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CREATION OF CONCEPT ART
FOR A HORROR GAME

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Abstract

The topic of this thesis is how to create concept art for a horror game. Additional questions are what makes a person scared and why, and how these elements are used in horror games.

The creation process consists of analyzing fear from a psychological aspect, the objectives of horror entertainment, an in-depth analysis of different horror games and a flexible modeling executed with test subjects. The end conclusions will act as an inspiration for the concept art, which is created for a certain horror game idea of the author.

The research methods in use are qualitative content analysis, case study and flexible modelling.

The written part starts with introduction, which is followed by the psychology of fear and common themes of it and horror. After the theoretical part a qualitative content analysis of six themes of fear and horror and their occurrence in twelve different horror games is executed. Every element is studied carefully among various video game cases. After the in-depth study of these elements in different games, test subjects are creating the basic designs for the character and the environment, which will be taken into further investigation and development by the author. The end result will be a fined piece of concept art which represents the original horror game idea of the author.

Keywords

horror, psychology, concept art, game design

CONTENTS

1 INTRODUCTION

The idea for this thesis emerged from the author's personal interest in psychology and the need to understand the human mind and motives behind actions. When combining this need with game design studies and a passion for creating art, the topic of this thesis was formed almost by itself: creating concept art for a horror game idea.

Like comedy, horror is difficult to execute, and easy to fail. There are various elements that need to be considered in order to create successful horror games, but are there any common elements that keep occurring from game to game? Before diving in to the world of horror games it is first necessary to take a look at fear itself and the psychology behind it, in order to find answers to the following questions. What is fear? When and why does it occur? It is important to know why the feeling of fear differs from horror, and how horror serves as an entertainment. How is horror defined and how is it used when creating horror games, which are one way of expressing horror fiction?

The purpose of this study is to explore common themes of fear and horror and how they appear in the horror game industry. A number of different horror games that the author has found entertaining has been chosen for this investigation. They are analysed by applying content analysis method and case study method, using variable books and articles written by different professions such as psychiatrists, horror writers and game designers. Also different analytical opinions and the personal experiences and preferences of the author will be discussed.

After analysing these topics and searching answers to them, the research method of flexible modelling will be employed. Four test subjects will work together in order to bring fresh opinions from different points of view and their designs will work as an inspiration for concept art production. This concept art will be representing the environment and character of a certain horror game idea of the author, which will be discussed in this thesis.

2   OBJECTIVE

2.1   Research questions and methods

The main question of this study is how to create concept art for a horror game. Additional questions include what makes a person scared and why, and how these elements have been used in other horror games.

The study will employ a thorough qualitative content analysis method. Content analysis can be qualitative or quantitative. While qualitative is focused on the quality of fewer information sources, the quantitative approach is used when reviewing a large amount of information and lighter examination. When dealing with qualitative data, content analysis is a preferred research method, as it is used to create theoretical themes and patterns. Qualitative content analysis can be used to find meanings behind different kinds of information from various sources, and it is an effective technique for deeper examination. (Hanington & Martin 2012, 40.)

Content analysis can be inductive or deductive. While deductive analysis is used to form concrete and provable facts that an already existing theory supports, inductive analysis is more a tool of creating assumptions, forming new theories and knowledge. (Gabriel 2013.) This paper is focused on the fear from its psychological aspect and the personal experience of different individuals, instead of the fact driven biological side of fear. Therefore assumptions are made instead of provable theories, which makes this qualitative content analysis an inductive one. Fear itself is a personal experience, and personal experiences are not facts.

To support the content analysis, the case study research method has also been chosen. The strategy of case studies is meant for an in-depth investigation (Hanington & Martin 2012, 28) of a certain horror element or a game appearing in the chart created from the content analysis. These horror themes and video games are all being examined through the author's personal experiences, the experiences of another audience, and the opinions of professionals related to psychology, game industry or horror industry.

Flexible modelling with four test subjects will be done in order to map out the feelings of an individual. Flexible modeling is a good research method when the designs of a product are almost set, but there are many options existing for their arrangement and results. (Hanington & Martin 2012, 88.) The opinions and designs of the subject group are used to add elements from different points of view. Concept art is made to create certain thoughts, ideas and moods in an audience, so including the opinions of outsiders can play an important part in the art creation process.

2.2 Framework

The framework (figure 1) of this thesis has been built from the research questions, forming three categories of investigation:

1. Elements of fear and horror
2. Horror game analysis
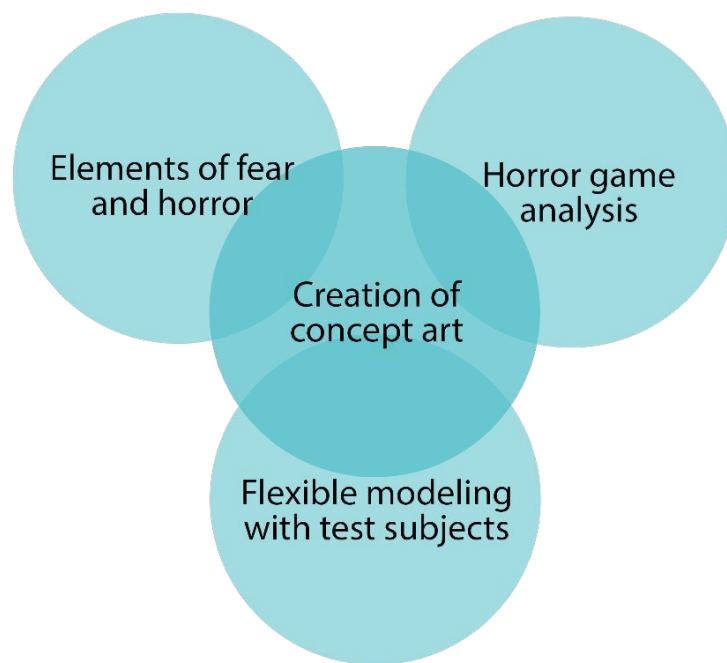3. Flexible modelling with test subjects

Figure 1. Framework (Kunttu 2018)

The result of these three sectors will form the productive work process which is the creation of concept art.

3 PSYCHOLOGY OF FEAR

According to Nummenmaa (2010, 35), who is a professor of medical techniques in Aalto University, along with pleasure, sadness, anger and surprise, fear is also one of the basic emotions of an individual. Feeling fear often includes increased heart-rate, sweating and muscle tension. (Nummenmaa, 2010, 16, 23, 60.) In human behavior, an emotion is created from three steps: the stimulus, emotional reaction, and an emotional experience. (Figure 2.)

Figure 2. Interpretative illustration of human emotion: stimulus, emotional reaction and emotional experience (Kunttu 2018)

Emotional reactions are part of the automatic emotion process. The reactions include sudden changes in body language and behavior, and are mostly executed subconsciously. The emotional experience on the other hand is the conscious side of the emotion process, which in this case is for example the attempt to understand the cause of the reaction. (Nummenmaa 2010, 16.) The actual order of these three steps is still being discussed by different psychological schools, yet an overall final conclusion has not been made.

3.1 Survival instinct

According to Nummenmaa, Öhman's research show that most of the human fears are actually related to the evolution of human. They are usually pointed towards potential threats that are considered necessary for the survival of the species. Consequently, it can be stated that the fear reaction is a result of evolution, and it has been developed in various species to prepare them to face a potential threat, focusing all physical resources to the instinct to survive.

(Nummenmaa 2010, 193.) Leahy, who is a postdoctoral researcher of psychiatry, calls these 'natural fears', which vary from one individual to another but are all based on a simple instinct that is telling us to avoid potential dangers that can lead to death. (Leahy 2008.)

3.2 Fear conditioning

Due to rapid urbanization, the human brain still has not fully adapted to serve the modern human as well as it could. For example fear of snakes is still common, even if fear of more modern threats should be a larger concern. It is unnatural for a person to be afraid of cars, but this does not make it impossible. Humans and many other species can become afraid of various non-natural elements if there has been a negative experience related to that certain element. This phenomenon is called fear conditioning, when an originally neutral stimulus is learned through experience as negative. (Nummenmaa 2010, 28.)
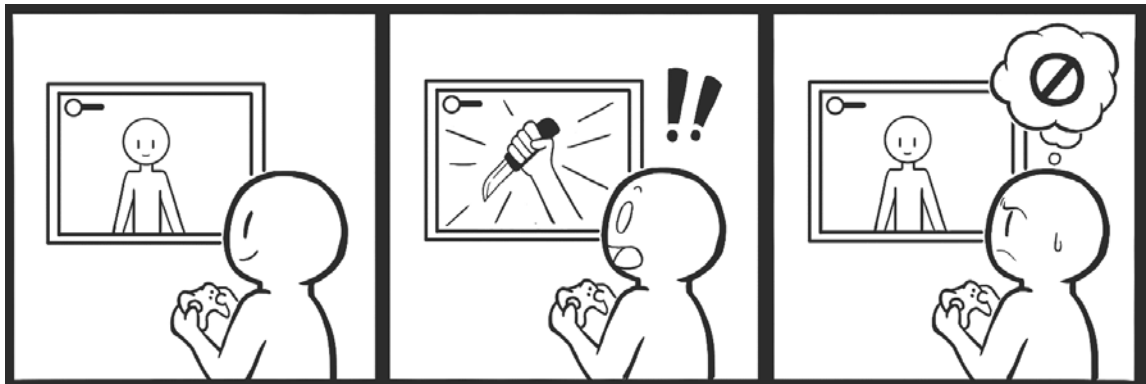

Figure 3. Interpretative illustration of fear conditioning in video games (Kunttu 2018)

As can be seen in Figure 3, after the experience of a surprising, negative stimulus a normal human figure becomes associated with a negative feeling. According to president Giller of Sidran Institute of Traumatic Stress Education and Advocacy, if the negative experience is powerful or repeated enough, it is possible for a person or an animal to form a trauma. Giller defines trauma by as individual experience of a survivor (Giller).

4   EXPERIENCING THE HORROR

4.1   Horror as an entertainment

There are various theories about horror and what makes it fascinating, yet the final conclusion is still nowhere to be found. John P. Hess, the founder of Filmakeriq.com, has studied Dr. Glenn D. Walter's analysis of horror entertainment. Walter has gathered together three terms about horror that need to be fulfilled in order for the horror to become entertaining. The three primary terms are: tension, relevance and lack of realism. (Hess 2017.)

The definition of the word horror is a strong feeling of fear or shock towards an event or a character of something (Cambridge dictionary). This describes what Glenn Walters includes in the tension category. It is the main element of expressing horror, and it varies through genres and techniques. (Hess 2017.)

The element of relevance can be used on many levels: universal, personal or as a subgroup relevance. But whether it was a movie, a book, or a video game, it needs to matter to the audience. For example a horror movie targeted to teenagers usually has many aspects in common with the normal life of a teenager, so that the problems faced in the movie actually can be understood by the audience. (Hess 2017.)

Above all, the element of unrealism is one of the biggest factors when it comes to horror entertainment. There was a psychological test on subjects who were exposed to visually disturbing documentaries in 1994. The results indicated that the audience found these visual materials disgusting instead of entertaining. So in order to make horror entertaining, the audience needs to know it is not real. It needs to be fictional in order to be entertaining. (Hess 2017.)

On top of Dr. Walter's theories, there are many assumptions from various professionals about why people are drawn to horror entertainment. For example professor emeritus of psychology Marvin Zuckerman has stated that it is all based on one certain trait of personality: the sensation seeking of an individual. On the other hand, there are also theories of Gender Socialization, where a man

is naturally entertained by the horror movie when watching it with a woman. Doctor Zillman believes that this is due to the gender roles they are representing: the man being the brave protector, and vice versa the woman finding pleasure being fearful and protected. (Hess 2017.)

According to Hartwig, the producer of Filmmakeriq.com, horror movies provide a safe experience of something radical and scary. They work as a way to explore and learn about situations that are not possible and hopefully not desired for a person to experience. (Hartwig 2009.) Nakanishi also adds that the feeling of overcoming fears can feel very good and that is why the audience gets hooked in the horror. The chemicals meant for triggering the survival instinct are released by the brain while viewing horror and it can become very addicting. (Clark 2017.)

4.2 Horror in video games

Video games have become a popular way of expressing horror. They have much more of an impact to scare the audience, because the responsibility and the pressure of the characters safety has been put on the players shoulders. In words of assistant professor of communication technology Lynch, the fact of having to be involved, controlling the character and making decisions is the number one reported element when investigating the scariness of horror games. (Clark 2017.)

Lynch states that the enjoyment behind a horror game experience comes from the feeling of being brave. This is related to the sensation seeking element, which was covered by Zuckerman earlier. If the player wants to feel the sensation, and engages with the game successfully, it is easy for them to enjoy the game, due to the feeling of overcoming their fears. (Clark 2017.)

4.3 Common themes of horror

After analysing materials from various sources, for example game designers such as Chris Novalski, horror fiction writers such as Elizabeth Barette, professionals of psychology mentioned before and even horror game audiences like Jackson

Giller, a list of the most used ways of scaring the audience in horror entertainment was formed.

4.3.1 The Unknown

The fear of death is an instinct that has been programmed into every living creature on this planet. Why does it scare human kind, when encountering this phenomenon not as a biological instinct, but as a part of one's conscious mind?

Nobody knows what will happen after death, and that is what makes it so horrifying. The human race has the tendency to find explanations to phenomena, and unexplainable events tend to bother the logical brain. The reason behind this is the fear of unknown. Visual creatures like human beings, automatically avoid darkness and rattling bushes, but unlike other animals of prey, which avoid the bushes from an instinct, only the human tends to think about all the horrifying possibilities beforehand.

The fear of the unknown is the first, most primal fear because it contains all others. The fear of death, darkness, things that cannot be seen. Even paranormal and other unexplainable phenomena can be categorized as a fear of unknown. As Barette says: "Everything known emerges from the unknown, and so it has endless power to hold our attention." (Barette 1997.)

4.3.2 Aloneness

According to Rakison, who is a professor of Evolutionary Psychology at Carnegie Mellon University, humans are a social species and need each other's company. (Betka 2013.) It is unnatural and unwanted for a person to execute actions, especially scary ones, alone. This can be one of the reasons why horror entertainment tends to take away the people around the main character. Also horror games that are meant to be accomplished alone are the ones that bring up the heightened awareness of potential threats. People are most vulnerable alone, when there is no-one to have their back. (Betka 2013.)

4.3.3   Break of familiar forms

This element of scaring is very common among various horror entertainments. The more common name for this element in horror film industry is body horror, which stands for a genre that features graphical destruction of human body parts. (Collins.)

Encountering an individual who for example has lost one of their limbs or has their face punched inwards, sends a clear message of avoidance. According to Rakison, there are two reasons why people find the destruction of familiar forms so repulsive. Either it tells about a sickness in a malformed person or it is a signal that this individual is not living in the bounds of a normal human behavior. So whether it was due to disease or actions of a psychopath it is better to stay away from them. It certainly is not anything healthy to be in close proximity to. (Betka 2013.)

4.3.4   The Uncanny Valley

According to Hills, Ernst Jentsch explained uncanny valley as a feeling of "not quite at home". Uncanny valley is the time when something familiar, for example an object or a pattern, becomes eerie by a minor violation. These mixed feelings between familiarity and bizarreness causes confusion and disturbance. The most classic example of uncanny valley is a humanlike robot that is rejected instead of receiving empathy. (Hills 2015.) Masahiro Mori's chart is a good example of how the uncanny valley works. (Figure 4.)
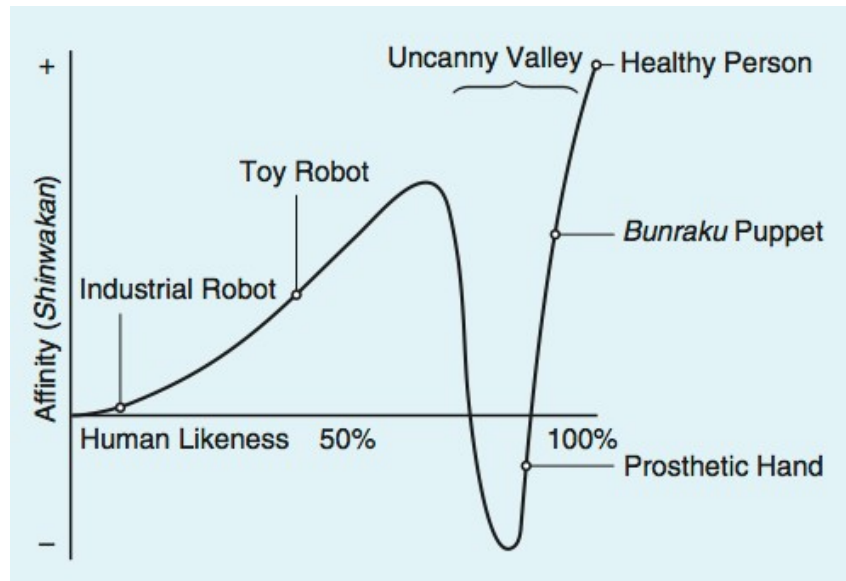
Figure 4. Screenshot of Masahiro Mori's uncanny valley chart (Kageki & MacDorman 2012)

In Masahiro Mori's chart it can be seen, that the closer an object gets to the human likeness, the more its familiarity grows. For example when a robot with human-like features can be found cute, a bunraku puppet (Figure 5) can be found cute but also weird. But when reaching a certain point of highly human-like figures still not reaching the normal looks of a healthy person, the uncanny valley occurs and the familiarity and empathy towards the subjects suddenly decreases. (Kageki & MacDorman 2012.)

Figure 5. Bunraku puppet (Japan-guide 2016)

Although the human-likeness of bunraku dolls are notable, they can still be found repulsive instead of affectionate.

5   CONTENT ANALYSIS OF HORROR GAME MATERIAL

After studying the psychology of fear, the definition of horror and the most common horror themes in general, the elements of fear and horror have been categorised in the following themes: natural fears, fear conditioning, aloneness, break of familiar forms, the unknown and the uncanny valley.

Natural fears include the survival instinct at its finest. It is the primal fear of injury, sickness or death, the basic feeling of trying to keep safe from something obviously threatening. This can also include personal natural fears, such as fear of spiders, heights or even filthy spaces. Natural fears in video games also include death as a results of failure. If the player gets punished for mistakes with death, it can be said that the game is basically driven by the survival instinct.

Fear conditioning can be divided in two: the emotional side and the mechanical side. While the other one is purely included in a game to build an empathic connection between the player and the character, the mechanical side is more about how the game affects the player's behavior. As this thesis is focused specifically on horror games, it is not necessary to discuss the player relationship and the conditioning involved in such a great scale, instead it focuses only on the learned scare reaction horror games offer to their audience.

Aloneness stands for the fear of being left alone, or finding the thought of being alone disturbing. Many horror games are meant to be played alone, offline, and often without NPC's (non-playable characters), which help to create the uncomfortable feeling of isolation. There is safety in numbers after all. Aloneness has been used if the player is purposefully put into a situation, where the objects and missions are meant to be accomplished alone, forcing feeling of loneliness without continuous help from others, whether they are other players or NPC's.

There are many opinions about the 'uncanny valley' phenomenon and whether zombies are a part of it or not. This study is more based on the familiarity of a humanoid character that deviates slightly from the norm. For this reason it was decided not to include zombies in the uncanny valley section. Instead zombies

have been categorized as being a break of familiar forms and included that section, which discusses more about deformation and mutations of the human body, when exposed to, for example, serious violence.

Since the primal fear of death is discussed in the natural fears section, the fear of the unknown is not based on the instinct itself, but on the conscious side of it. It is more focused on the usage of lighting. For example if a game includes elements of darkness, gameplay, or even camera angles that are all there to build an unwanted and lasting feeling of uncertainty, it can be stated that the element of unknown has been used.

1. Natural fears
2. Fear conditioning
3. Aloneness
4. Break of familiar forms
5. The Unknown
6. The Uncanny Valley

	1.	2.	3.	4.	5.	6.
Amnesia: The Dark Descent (2010)	X	X	X	X	X	
Dead Space (2008)	X	X	X	X	X	
Doki Doki Literature Club (2017)	X					X
The Last of us (2013)	X		X			
Layers of Fear (2016)		X	X	X	X	X
Outlast (2013)	X	X	X	X	X	
Project Zero 2 (2003)	X	X		X	X	X
P.T. (2014)	X	X	X	X	X	X
Resident Evil (1996)	X	X	X	X		
Resident Evil 7: Biohazard (2017)	X	X		X		X
Slender: The Eight pages (2012)	X	X	X	X	X	
Silent Hill 2 (2001)	X	X	X	X	X	X
Total	11	10	9	10	8	6

Table 1. Games analyzed and themes occurred (Kunttu 2018)

1. **Natural fears – 11 occurrences**

One of the biggest questions while categorizing these elements of fear and horror, was natural fears and the part they are playing in horror games. As can be seen from Table 1, natural fears occur almost in every game, and there is a reason for that. The playable characters are the bridge between the player and the game, and the scary situations are experienced through immersion with the character. If the character is in danger, the player should feel threatened too. The survival instinct has more or an impact if the playable character gets punished by the player's mistakes for example with death.

Layers of Fear did have the mechanics of death, but it did not really work as a punishing act during the gameplay, which is the reason for not including it in the natural fears when analysing the chart. Dying was not something to be afraid of, but a rather safe thing to do while wandering around the game area and investigating. The character did not need the protection of the player which was one of the biggest reasons for the game not to be that scary.

Doki Doki Literature club was a difficult game to analyse too when seeking for the elements of natural fears. As in Layers of Fear, at first it appeared that the main character was not in any serious danger at all, but the other characters were. This lead to a deep investigation about empathy, worrying about others and how it is related to the feeling of fear. But this is not further discussed in this thesis, due to the following conclusion: The reason behind Doki Doki Literature Club's success was the fact that eventually the main character, the link between the game and the player, was removed little by little. As Gita Jackson reviews, instead of the playable character the game started to become hostile towards the player herself, and that is what made her feel uncomfortable. (Jackson 2017.)

In other games from the list, the player becomes familiar with the survival instinct right from the start. That theme follows the characters all the way to the end, which manages to keep the players stress levels high the whole time. When mistakes are made, the game punishes the player with death. That is an effective

way to keep the players on their toes. But whether it is another person, a zombie
–person, or even a dangerous infection, The Last of Us is a game that is all about
the survival instinct. There are many threats out there in the wild, and sometimes
it feels like the most horrible ones are not the monsters themselves, but the
healthy and clever fellow citizens.

2. Fear conditioning – 10 occurrences

As said, the combination of game mechanics and conditioning of the player is
based on a taught fear reaction in the player, created intentionally by the
developers to adjust player behavior through a repeated stimulus. But in order to
create a learned scare reaction, the game needs to use a punishing act towards
the player for their mistakes. Otherwise the player does not feel the need to
correct their way of taking action. So it can be stated, that the natural fear
discussed earlier, which included the death mechanic itself, is directly related to
fear conditioning. Without fear of death, there is no need to correct their way of
playing.

Figure 6. Screenshot of P.T gameplay (7780s Studio 2014)

The gameplay of P.T. (figure 6) is all about repetition. The player is conditioned to
expect an experience of something bad happening every time they reach the
corner of a corridor. Eventually the whole corridor becomes very repulsive,

building tension beforehand step by step, even if nothing abnormal has even occurred yet.

The emotional side on the other hand works as an empathic bridge between a player and a character. Everyone has their own fears and experiences, so it is natural that the main character has theirs too. It makes the player feel like the character they are controlling is no more than a normal human being, increasing the immersion. They have their own fears and personal experiences – even trauma, that is driving their motives and actions towards their personal goals.

The Last of Us discusses trauma powerfully in an emotional way. The main character Joel, experiences the greatest loss of his life right at the beginning of the story, and that trauma follows him through the whole game, which is 20 years of his life. His loss can be seen in his way of thinking and actions towards the people he meets and interacts with. This makes him very believable as a character, and very easy to relate to, even for players who are not of the same sex or generation. (Figure 7.)

Figure 7. Screenshot of Joel's traumatic experience in the Last of Us (Naughty Dog 2013)

The immersion can be so strong, that through Joel, the players can feel the fear of history repeating itself, and are willing to do anything in order to prevent that from happening again. The Last of Us reminds the players that the feeling of fear can last much longer when it is about someone else's security.

3. Aloneness – 9 occurrences

As can be seen, aloneness was one of the most used themes in the games analyzed on the chart. 'Dead Space' in particular is very focused on the theme of aloneness, and that is one of its greatest strengths. The main character and the player are forced into the isolation of deep space. The space is endless and the distance between the character and civilization is too great for the player to understand. The crew has just abandoned the main character Isaac due to an ambush of alien monsters. There is nowhere else to go other than forward, the player is stuck in an abandoned space ship after all.

'Amnesia the Dark Descent' also has a strong theme of aloneness. The game starts with the main character Daniel alone in a strange castle. Despite the screams of victims in the empty corridors, not a soul can be seen for almost the whole of the gameplay, except for the monsters themselves that are trying to kill Daniel. The only comfort the player gets through his adventure are the notes he has left for himself. This takes aloneness to a whole new level.

4. Break of familiar forms – 10 occurrences

'Dead Space' and 'The Last of Us' are the most classic examples to analyze the breaking of familiar forms. Both of these games include an element of surviving from fellow humans who have turned into malformed monsters. The reason behind the transformations are different but the function within the story is basically the same: a parasite attaches itself to a human host, which eventually makes the host more and more hideous looking. Shooting these monsters in their malformed heads, which can still be recognized to belong to something that was once human, is a classic way of expressing body horror and an easy element for scaring players.

One of the examples that showed the most interesting ways of using the break of familiar forms is Slender: The Eight Pages. The enemy in the game, Slenderman, is a suited man who appears in the woods that the player has to escape from. The appearance of Slenderman is not hideous, but rather modest. There is no blood, guts or other radical twist and changes in its body unlike in Dead Space and the Last of Us. The design relies on a simple key difference from a normal human being, which is its very long and unnatural arms that can be spotted even from far away. But when examined closer, it is face is that draws attention. Slenderman has no facial features at all, which can be very repulsive. Because he has no face, there is no chance to read his emotions or intentions.

5. The Unknown – 8 occurrences

The element of unknown was very popular among the games analyzed. Whether in the form of fog in Silent Hill 2, or through the lack of lighting in the rest of the games. This is a common, yet effective way of creating an uncertain and insecure atmosphere, which demonstrates that lighting is a very crucial factor in horror games. (Birkhead 2011). In 'Amnesia: The Dark Descent', the darkness itself becomes an enemy of the character. If the player spends too much time in the dark, the mental health of the main character becomes damaged. His field of sight starts to blur and swing, and the clattering sounds of cockroaches starts to fill his head while his legs feel weak and clumsy. All these mechanical elements are there to make the gameplay more challenging, which is certainly not welcome when the player is getting chased by a monster. The darkness itself becomes hostile towards the player, and it needs to be avoided in order to maximize the chances of survival.

The unknown can also occur in the form of the designs of levels, areas and characters. For example, in Project Zero 2, in addition to the darkness of the area, the architecture of the buildings and the use of fixed camera angles makes it impossible for the player to see what is going on right in front of them. The feeling of a presence but the lack of knowing for certain can become unbearable when using the architectural designs and camera properly. Also the ghosts in the

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game represent the element of unknown, by often appearing out of nowhere, and also disappear to nothingness after being expelled. They are transparent and often dull colored, which fills the player with the feeling of insecurity. Their lack of substance makes them hard to fight.

It can be stated that an element of randomness causes a feeling of uncertainty too, which is related to the fear of unknown. In this case, 'P.T' and 'Layers of Fear', which are both categorized as psychological horror games, are good examples. The designs of the game areas and their events can't be predicted, and that is what makes them unsettling. When walking from one room to another, anything can happen, and certainly things will not be the same when visiting the same area twice.

6. The Uncanny Valley – 6 occurrences

The Uncanny Valley was the most uncommon theme among the horror games chosen, but yet it is still a very powerful one, especially when it comes to Doki Doki Literature Club. Before anything weird starts to occur, the player needs to spend at least a couple of hours playing the game as if it were the same as all the other carefree dating simulation games. The buildup of tension goes almost unnoticed, which makes the first rather cruel uncanny encounter unexpected and horrifying. After that certain event in the story, the game is not the same. And the way it reminds the player of this is not only done through suddenly introducing a darker story or the uncomfortable facial expressions of the characters (figure 8). It is also done through the mechanics. The fans of horror games are used to hostile enemies and environments, but when the game itself becomes aggressive towards the player and starts to work in a way that game should not work, breaking the fourth wall and becoming self-aware, that is where the uncanny really occurs.

Figure 8. Comparison between normal and uncanny faces of character Yuri, screenshots from Doki Doki Literature club (Team Salvato 2017)

The sudden change in a character's facial expression was an effective way for Doki Doki literature club to create an uncomfortable feeling of uncanny valley in the blink of an eye.

6   STORY OF THE HORROR GAME

The concept art created during this project is for a horror game idea of the author. Before starting the flexible modelling phase and therefore the design process, the story of this idea needs to be explained. By doing this beforehand the designs of the test subjects will work together better with the story provided.

At the beginning of the game, the main character of the game wakes up in an unfamiliar room, with a chain around his ankle. His design will work as an avatar for the player instead of a character, which means that his physical appearance has to be made as relatable to the player as possible. Therefore he should reflect the assumed target audience of the game, which is mostly an adult male. (Birkhead, 2011.) He has been captured in a strange house, which is inhabited by a creature. As can be seen from the research table (table 1), our survival instinct needs to become activated in order to create a scary game, so naturally the creature has to be hostile towards the main character. The objective is to get out of the house while avoiding the life threatening enemy. In order to have great

impact on the survival instinct, the player is not able to defend himself in any situation, except the ability to run away or hide in the building.

The motives of the creature itself and the backstory of it and the house were actually created in more detail while executing the flexible modelling test, due to the fact that the test subjects themselves tended to find solutions and reasons behind their designs, as human nature tends to do. However in game, nothing would be explained properly in order to confuse the reasoning mind of the player. All that could be seen is that the enemy character is definitely not living a normal life in his house, which can also be seen in the design of the game area.

7 FLEXIBLE MODELING WITH TEST SUBJECTS

7.1 Character modelling

Based on idea of the Exquisite Corpse game invented by French surrealists in 1920's, flexible modelling technique was employed by the following terms: each subject designed two hands, two legs, a head and a torso that were supposed to look as scary as possible. These designs were drawn on a paper and were cut apart from each other. All the body parts were scattered around on a table and from these pieces the test subjects created together four different paper doll models which were meant to represent their idea of a scary character.

When examining flexible modeling of the test subjects, it can be seen that the most common theme appearing in their designs is the break of familiar forms. This element appears in every model, especially in arms and legs. (Figure 9.)
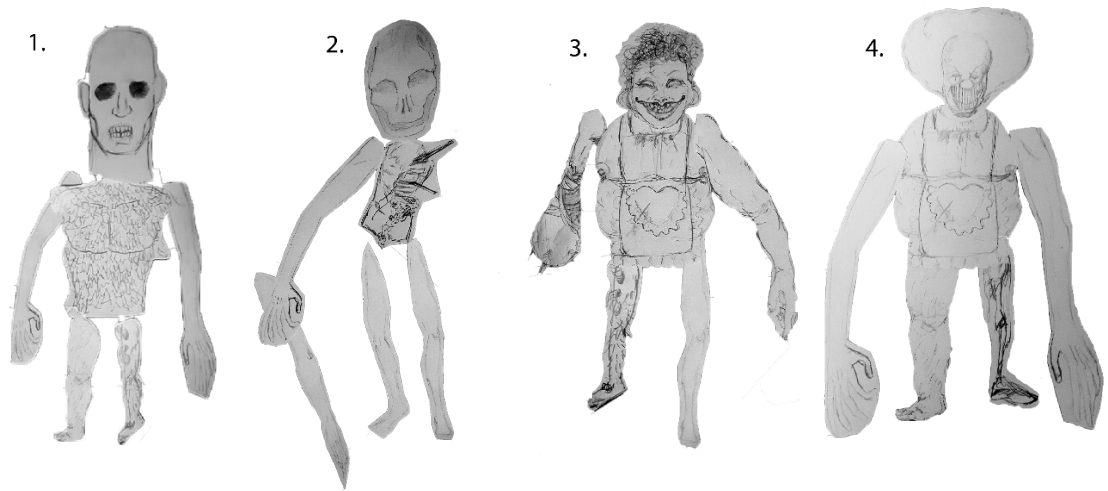
Figure 9. Comparison between the paper doll models (Kunttu 2018)

Model number 4 was stated to be the scariest paper doll model according to the test subjects. It has its legs damaged but still long and strong arms. One of the subjects stated, that the unbalance here between the arms and legs is logical, because if the character is not able to stand with his legs, he needs to compensate this with his hands. This idea of a person walking with his hands like a gorilla made them shudder. It can be stated, that the thought of an abnormal way of this character's movement creates an association related to either break of familiar forms or uncanny valley. A person knows the way how a human being is supposed to walk, and when this familiar pattern deviates, the person becomes uncomfortable. (Figure 10.)
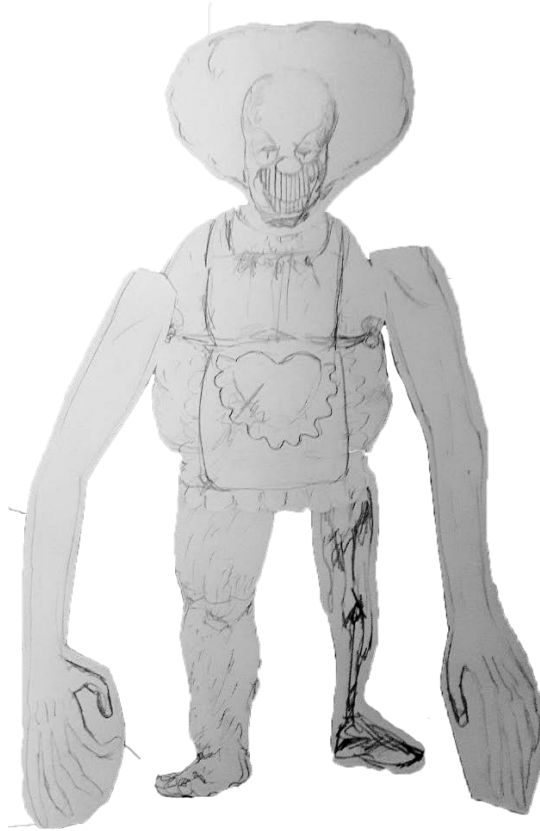
Figure 10. Paper doll model chosen by test subjects (Kunttu 2018)

Other elements worth noting are the clown face and the heart apron. They are both elements that are usually associated with positive feelings. A clown makes people laugh, an apron is related to cooking and a heart decorating the apron represents love. The apron itself looks almost welcoming, which clearly is in a conflict with the deformed body and the evil looking clown face.

According to the senior psychology instructor Kevin Bennet who was interviewed by Amanda Bell, clowns as a fear are somewhat common nowadays and can be explained by the uncanny valley. Clowns are almost human with slightly off features which is why they are scary. (Bell, 2017.) So it can be assumed that the test subjects chose this paper doll model as the scariest one due to the impact of the uncanny valley effect.

7.2   Environment modelling

During the flexible modeling of the environment, the presets of the rooms were carefully edited by test subjects. The test subjects were allowed to add four elements of their choice per a preset illustration of each room. The elements were restricted to lifeless and inanimate objects which could be easily drawn on top of the illustration. The elements could also be added in order to affect the lighting or edit an already existing object.

Every room turned into very interesting horror rooms easily, and they all got short histories in order to explain the design choices of the test subjects. Certain elements kept appearing repeatedly. For example every room except the dining room and bedroom had something to do with filth and dirt. Especially if the room had something to do with hygiene, for example bathroom and kitchen (figure 11), they were seen as very repulsive. This kind of impurity as a horror element can be assumed to be a part of natural fears, which is linked to fear of sickness, disease and death.
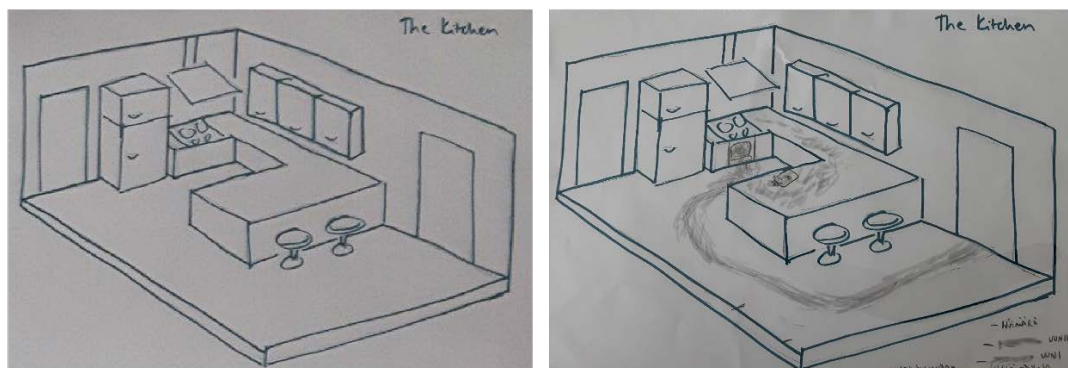
Figure 11. Comparison between kitchen preset and kitchen after modelling (Kunttu 2018)

It is normal for a person to avoid places as dirty as these designs. Humans know that a place with that much dirt can serve as a nesting place for different disease and bacteria. Especially, as one of the test subjects pointed out, some places can be found more disturbing when exposed to filth if they indeed are in places where cleanliness is necessary.

8 CREATION OF CONCEPT ART

8.1 Character thumbnails

In order to understand the anatomy of paper model 4 it was necessary to create thumbnails of his posture and possible ways of moving. When creating an enemy, it is important for the player to treat them as an "other", so that the player does not feel upset for fighting them or seeing them getting destroyed. (Isbister 2006, 242.) The character thumbnails has been created mostly based on this ideology (figure 12).
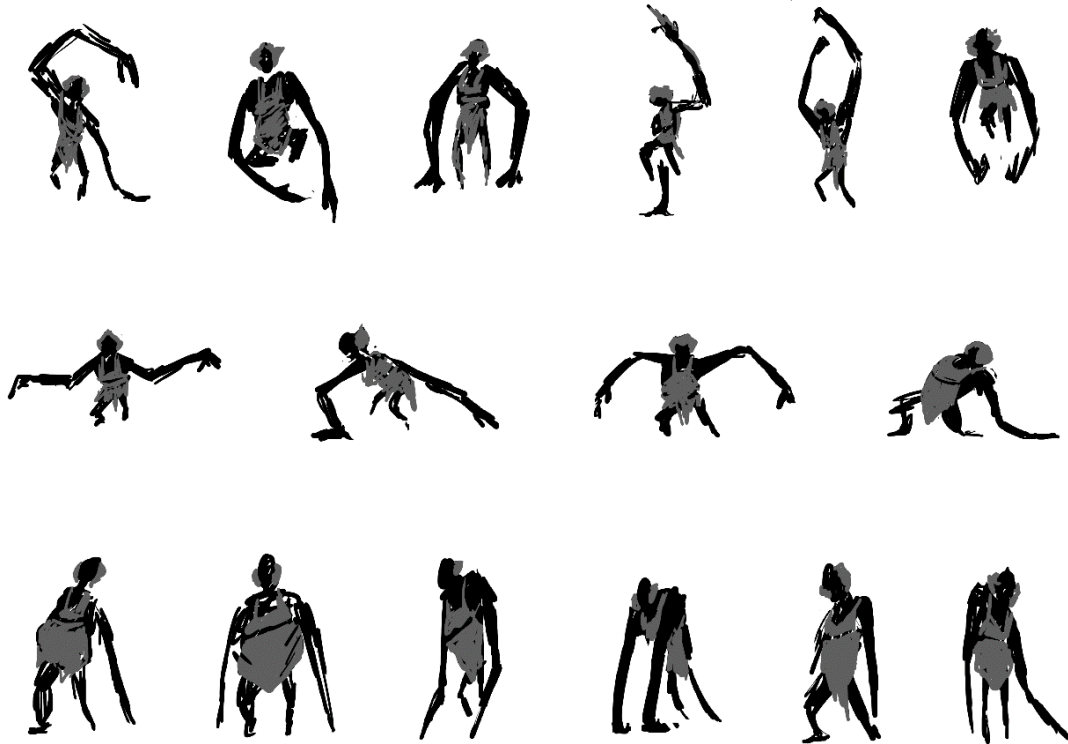
Figure 12. Character thumbnails (Kunttu 2018)

As can be seen from the figure, the two upper rows of character poses are resembling a monkey or a monster unlike the lowest row of poses, which includes more human-like poses.

8.2   Character sketches

Professor of computational media Isbister states that players tend to get more emotional satisfaction from situations where the enemy characters are clearly expressing their defeat. (Isbister 2006, 242.) It is easy to feel superiority towards someone who clearly has the body language of a loser, or someone who looks frustrated by the situation. In consideration of this fact as the concept art is created for a horror game, the character should be designed to be totally the opposite of a loser. The player should feel powerless against him, so the body language and the facial expressions of the enemy should seem somewhat confident. (Figure 13.)

Figure 13. Character face sketches (Kunttu 2018)

In Figure 13 can be seen various clown designs with different facial expressions, face paints and hair styles. When comparing these faces with each other, clearly number six and seven stand out from the rest of the faces. The reason they are highlighted is the fact that their facial expressions are actually unpredictable when compared to the other faces. Excepting the faces which are clearly upset, faces six and seven also indicate that they are fine with the situation, therefore creating a lack of feeling superiority over them. This is totally the opposite of what

Isbister talks about in his text. (Isbister 2006, 242.) In the end, the number seven was chosen for further development by the author. (Figure 14.)
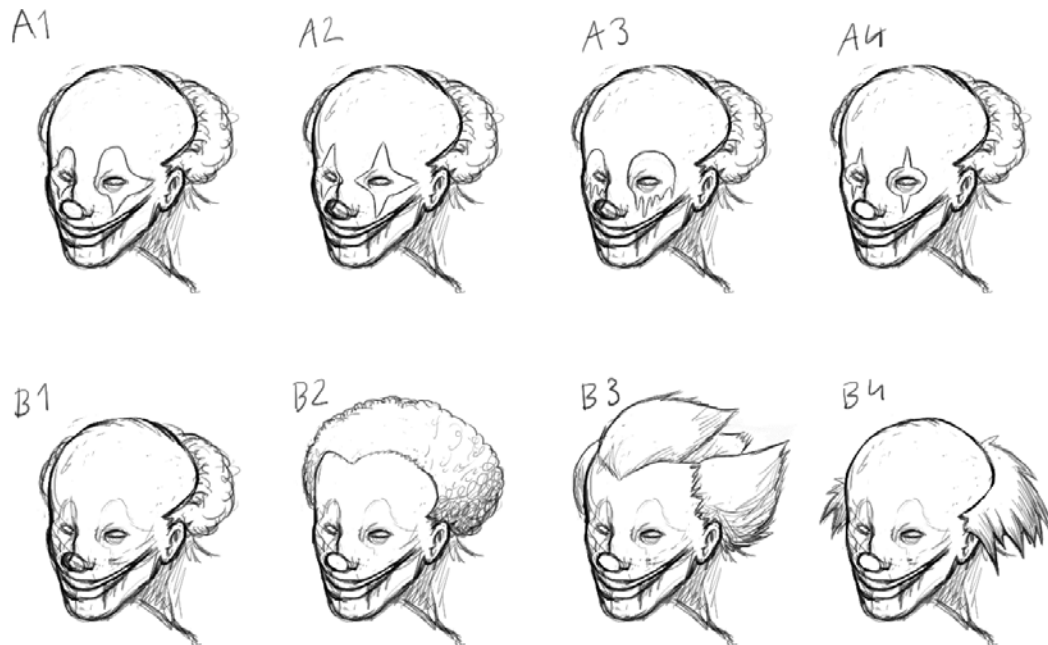
Figure 14. Character face paints and hairstyles (Kunttu 2018)

Even though other face paint designs were created, they did not seem as good as the original one (A1). There was a same effect with the hair, because the heads that were nearly bald seemed the only designs that were actually disturbing looking. B2 was easily associated with African Americans and B3 looked much cooler than the others. After a long consideration B4 seemed like the best option to take into further development since its baldness made him look sick and the rest of the hair looks messy and untreated.

The colors of the clown were easy to pick, considering the fact that clowns are usually related to high saturated colors. In order to make the design look weird, the colors were toned down a little bit, creating this look of nearly dead. (Figure 15.)
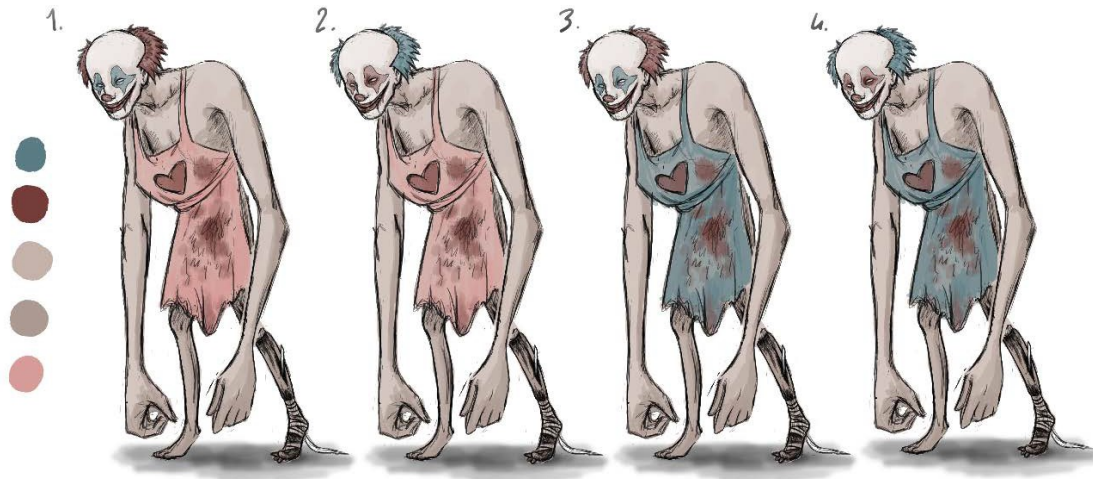
Figure 15. Whole character and color variations (Kunttu 2018)

Pink works well together with the heart design in the front, and thinking about the fact that this particular heart shape was there to create the feeling of unwelcome intimacy, pink seemed to be the best option. It was necessary to match the hair color with red or blue, considering the fact that they already appear in the default face paint. All of the designs were implemented well but only one was chosen to be the final design of the enemy, and that was number two.

8.3   Environment thumbnails

The environment thumbnails (figure 16) were based on the created pre-sets of the rooms and the results of the flexible modelling.

Figure 16. Environment thumbnails (Kunttu 2018)

They were created to express the lighting, the atmosphere and highlighting crucial elements that were brought out by the test subjects.

8.4   Environment sketches

When analyzing the environment modeling executed with the test subjects and comparing them with the thumbnails, every room has areas of interest. The difficulty in choosing only one room for more detailed experimentation was hard, because they were all very meaningful in their own ways. The selection of kitchen for its deeper investigation was found to be more logical than the other rooms, due to relationship with the character model. The test subjects made the enemy wear an apron because of him cooking in the kitchen, and that is what makes the relationship between the environment and the character unique.

8.5   Detailed concept art

After finishing the design of the enemy and ending up with the kitchen thumbnail, the next step was to create a more detailed piece of concept art that displayed the character in the environment it inhabits.

Shapes play an important role in character design and environment design, but according to Chris Solarski their relationship between each other is what creates the atmosphere. If the shapes of a character is similar to the shapes of the environment, it creates the feeling of harmony. However, if they start to differ too much, an illusion of a potential threat starts to occur. (Donovan & Solarski 2012, 204.) This is the reason for placing flat and lifeless props horizontally around the room and placing the character vertically in the centre of the picture. (Figure 17.)

Figure 17. Concept art (Kunttu 2018)

The composition of the props are created in order to frame the character and draw attention to him by using the rule of thirds. Rule of thirds stands for breaking an image horizontally and vertically to thirds that define the points of interest. (Rowse.) The design of the environment is passive and even modern looking in order to create the illusion of normality so that the character stands out easily. Also the clear source of illuminating the subject in the middle of the picture is very effective.

A point worth of noting is also the lack of space and exits. The idea was to create closed and almost intimate interaction between the audience and the character even though there is nothing more than a gaze over a shoulder and a kitchen table in between.

According to Birkhead, when creating the atmosphere it is more about what cannot be seen instead of what can be seen. (Birkhead, 2011.) Amnesia and Project Zeroes are a good example of this, which is why they are considered as an inspiration for this concept art piece when it comes to the lack of lighting that was taken even further from the earlier sketch. (Figure 18.)

Figure 18. Finished and detailed concept art (Sanja Kunttu 2018)

The knife and the cutting board props were placed on the table in the foreground which is almost completely dark, and the only thing that can be seen is a sharp metallic glow. This is not drawing the attention of the viewer but it is a nice storytelling detail. The execution of this visualization is very successful because the viewer still tends imagine the rest of the object even if the grey line is the only visible thing on the table.

After analyzing different games and studying the key factors behind the designs created during the flexible modeling, the uncanny valley is a very strong element when it comes to scaring the audience. This is the reason of including it in the final concept art piece. By shadowing the basic forms of a smiling face that is staring right to the eyes of the viewer can create an uncomfortable feeling of being threatened, even though there is no clear indication of what will happen next.

9   CONCLUSION

As can be seen the process of creating concept art for a horror game several different factors need to be considered. It is necessary to understand basic human behavior in order to understand horror game industry or even horror entertainment itself. When it comes to the ways of scaring the audience in a game, a deep analysis of various different horror production, whether they were successful or not, is recommended.

The character creation process, the flexible modelling and the final detailed concept art that included the character and the environment together were all found very interesting. From this amount of work and research material it can be said that horror genre definitely is easy to fail but difficult to execute. But seeing the visualization of the game starting to evolve into something that actually delivers the wanted emotional reactions from the audience is very rewarding.

One of the biggest concerns of this project was the scary elements and if the visualizations of the character and environment turned boring. After a long period of investigating and working with the horror theme the artist can grow numb to the genre, which can become a huge problem when presenting the production to the audience. The problem was taken into account and discussed with the supervisor beforehand, which lead to choosing the flexible modelling as one of the research methods. With this method the presets of the character and environment design were determined by the audience itself which kept the whole project fresh-looking. It was also very interesting to see the elements of fear and horror

affecting the test subject's way of thinking which also worked as a proving factor of my deep analysis.

The production of the concept art seemed to support the theoretical side of this thesis and the other way around. Working with this project has taught many crucial factors from horror entertainment overall to the video game aspect of it. This study has made it possible to see through the common ways of scaring the audience and the ways they are executed in the entertainment, which can be all seen from a different aspect from now on.

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LIST OF FIGURES

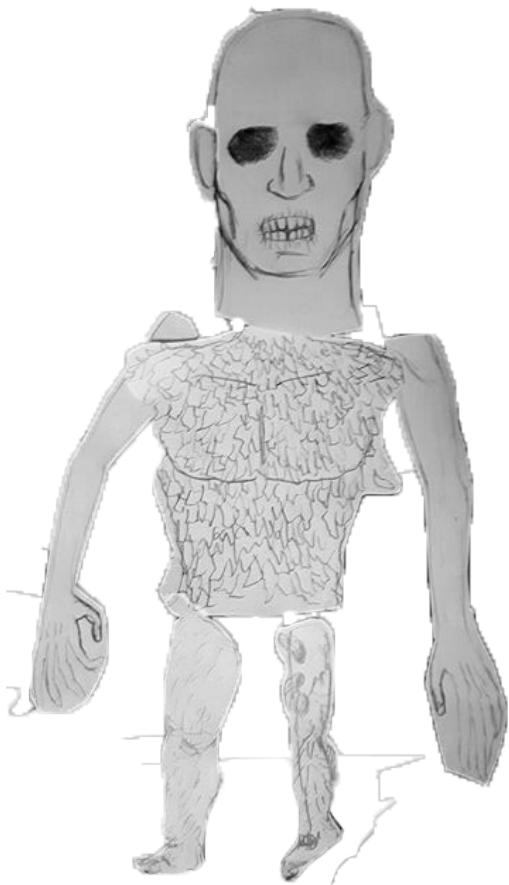# CONCEPT ART FOR

HORROR GAME

Degree programme in
Game Design

Sanja Kunttu

Flexible Modelling (Environment)

-white walls
- Fish on the wall

The bathroom

The bathroom

Blinking

hirousti
- kosymistyrä
Loisteputki
- Likaista

bedroom

droom

NO CURTAINS

YELLOW

-EI VERHOUP IKKUNOISS
- REIKIE SEINÄSSÄ

The Living room

he Living room

random TV static
TV not connected
couch facing unusal spot
Darkness
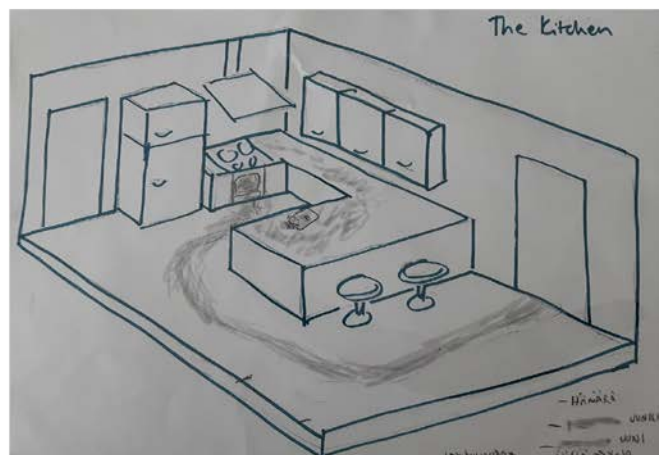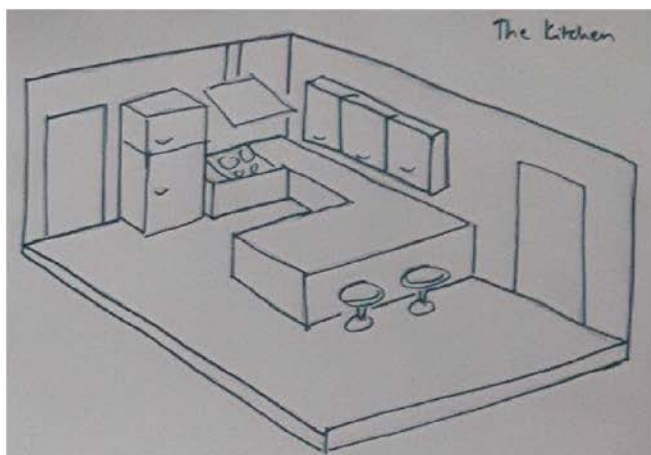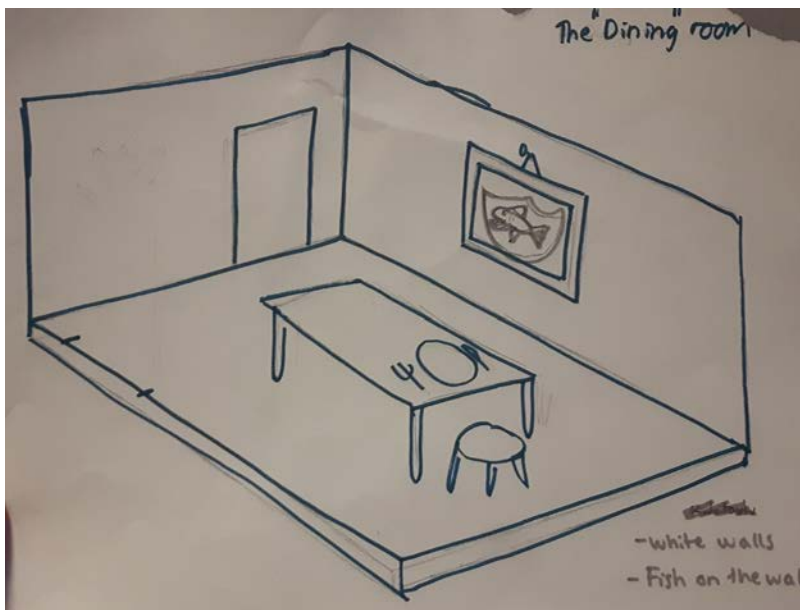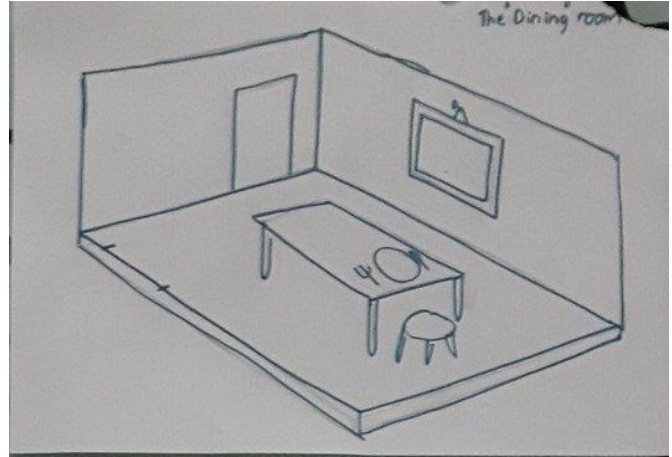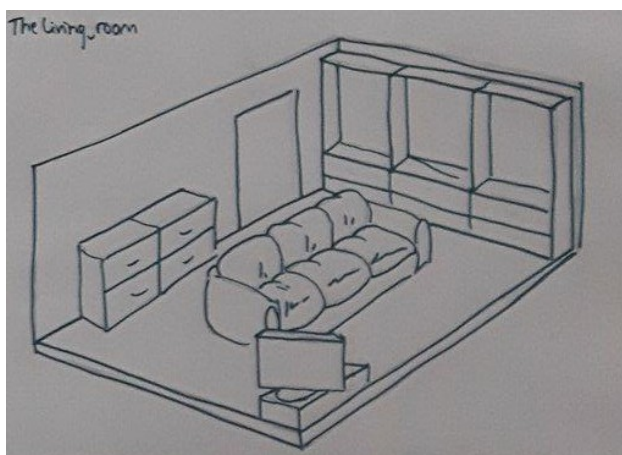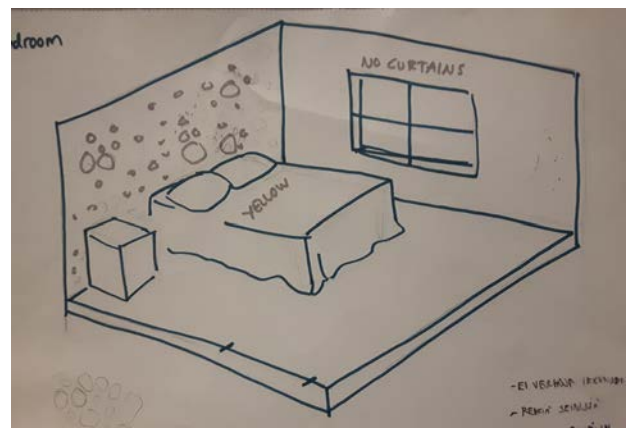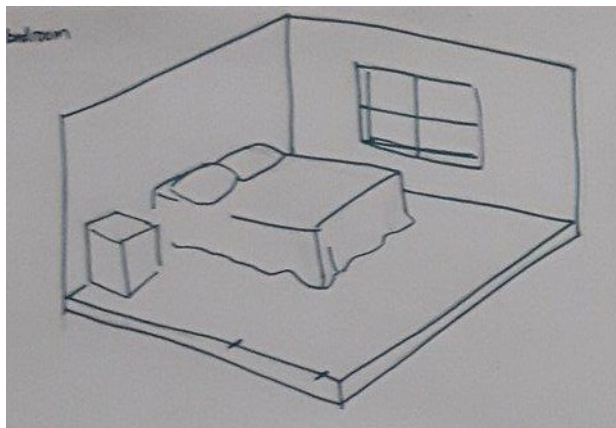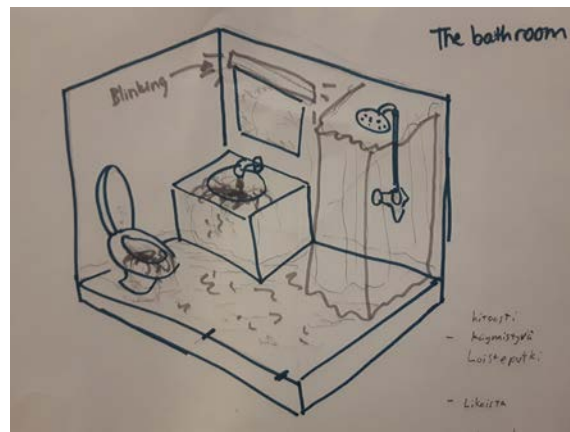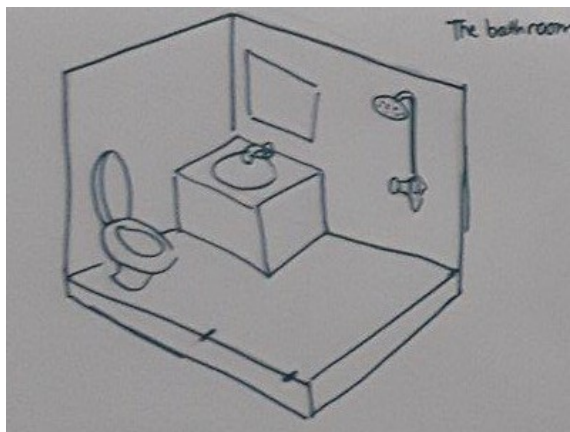
Flexible Modelling (Character)

Character Moodboards

DAVE ALLSOP
ADRIAN BOTT   THE BOOK OF
UNREMITTING
HORROR
GUMSHOE
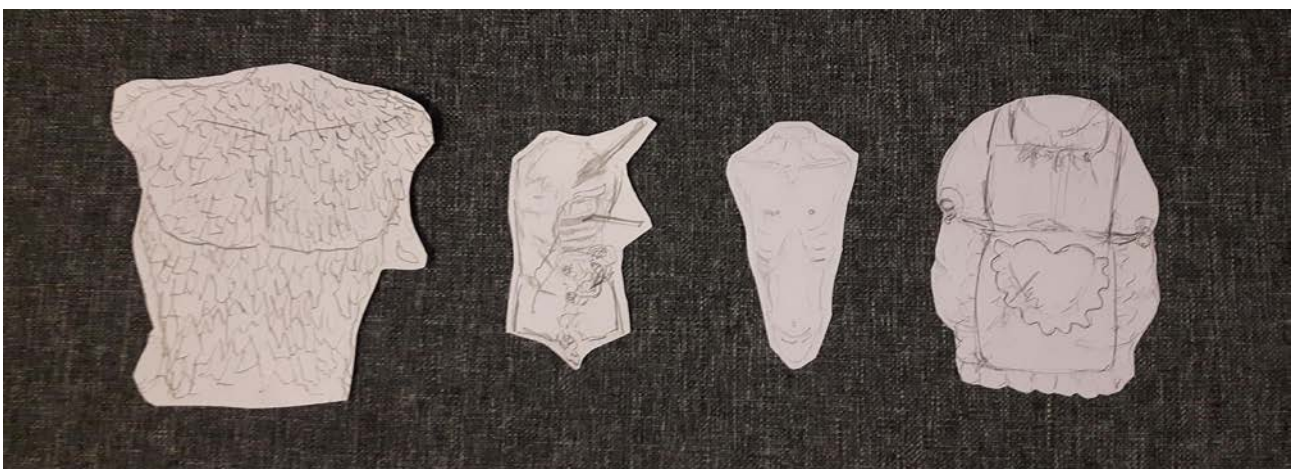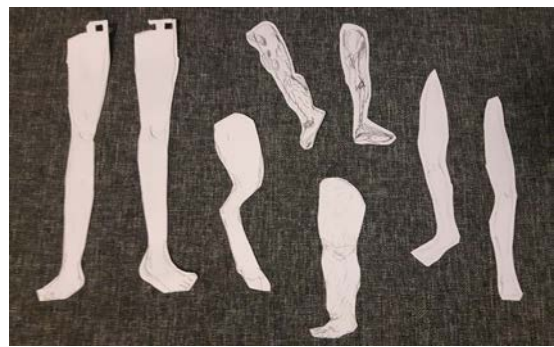
Character Thumbnails

Character
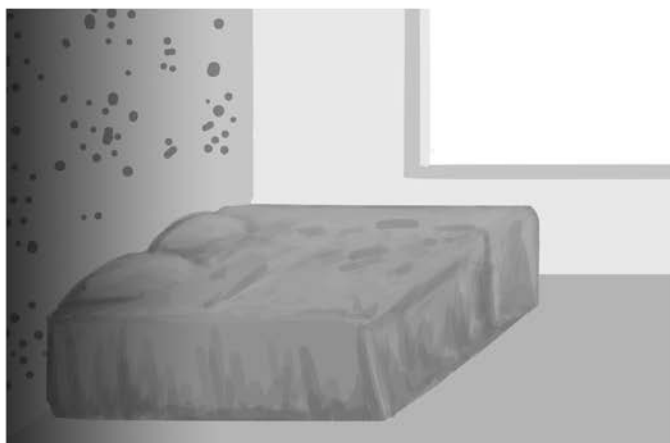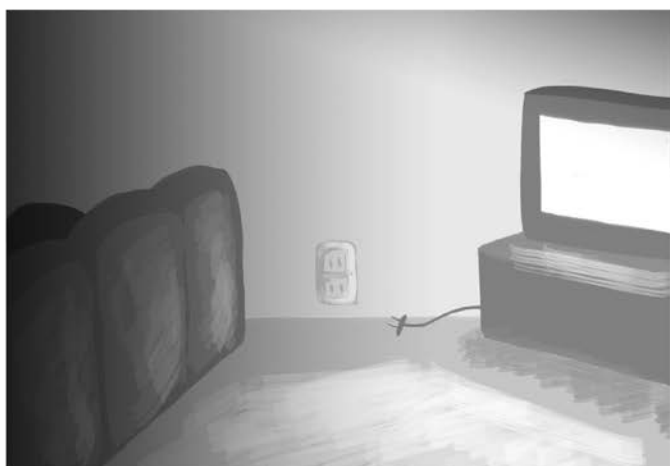# Sketches

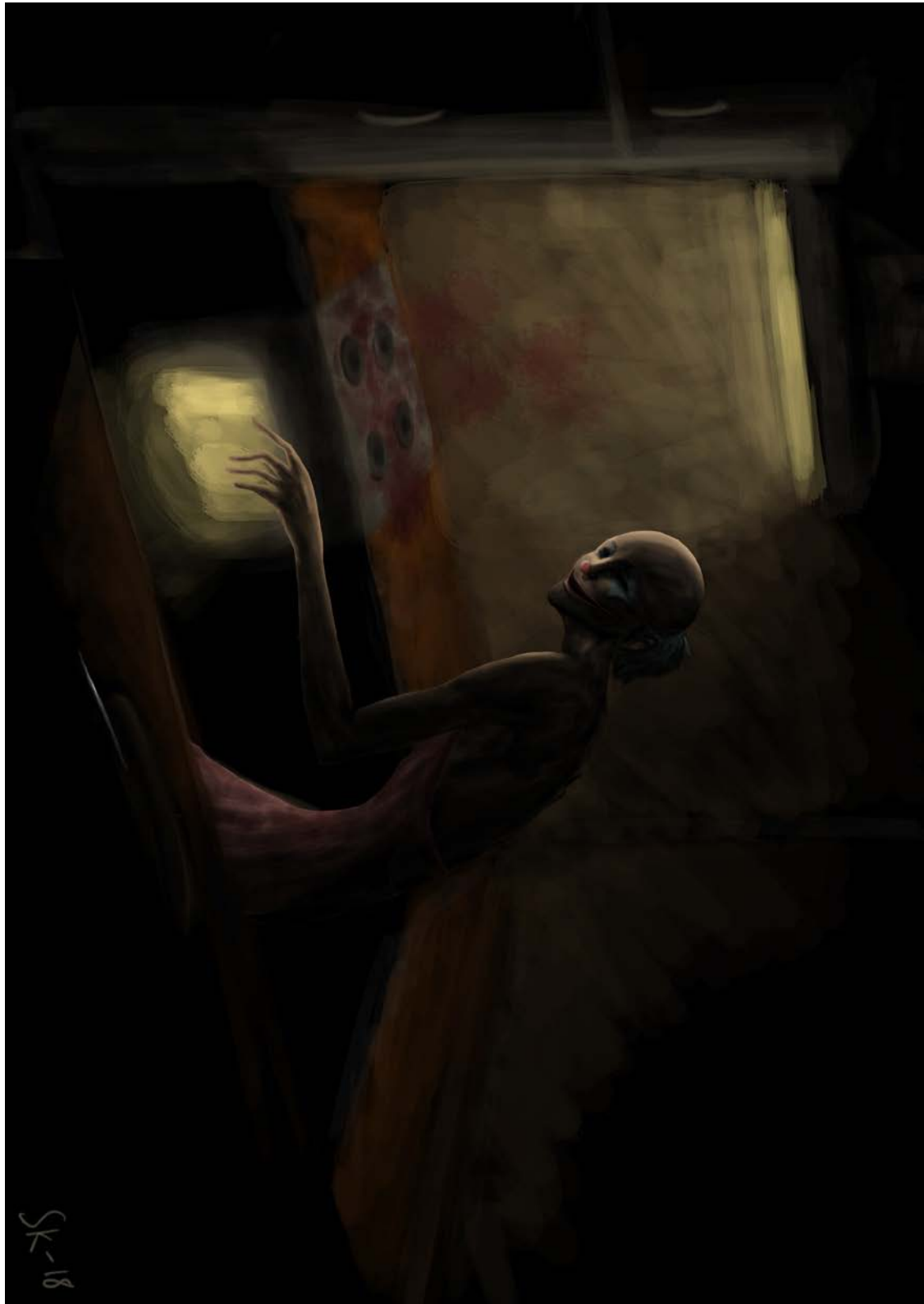1.　2.　3.　4.　5.

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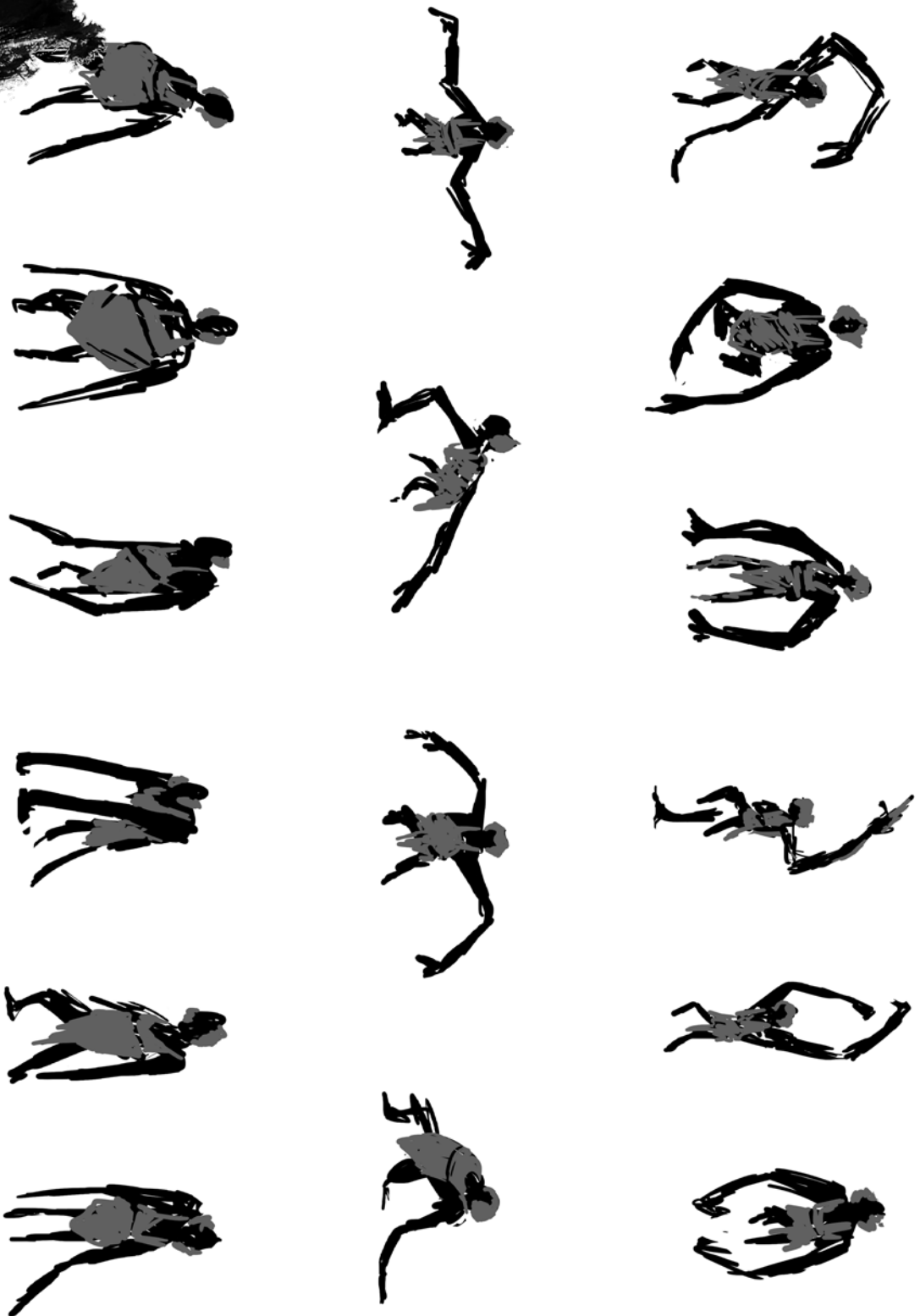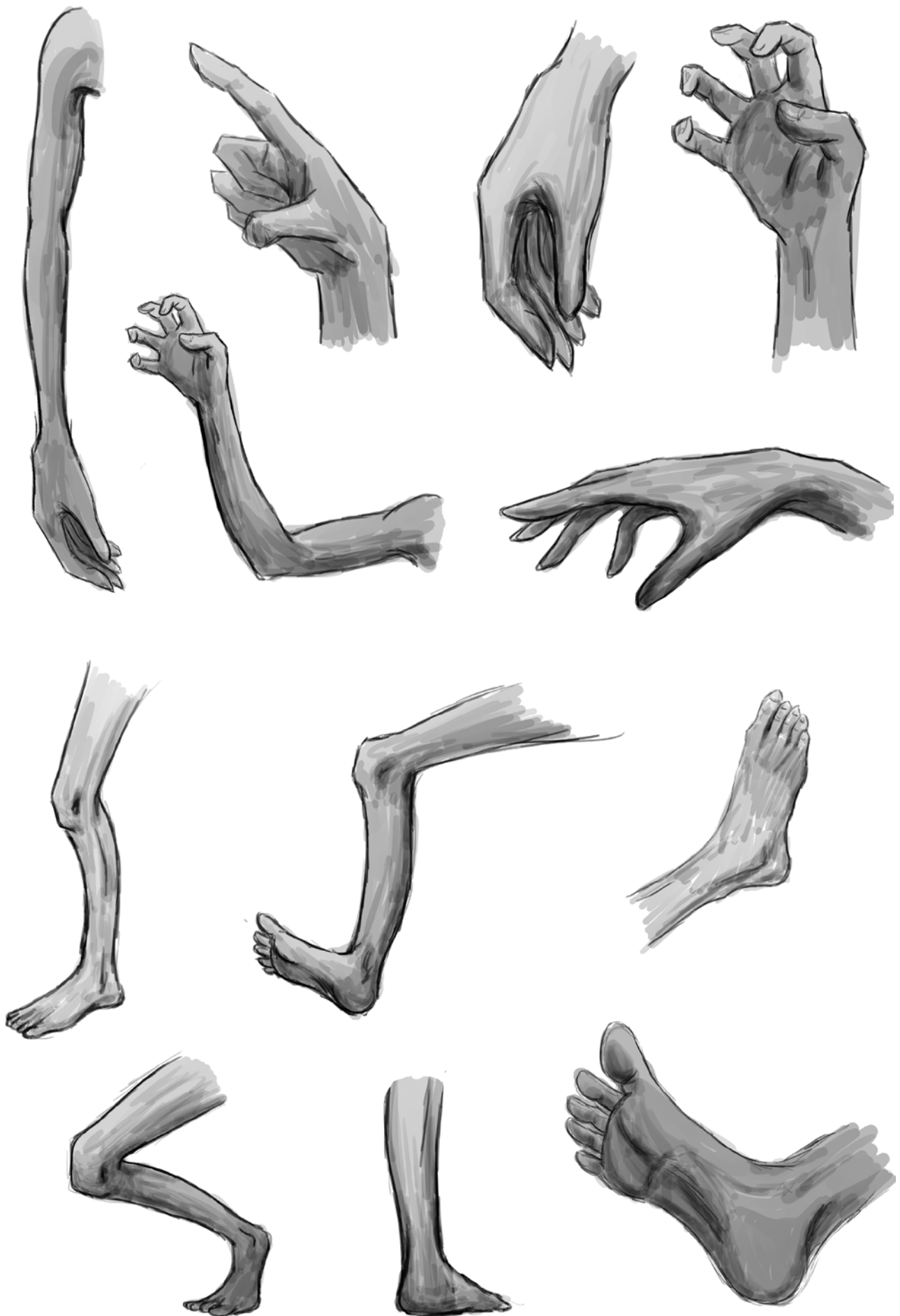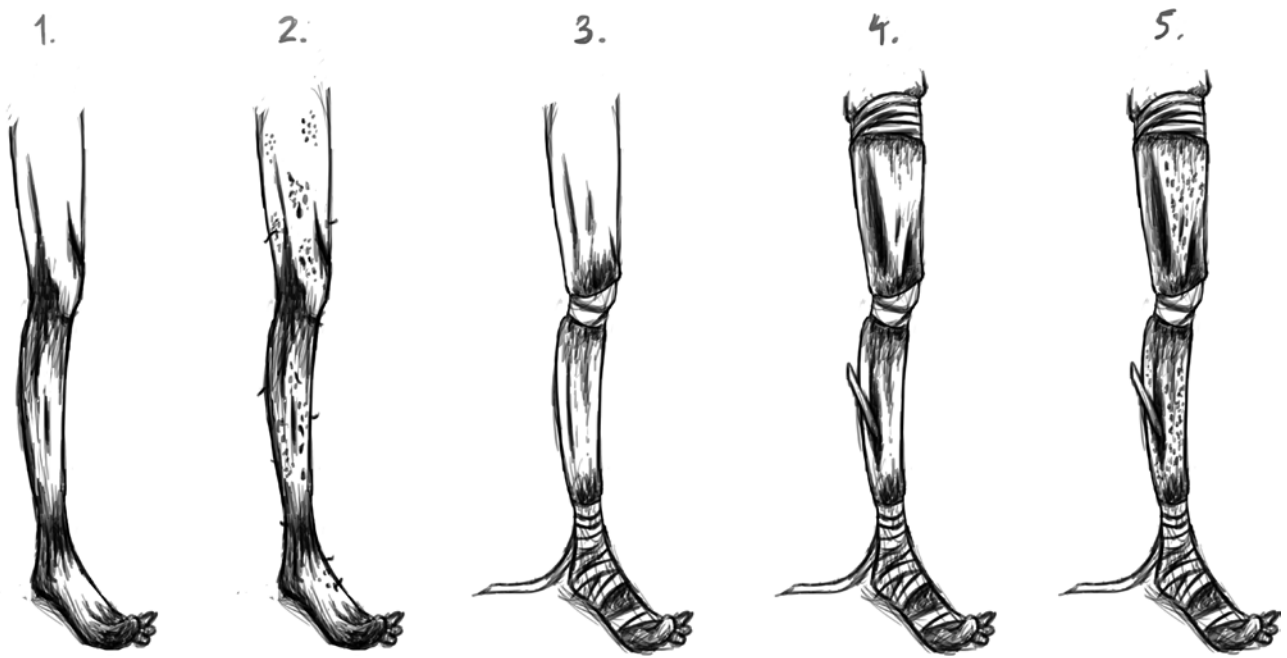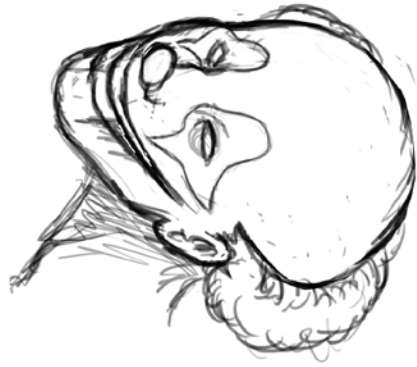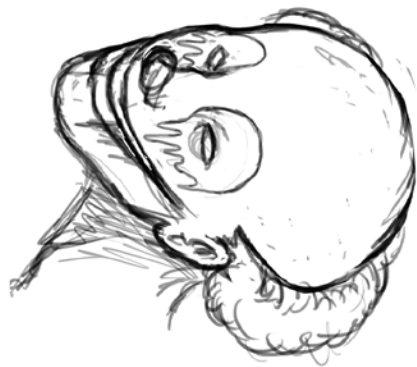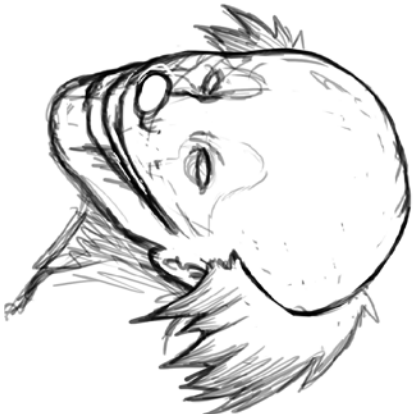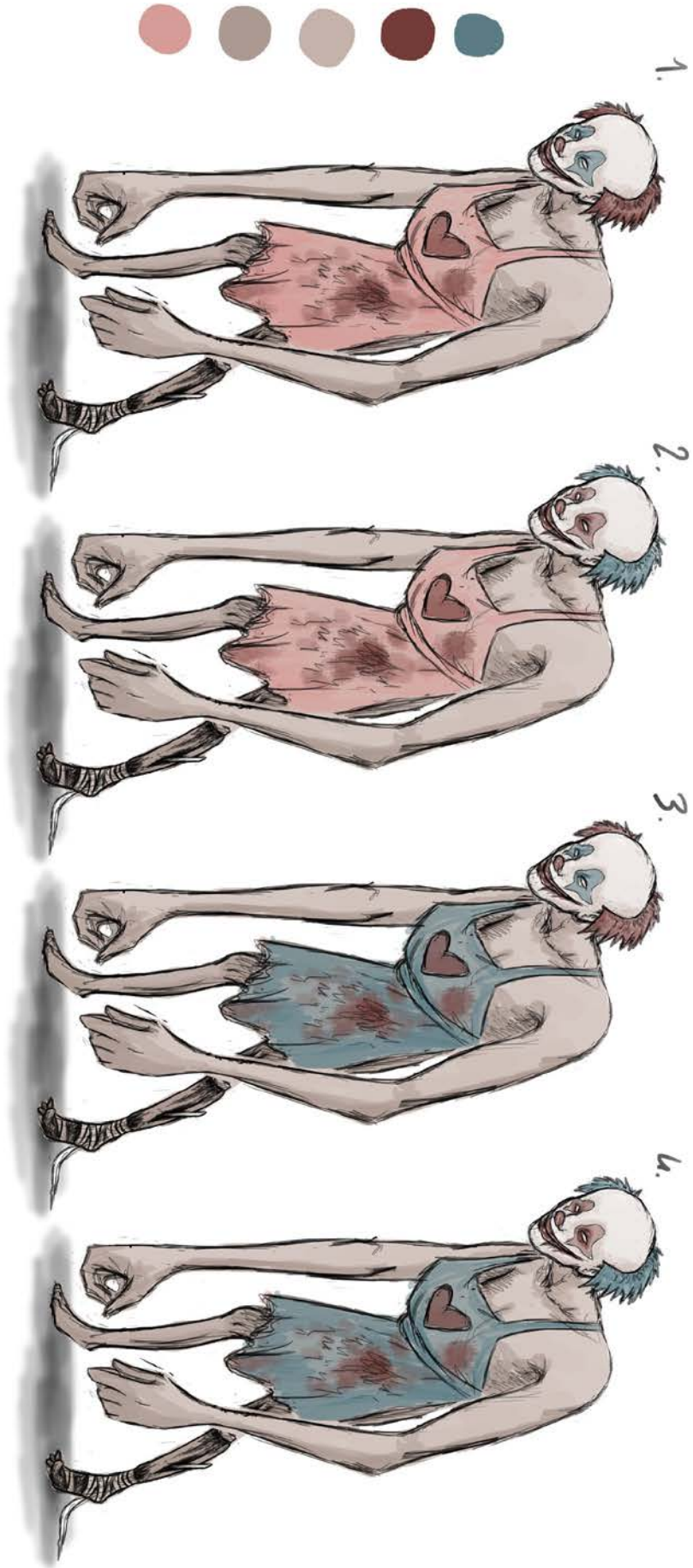
Environment Moodboards

Environment Thumbnails

Environment Sketches
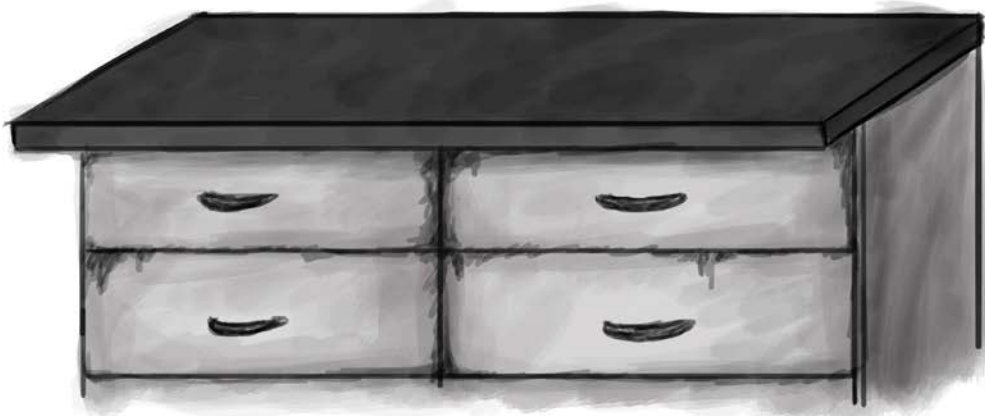
**Final
Concept Art**

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