.
Researcher	It's hard to find {name of friend] sometimes, isn't it?
Informant 3	Yes.
Researcher	Well, I think we can begin our next step.
Informant 3	I have many pens [show pens]
Researcher	Oh, that's cool!
	Do you want a short break?
Informant 3	Whatever you say. For me we can keep on going.
Researcher	Alright. The priority is you.
Informant 3	Right
	<b>*Artistic Activity*</b>
Researcher	Now try to focus on the things I'll say and imagine them in your head, reconnecting

	with your memories and emotions.
	You don't need to answer anything for me at this moment. They are only things that will stay in your mind to make the representation.
Informant 3	Right.
Researcher	Try to focus on a social situation that has been particularly hard.
	And remember what you were thinking on the occasion.
	What else you were feeling.
	What bothered you in the situation.
	What you wished for in that situation and if you could see a way out.
	And try to imagine that as an interactive scene, that could be a part of a game.
	But you don't need to worry about any game application, if it is really implementable or not.
	Try to focus more on what would be the interactions and the space of possibilities of the situation.
	This is not an evaluation. It is just meant to understand your perspective towards that.
Informant 3	Fine.
Informant 3	I should try drawing something based on that now. Is that it?
Researcher	That's it..
	Do you think 15 minutes would be enough?
Informant 3	Possibly. Would you rather hang up and I call you back, or should we leave it on while I draw?
Researcher	For me, if you'd rather leave it on it would be ok. If you'd rather hang up and call again

	it's fine too.
Informant 3	Either way.
	Try to draw my stick figures.
Researcher	Alright!
Informant 3	You know I don't really draw, right? If i make stick figures you won't judge me, will you?
Researcher	Not in the slightest! By the way, be welcome to make stick figures that it's alright.
Informant 3	[finishes drawing]
	Done!
Researcher	Do you think you could take a picture and send me later?
Informant 3	Uhum.
	*shows the doodle and already starts describing it*
	For me, one of the most afflicting things is this idea of losing people for being weird and for the thing I told about social battery.
	of sometimes not being able to talk properly.
	Here we have a little energy bar, with only one heart left, and here I have the options.
	But some of them spend different energy levels and, since you don't have much, you choose the weirdest one.
	And people are left with this "ahn?" face.
	And then the result is that you don't lose energy, but in fact you lose opportunities.
	Then you are left in the doubt.

Researcher	Leave it like this that I can take a screenshot.
	Let me open Photoshop to save the screenshot.
	Almost done.
	Done.
	Before we proceed talking more about this one, let's go to the second representation.
	You will do basically the same thng, but with a different focus now.
	Try to focus on a social situation that you have considered good, that had been particularly pleasant.
	Try to connect back with what you were thinking on the occasion, what else were you feeling.
	What made you feel comfortable on that situation.
	If there was still any worry at that moment.
	And then try to imagine that as a game scene.
Informant 3	Uhum.
	Ok.
	[finishes drawing]
	My concept is the exact same situation.
	But what I consider most well succeeded and what comforts me the most in interpersonal interactions is when you think everything is going wrong and then realize there is no wrong answer.
	You won't be penalized.

	You end up recharging.
	*shows doodle*
Researcher	If you can place it a little to the side, towards your bedroom, I can take a screenshot of the whole image.
	A little to the back.
	Right. I got it.
Informant 3	I find it very rewarding when there is no wrong choice.
	I always joke with my brother when he mocks me, saying I spend more time than I should on Stardew Valley and Animal Crossing.
	And he likes games that are way harder.
	I don't know, like Binding of Isaac, X-COM and I tell him "[name of brother] I already get nervous from life. On the video game I want more that the things be simple, you perform an action and has a return"
Researcher	That be rewarding and relaxing.
Informant 3	Exactly!
Researcher	Do you feel recharged, when playing Stardew Valley?
Informant 3	A lot! *laughs*
Researcher	What was the other game you mentioned?
Informant 3	Animal Crossing. Oh, my! I'm addicted! The [name of friend in common] mocks me because I think I'm level 70 on Animal Crossing Mobile.
	But... those creatures love me. They are always there with a word of tender.
	I can't wrong them, I won't say anything wrong. It is very simple. I give them something and they love me back *laughs*

Researcher	I didn't get o play Animal Crossing Mobile, but I have many hours of Stardew Valley. I think around 300.
Informant 3	I'm around that too.
Researcher	I think I'm going to the sixth year.
Informant 3	I think I've stopped on the fourth. There is some time since I last played, because I'm using a [laptop model] my mom gave me some years ago.
	And now it's processing capacity is over and it doesn't open anything anymore.
	*shows Animal Crossing interface focusing on the level 72*
Researcher	Back to the first representation you've made, would you explain again the situation for me, please?
Informant 3	I am afraid of always being about to say or do something that will ruin everything, let's say.
	Of people say "Oh, now I know! You were just pretending to be a cool person. Now I remember why you are an execrable person. You weirdo!"
Researcher	I remember you mentioned that when you choose the option that is not what you really would have liked to choose (...)
Informant 3	It's kinda like ofr a lack of choice. Sometimes you are so nervous, so out of battery, that it is the only thing you can think at the moment and all the other ones are unavailable.
Researcher	What about the "Proceed?" there? What does it represent exactly?
Informant 3	It's that moment when you have to take a deep breath and think "This is so exhausting. Should I continue? Should I leave it?"
	"Should I give up on making a friend? Should I give up on... Or should I take a deep breath and go back from zero?"
	Sometimes it feels like you're always starting over.
	It is a little different for me, perhaps, because I was institutionalized on a psychiatric

	hospital when I was 14.
	And while other kids were... I've had my 15 years birthday there.
	And then I spent the next years of my life with depression, going in and out of hospitals.
	While the other people were dating, entering high school, partying, I was going in and out of hospitals.
	So I felt I lost a lot of the "normal" living and then it's like I feel I'm an undercover alien walking among people.
	And I felt like this for a long time. It got better with the years, but I still feel a little freak.
	And the fear was that being different wouldn't be a good thing.
	Now I know it is, because I know a lot of wonderful weird people.
	But at the same time is that thing. I feel too normal to walk with weird people and too weird to walk with normal people.
	I'm not goth enough to walk with the goths, but I'm also not... you know? It goes on.
	I never felt I fit in anything. Nothing nothing nothing.
Researcher	You didn't find a group you felt 100% comfortable?
Informant	This I think is one of the illusions the adult life and maturity helps us to figure.
	There is no finding yourself 100%. There is no 100% acceptance.
	I need my friends to be like me? No, I need them to accept me like I am.
	And with time you realize there are people willing to handle the moments of pure weirdness *laughs*
	Like "Really, is that what you mean? Calm down, breathe" *laughs* someone that will not run away at the first opportunity.

Researcher	I'm glad you found people like that!
Informant	I think I did *laughs* I hope I did.
Researcher	[start of relaxation moment]