

# How can games designers elicit emotional responses in their designs?

A investigation into emotional design within  
games design

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# Abstract

How people are made to feel when they engage in play is of paramount importance to game design and understanding how their designs elicit the emotional experiences is of equal importance. There is documentation on the relevance of emotion within play but there is not a great deal showcasing how we elicit these emotions. For the purpose of bolstering the effectiveness of game design this thesis is an exploration into how game designers elicit emotional responses in their designs. The results show that emotional design within games is complex as the thesis shows a multitude of ways in which emotional responses can be achieved. Sources from game design literature, online journals and books on emotional psychology and play have informed the findings of the two case studies exploring joy and fear. The findings of the thesis imply that although there are clear design techniques and psychological traits

# Acknowledgements

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# Introduction

In the book *The Art of Game Design: A Book of Lenses* Author Jesse Schell an American game designer speaks in his chapter *Dissect Your Feelings* about the importance of being able to clearly examine and analyse your experiences and how they make you feel. (Schell,2008)

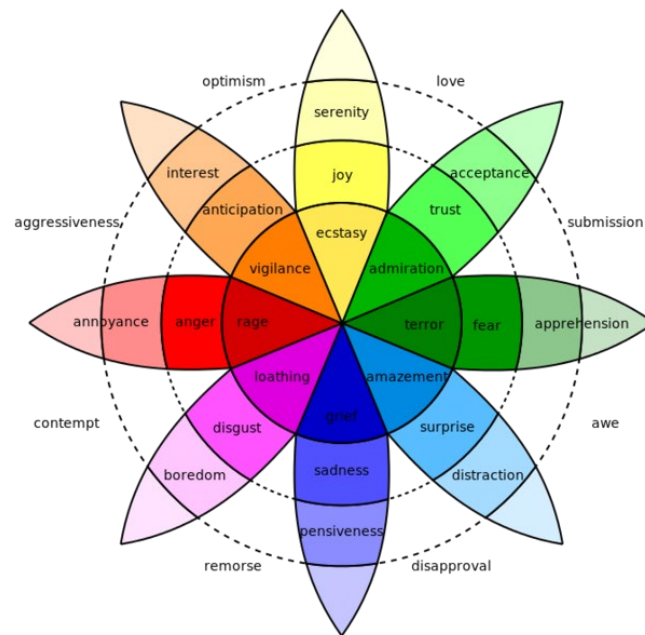
This thesis aims to investigate how game designers elicit emotional responses through their design choices when creating games. This will range from the choice of aesthetic design involving colour, level design, sound design and camerawork, keeping the player invested and immersed within the act of play, along with identifying parallels between emotional design in film and tv. Emotional design can be defined as the utilization of stimuli that provokes an emotional reaction, influencing design choices. The thesis will continue to cross-examine two separate case studies from different genres of games being horror and puzzle, which are designed to elicit different emotional reactions during play. This investigation will be in aid of the understanding of why people feel a strong sense of fear when playing horror games, and why people feel joy when engaging in new and surprising forms of play. This greatly increases the potential of game designers to emulate these experiences, resulting in greater design methodologies, alongside better games design practices.

This thesis will draw upon theories presented by Katherine Isbister (2017), human-computer interaction and games researcher who has written at length on the emotional impact of games in relation to the work of Jenova Chen, creator of *Journey* (Thatgamecompany,2012).

*Journey* won Best Game Design at the BAFTA game awards in 2013. Games designer Tynan Sylvester's theories on engineering playful experiences with emotional moments of play are particularly useful to the concerns of this Thesis; specifically, to explore how emotions are tied to human values and stakes within play and how designers can use them to tie into a games design as well as narrative.

Furthermore, this thesis will be engaging with the influential ideas of dutch historian and theorist in culture Johan Huizinga who looks into play within human culture. A key part of *Homo Ludens* is his concept of the 'play space' in which all play performed an example of

this is in “the magic circle” (Huizinga, 1992, p.10) a place where humans create order from disorder, immersion within the fantasy and accept rules within self-created-boundaries. I will be looking into how the “magic circle” being a concept that can be defined as accepting a game world and the rules ties into the Core Player Fantasy, a term that will be unpacked further down, and how this concept can change how we approach games design.



*Figure 1 Plutchik's Wheel of the key emotions (The Interaction Design Foundation, 2019)*

The case studies have been selected because each individual game represents a different key emotion, which has been informed by looking into Robert Plutchik's Wheel of Emotions (figure 1). In his Wheel, Plutchik highlighted eight primary emotions, which are anger, fear, sadness, disgust, surprise, anticipation, trust, and joy. The two key emotions being explored in this thesis are joy and fear. Tiffany Watt Smith's book *The Book of Human Emotions* defines joy as

“the accidental and unforeseen. It surges up when something is better than we can possibly have imagined.” (Smith, 2015, p.161)

When the emotion of joy is explored within the thesis's investigation surprise does play a large role in understanding why we feel joy and how it's the application to games design is important. Fear is a primal and pivotal emotion described in Smith's book as

"We try to hide ourselves, or flee. Or else, riding a surge of adrenaline, we turn and fight. The response is instinctive." (Smith, 2015, p.106)

Although correct a greater reason we subject ourselves to this, specifically within play is well captured within the essay by author Stephen King, writer of critically acclaimed horror novels such as "IT", "Carrie" and "The Shining" said in his essay "Why We Crave Horror Movies"

"Our emotions and fears form their own body, and we recognise that it demands its own exercise to maintain proper muscle tone." (King, 1981)

To abstract King's message in terms of what we get out of fear in relation to play and entertainment, we can look at the work of Dutch historian Johan Huizinga and his book *Homo Ludens: a study of the element of play in culture*. In his chapter Nature and the significance of play he states that play expresses "an innate urge to exercise a certain faculty" and to satisfy some kind of "imitative instinct" (Huizinga, 1992, p.2) he goes on to explain that as much as play is to express some kind of aesthetic satisfaction this must be exercised as much as a biological purpose as a social and cultural one.

Finally, the case studies will explore the nature of the Core Player Fantasy and why emotion in design is pivotal to making the player feel the fantasy the game is trying to portray. The core player fantasy can be defined as fulfilled immersive roleplaying. Meaning the game is working to convey a sense of fantasy in multiple ways, be it mechanically, narratively or aesthetically. This is a term built on "the magic circle" which has been attributed to Huizinga's writings on acceptance of a world's rules and the spaces we inhabit during play. (Huizinga, 1992, p.10) During each case study how the core player fantasy will be achieved will be explored in detail. The next segment will continue onto the first case study of Resident Evil 2 remake and how game designers design fear.

# Designing Fear

This chapter will be investigating how designers elicit the emotion of fear through the games design choices. Kevin S. LaBar defines fear as an emotionally driven reaction to an imminent threat (LaBar cited by Barrett, Lewis and Haviland-Jones, 2016, p. 751). The Case study being investigated is the 2019 remake of Resident Evil 2 ([Kazunori Kadoi](#); Yasuhiro Anpo, 2019). This game has been chosen because it is a remake, the original being released in 1998 it has been over two decades since the original's release. The games industry has since evolved drastically regarding their technological capabilities effecting, sound design, visuals and game design have changed as a result of all of these leaps in technological advancement. This means the approach to its design and how to gain the same sense of fear has changed since the original. The investigation will begin by giving an overview of the game's plot and premise. Followed by looking into the colour and lighting of the game and how they contribute to the overall emotional outcome, Once established the next section will illustrate how the designers utilised camera work within the game and how they use it to build anticipation and surprise, comparing this to how cameras can be used to employ fear in film and TV. In addition to this, looking at the overall gameplay and what design choices they've made to make moments within the game to elicit fear. The end of each of these segments will conclude in bridging the gap between their design and how they've been used to elicit fear. The first discussion will be giving an overview of the game itself giving context to the design choices made.

## Game Overview

The Genre of the game is horror, a genre with strong ties to fear. The setting of the game is in the fictional Raccoon city, where players can take the role of rookie police officer Leon or college student Claire. The game takes place when a sudden outbreak of a zombie virus drives the city to ruin where there is only a small amount of people left fighting for survival. The game's environments are bleak and lonely. The primary environment is a ravaged police station, making the player feel isolated and against the odds against the backdrop of the

zombie ravaged city, the player rarely meets other survivors this strengthens the feeling of isolation. This is a well-established setting amongst familiar horror driven media, like Dawn of the Dead (Zack Snyder, 2004), The Walking Dead (2010) both of which are set against the backdrop of a world facing a zombie outbreak. This being a game with designs made to elicit fear, there are clear parallels that could be drawn between fear at play and fear in film and tv. According to game designer and author of Game Design: Theory & Practice Richard Rouse III, in games and entertainment fear is one of the two most apparent emotions best suited to the Horror Genre. He states

Two of the most obvious of these emotions, in both games and films, are tension and fear. Games provoke these better than any other media because there's actually something at stake for the player. (Rouse cited by, Perron 2009, p.20).

He goes on to describe in his essay "Match Made in Hell" with immersive games fear becomes intensified than in non-interactive media (TV and film), in games where the player holds agency meaning the ability to assert action within the space of the game. This has a direct impact on the outcome of the game there is the chance of failure that places real-world values on the result of the play. This is supported through Tynan Sylvester's work on emotion and change. He states that to provoke an emotion there has to be a change to trigger the emotion and the trigger has to be one that changes a human value (Sylvester, 2013, p.12). From victory to defeat in the context of a horror game, this is often life to death, which is a human value with generally very negative connotations. This shows that game designers can elicit emotion directly through state changes that only games can provide through giving a player choice and giving them control over their agency. Providing they are tied to human values that elicit emotions, being they victory and defeat, learning and improving. The next aspect of this investigation will showcase how light and colour can be used to influence players emotion through a smart selection of colour palettes and specific lighting.

### **Sounds that scare**

One aspect of fear within game design revolves heavily around sound design and how sound can be used to provoke an emotional response. In the essay *Hair-Raising Entertainment* by Inger Ekman, interaction designer and researcher from the centre for knowledge and innovation research. Along with Petri Lankoski researcher and teacher at the university of art and design Helsinki, they discuss unconscious emotion in games and how they can influence



us in meaningful ways. They state that “Sounds create continuity and presence, and as a result, confuse the borders of fiction” (Ekman and Lankoski cited by, Peron, 2009,p187,188) these sounds help establish a multitude of things. They can be used to demonstrate agency, warn of oncoming threats and alarm the player to an impending attack. This can be showcased in resident evil 2 in the following ways. The click of loading a shotgun conveys player agency in that they are preparing for a threat, the guttural moan of a zombie offscreen warns the player of a possible threat and the sudden growl and scream of a zombie that grabs hold of a player, alarms the player to being attacked. Sounds that scare are important to horror games because they help the player demonstrate their agency alongside building tension creating a palpable sense of fear and overall helps convey the sense of horror in the games design.

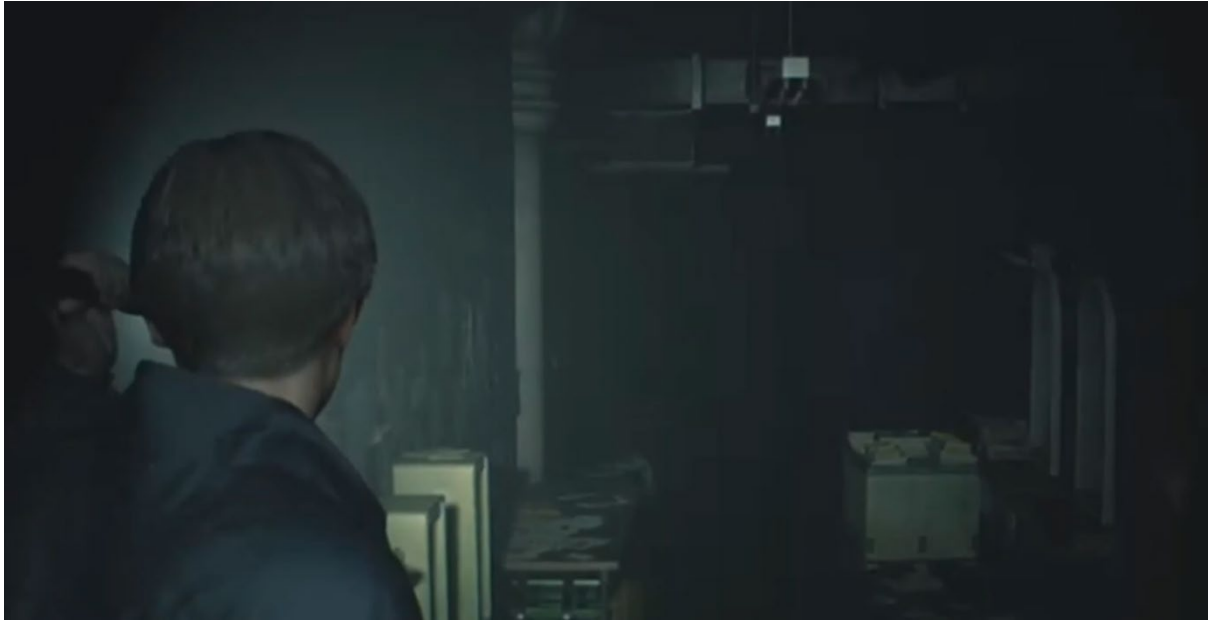
### **Smart Colour Palettes and Effective Lighting**

The current debate about colour theory in regard to emotion says that specific colours are hard to link to emotion as our perception of colour is extremely subjective and personal (Küppers, 1982, pp.194-195). However, there are colour models that help in the understanding of colour, the most commonly used model is hue, saturation and brightness commonly referred to as HSB in digital print (Totten,2014, p.176)

Hue's are generally reflected in the colour harmonies that precede them. Colour harmonies are colour combinations that are similar in chroma and shades, Colours that blend well without contrast. Resident evil 2 makes great use of this in its environmental design with similar colour chromas. Chromas are colour relative to light (Itten and Hagen, 1977, pp.72,73).

Having established the relevance of colour hues looking at colour harmonies within the game we can see how this may contribute towards eliciting fear. Figure 2 shows a screenshot of when the player has been given their first task. They need to navigate the previously sectioned off part of the police station to find another character who appears to be in trouble. They will need to navigate in a low-lit environment with an eerie backdrop of music with the sound of the heavy footfalls of the player to highlight the isolation of the player. Ekman and Lankoski echo this when they state that the games mood is effected by ambient sound

increasing the players anxiety”(Ekman and Lankoski cited by, Peron, 2009, p.193) The players only source of light is a flashlight they are carrying, and the colour palettes are cold and not strong, this means the players' attention isn't drawn to any specific point meaning an ambush or any perceived danger the player won't have planned for.



*Figure 2 Resident Evil 2 (2019)*

This image also gives contrast to the hub section of the game Figure 3 where the player is generally safe when the player enters the primary environment of the game they are greeted with a well lit spacious part of the reception hall at the police station. This change in lighting also highlights the contrast of settings one a well lit spacious area where the player can take

time to plan and manoeuvre its room opposed to Figure 2's narrow hallway not leaving space quick manoeuvres.



Figure 3 Resident Evil 2 (2019)

According to game developer and author of *An Architectural approach to level design* Christopher W. Totten space is a resource much like ammunition for dealing with the games challenges, narrow hallways which present not much manoeuvrability give the player less space to move and are more likely to come into conflict with the enemies of the game as ideally a player wants as much space as possible so they can plan their next moves and perform the most actions. "Narrow spaces create tension by giving space *scarcity*, limited amounts such that space itself becomes a resource" (Totten, 2014, p118) Narrow spaces feed on people's natural fears like claustrophobia and are great at creating moments of tension as the player is confronted by an enemy is given less time to make crucial choices to the players survival.

### **Withholding information**

The next section of this investigation will be looking into withheld information, surprise and the use of camera work to highlight moments of tension. This will also touch upon preconceived expectations and understanding from the player also known as the 'Curse Of Knowledge' (Tobin, 2018, pp76-78) and how this can be used advantageously in game design to subvert a player's expectations. Withholding information directly impacts a player's decision making alongside this it can directly impact a player's emotional state. During a

session of play, the player makes a series of extremely fast-paced rapid decisions based on the knowledge they have. Running countless simulations in their subconscious.

This is highlighted in Sylvester's work regarding decision making called *Feeling The Future*. He begins discussing that fact that it's not the actions that drive these emotional moments but it's the decisions we're faced with and what those implications are. (Sylvester,2013) He goes onto to state that

In games, the player doesn't just experience what happens. His decision-making process mentally interacts with every possible outcome his mind can Detect. His unconscious runs a constant simulation of the world stretching into the future, where he wins, loses, lives and dies. These perceived possible outcomes affect his emotions, regardless of whether they occur or not. (Sylvester,2013, p.122)

He then discusses at length in how games must have a level of predictability in order for the players to make meaningful decisions. With regards to game design especially in the vein of the horror genre taking cues from the film and tv media tv makes this especially difficult as fear comes from unpredictability. A great example of how this is addressed in our case study is the fact that the player can in times of danger and challenge only see visuals illuminated by their torch. The player has full control over where they shine the torch, but they know outside of this visual could be anything within the parameters the game sets. If the player hears a guttural moan from a zombie, they know it's there, but they can't see it so begins the series of choices the player begins to make. to confront the zombie with their limited ammunition? To run past alerting other zombies to their presence? To slowly and carefully make their way through trying to not alert the zombie lowering their flashlight? There are so many choices to be made each with their own possible outcomes that the player has to weigh against one another. All of these decisions are made because the player isn't able to see their enemy. Withheld information ushers' players towards making decisions which will influence their emotions.

These sentiments are also echoed by Katherine Isbister who discusses that in order for us to be emotionally invested in games they need to allow for us to express our agency within the game's worlds (Isbister, 2017, pp.2-3). It is clear that choices influence emotion in games, the key to driving fear in particular, can be placing the player in perilous situations which compromises effective planning. Furthermore, withholding information so that they must engage with the horror in order to pass through it. This can be intensified through the use of

lighting and colour, mixed with narrow and claustrophobic environments. Designers utilising all these design choices can create environments that drive hard choices and make the player feel fear. The next segment will discuss how sound can be used to elicit fear and establish the player's agency.

### **Surviving Raccoon City, The Core Player Fantasy**

The core player fantasy of *Resident Evil 2* is the idea that both protagonists Leon and Claire are survivors, allowing the player to feel as though they have overcome great adversity through the challenges presented to them. Although these challenges are not insurmountable the game continually presents this in a great many ways. Firstly, the game's mechanics aid greatly in building suspense as with the game's primary way of fending off adversaries is based on well-established conventions from zombie horror films. In famous film director George A. Romero's entire catalogue of zombie horror films, one of which being *Land of the Dead* (Land of The Dead, 2005) the only way to dispatch one of the undead is to destroy the brain. This is also how the player has to dispatch enemies in *Resident Evil 2*. Not only is this a common convention in zombie horror. It could be argued that people familiar with the genre will likely know this information. This draws a greater emphasis on fear in the game however as it is not as simple as one shot and the enemy is taken care of. Enemies in the game can take a multitude of shots to the head resulting in grisly and visceral visuals. When a zombie is eventually killed it is with great effort, a player will need to show good marksmanship as the zombies can move erratically, leaning out of the way when a player lines up a shot. Along with this a caveat of how sound design is used within the game's mechanics. If the player is quiet, they can bypass some enemies, but should they discharge their weapon the sound will likely attract enemies should they be within a certain proximity. Should the player become overwhelmed the only option is often to retreat, another common convention in the films of George A. Romero as the protagonists of his films often end up having to flee danger. A natural response to the fear induced reaction of fight or flight. If the player is unable to escape, their death is normally a grisly affair, reinforcing the notion that the player is surviving in the world of the game not just inhabiting it. With regards to aiding the player stay within 'the magic circle' and engaging with the core player fantasy, the game

succeeds greatly by creating conflict in meaningful ways which will force players to make decisions influenced by fear.

### **Discussion of Case Study one**

This case study has displayed and evidenced how game designers can elicit fear by withholding information and obscuring information from the player. Through colour theory it has been established that with cold colour palettes and limited lighting we can withdraw focus from the environment and limit a player's visuals resulting in uncertainty and fear. Also, by withholding information in the way of not presenting threats in clear ways build tension and results in fear when a player is ill prepared to face these challenges. This coupled with conventions from horror films with establishing player agency shows that they are not an observer, but the tension builds around them and their actions. Fear can also be stimulated through effective sound design. All these things working in tandem help in the design of a palpable feeling of fear within the games design.

# Designing Joy

This chapter will be continuing the investigation into the emotion of joy and how game designers can elicit the emotion of joy in their design. The case study will be using the 2019 release *Untitled Goose Game* by Australian developer House House (2019), from this point untitled goose game will be referred to as *Goose game*. This game approaches the puzzle genre in new and interesting ways and with the viral success of the game (IGN, 2019,1:40) it has become a commercial success being parodied with the muppets(ref) at the Game awards a prestigious yearly award ceremony celebrating the year's most successful games.

Joy can be defined as a feeling of great happiness (Oxfordlearnersdictionaries.com, 2020)). However, joy is an inherently harder emotion to identify when it comes to play because our experience of joy is entirely subjective; it has multiple implications for different people. However the conditions and triggers of joy are much the same as explored through social psychologist Daniel Gilbert in his book *Stumbling on happiness* defines joy as thinking forward and surprise, (Gilbert,2007 pp.5-9) and goes onto explore control in games and how we find joy out of the organisation of chaos, of making sense of chaotic things and turning them into solutions. This part of the thesis investigation will begin by giving an overview of The Core Player Fantasy and how the game truly captures the fantasy of being a meddlesome goose the game's plot and gameplay, as with regards to the narrative and plot is not the games focus it will briefly touch on this and move onto Gilbert's writings of why people feel joy, the triggers of joy. Afterwards exploring why *Goose game* uses the concepts of surprise the curse of knowledge and how *Goose game* works in a unique way to avoid this effect. Linking into Gestalt Theory (Chang, Nesbit and Wilkins, 2007) which explores how we organise the chaos of the world around us and how the very concept of this used within the design of *Goose Game*. The final section will be looking at Jesper Juul's book *The Art of Failure* (Juul, 2013), and his writing on the paradox of failure and how *Goose game* avoids this.

## **The joy of being a menace and a goose, the core player fantasy**

The core player fantasy of goose game is placing the player in the position of a goose and allowing them and encouraging them through, creative and comical objectives to bother the residents of a small English village. Goose game succeeds in this in many ways, mechanically the games actions are limited but very much mimic the abilities of a goose. The player can pick things up with their beak, flap their wings, honk and waddle their way through the game. This in the most joyful of ways grounds the game in a believable way. The goose's agenda is the players but the players interactions within the world are somewhat limited in the same way geese are. The player's only way of communicating with a non player character is honking, there is no dialog just a small image of what the non-player character is focused on, if the player has stolen a rake the only communication given to the player is a small image of a rake above the non-player character as they chase you. It's subtle but lends its self to the idea that the player is a goose and doesn't understand the non-player character. At least not in a human way, the mechanics help elicit a feeling a joy because the implications of what the player can accomplish are a constant surprise. The games varied and strange objectives encourage lateral thinking which always result in surprising and joyful outcomes.

## **Game Overview**

Goose game is a puzzle stealth game where the player takes on the role of a meddlesome goose in a quiet English village. The game begins with a prompt of one of the mechanics of the game, which is the ability to honk. From this point, the player/goose emerges from the bush in which it's been hiding, and the game begins. What follows is an elaborate and well-calligraphed list of objectives for the player to accomplish. (figure 4) The game encourages exploration of its different levels each with their unique goals which all require a creative solution often through exploring the level and interacting with the objects throughout. As the protagonist is a Goose, the player can Honk to get the attention of non-player characters. They can duck, spread their wings and flap them and go from a waddle to a sprint. Environments the player travels through on their chaotic journey consist of a farmer's garden next to a small pond, a pub, a town centre with a garage sale and households of the neighbouring citizens. The levels are large in scale as our protagonist is a small goose and



encourage exploration with a varied bright colour palette. The core challenge of Goose game is its objectives which require the player to think carefully and creatively about how to go about completing them.

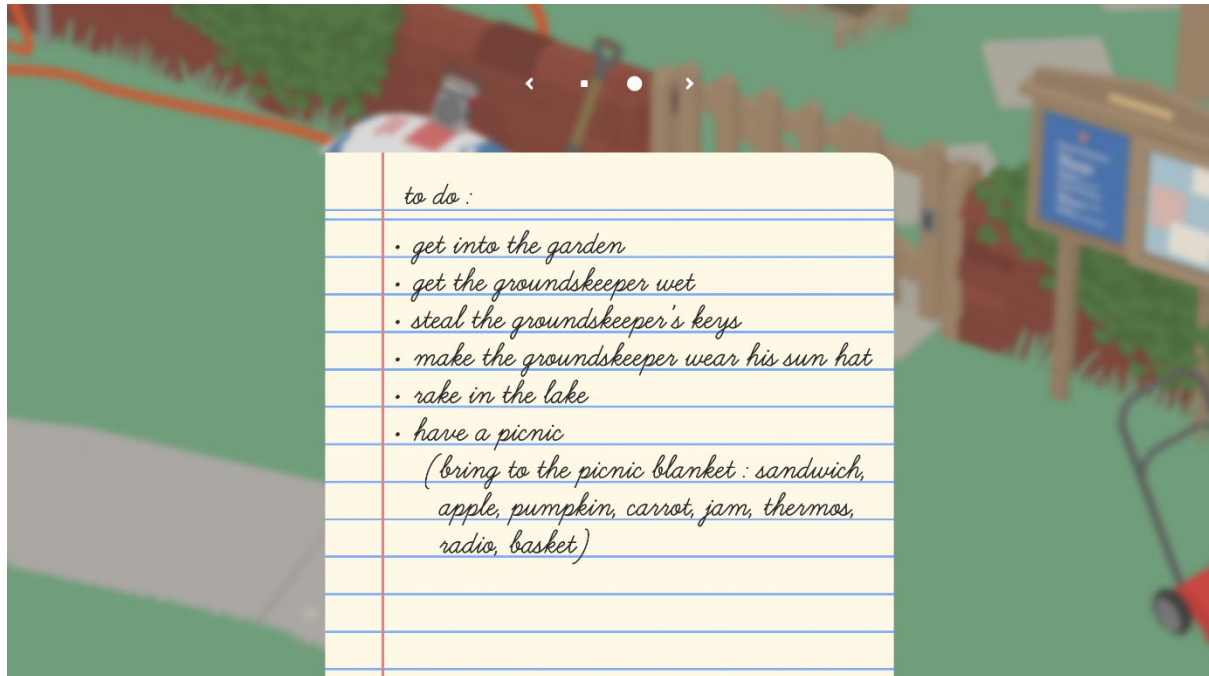


Figure 4 (Untitled Goose Game, 2019)

### **The element of surprise**

One aspect of joy is surprise and how our expectations can be subverted in pleasant ways, with surprise, however comes the curse of knowledge being preconceived expectations from the player which works against surprise. This next segment will continue into The Curse of Knowledge and how Goose game subverts this due to the very nature of it's design. Vera Tobin (2018), associate professor in the department of cognitive science at case western university has written at length about surprise, and in her book *Elements Of Surprise: Our Mental Limits And The Satisfactions Of Plot* she speaks about The Curse Of Knowledge, this is when our exposition to familiar subject matter pre-informs us of our opinions, predictions based on already known information and experiences. (Tobin pp.76-78) and makes it hard to take any other view at face value.

This can apply to game design as well. As when we engage in play, we often map our mindset, mood, and expectations based on other games we've experienced. (Sylvester,2013, p.55) When we play a horror game, we expect to be scared, when we play a game that

involves shooting, we expect moments of tension, when we play puzzle games, we expect to be challenged mentally. If we've experienced these kinds of games already this informs us going forward and works against surprise because more often than not if following the conventions of these designs. For example, in a first person shooter, the goal and mechanics often revolve around aiming a gun of some kind and killing enemies. We come across these familiar mechanics, visuals, and challenges the game presents us with. However, another angle on our case study with regards to the puzzle genre, the mechanics of puzzle games tend to vary quite widely, and the experiences differ. For example, the following games are all puzzle games that present varying mechanics and challenges.

### **Expanding on existing genres and conventions**

#### **EXAMPLE 1: BRAID**

Braid (Number None, 2008) is a puzzle-platformer that uses traditional platforming mechanics, jumping from A to B while avoiding enemies it uses time-reversal mechanics. The below figure 5 shows a falling barrier dropping in front of a locked door; the key for the locked door is at the top of the level. The player can climb and jump and collect the key, but



*Figure 5 (BRAID, 2008)*

the locked door has already been sealed off. Presenting the puzzle how does the player now unlock the door with the barrier in the way?



*Figure 6 (BRAID,2008)*

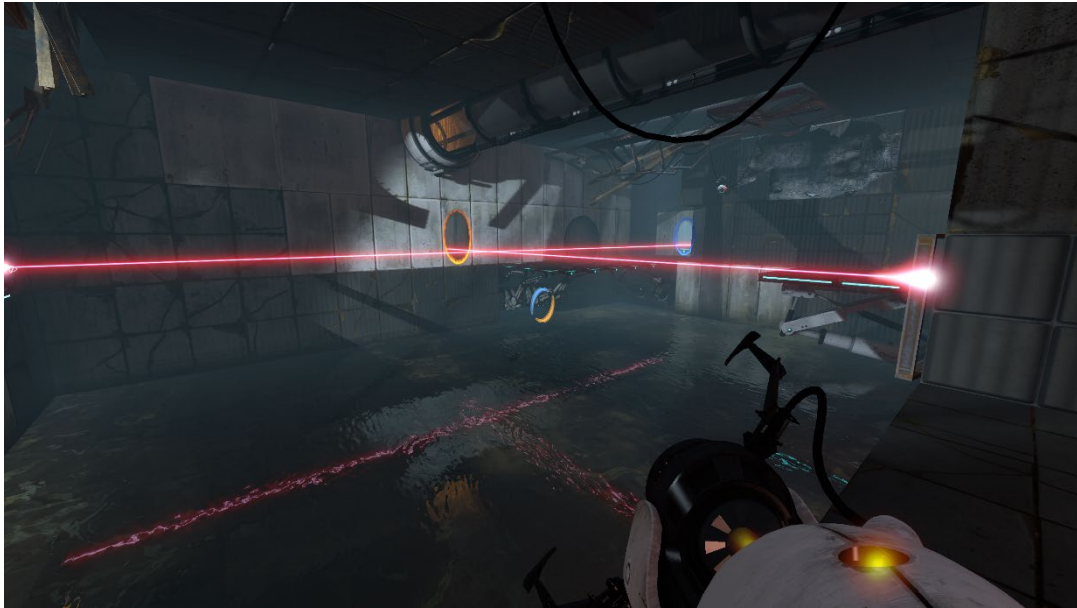
The answer to this puzzle shown in figure 6 presents the time-reversal mechanic in effect. Note the pale colour saturation to communicate the reversal of time. They are showing the barrier being raised alongside the players' movements to the top. Now the player has collected the key the player has ample time to open the locked door receive their prize and complete the puzzle. The mechanics in the game are reminiscent of a platformer but challenge the player in new ways with the introduction of the time mechanic.

### **EXAMPLE 2: Portal 2**

Portal 2 (Valve, 2011) is a first person puzzle game that takes the conventions of first person shooter games, aiming and shooting targets from the first person perspective, but changes the convention of first person shooting in that ammunition becomes two shots that create linking portals that the player has to use to solve complex puzzles to escape multiple challenge



rooms. The image below in figure 7 shows a puzzle where the player has to get from their current position to the other end of the flooded room. Contact with water resets the puzzle and the player has to start over.



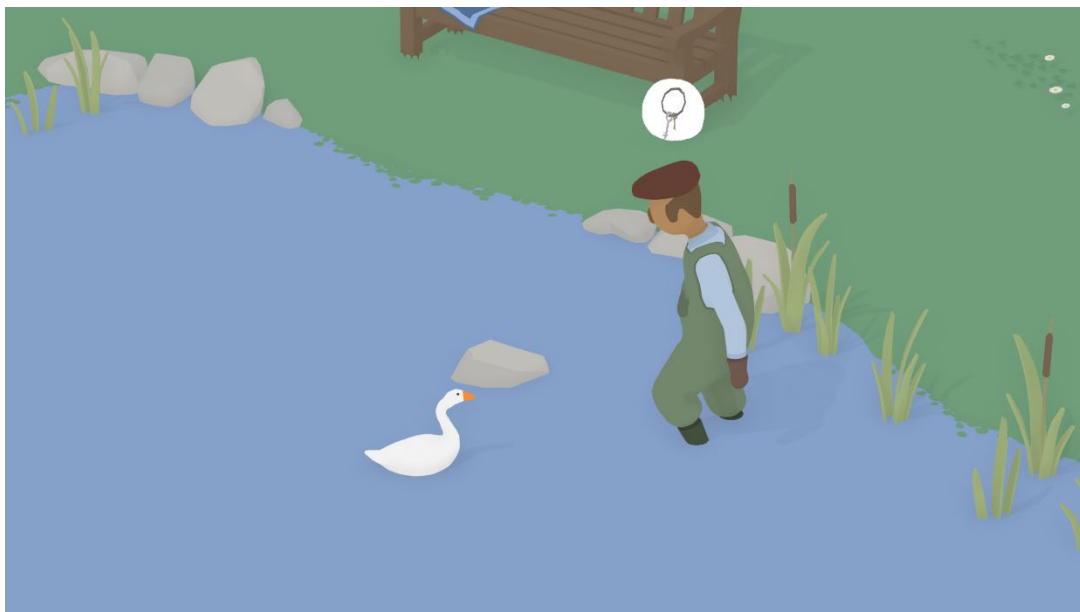
*Figure 7 (Portal 2, 2011)*

The answer to this puzzle lies in figure 8 two where the player must consider the positioning of the portals, in order to make a platform move to an accessible area.



*Figure 8 (Portal 2, 2011)*

These examples show how puzzle games often take well known conventions from well-established genres of games and turn them on their head by introducing a puzzle element. Braid is a platformer with a time reversal mechanic and Portal 2 a first-person shooter with portals instead of ammunition to kill enemies. Having established that puzzle games often change traditional conventions of other genres, Goose game manages to experiment with these conventions in introducing new and surprising mechanics with a new style of play that does not borrow from other genres. The case study untitled goose game takes from stealth games in which the player needs to creatively solve puzzles within the environment. Games journalism site Rock Paper shotgun compared the game to square enix hitman (Castle, 2020) where the player plays the role of an assassin where the objective is to inconspicuously eliminate targets. *Goose game* however gives the player of more varied list of objectives each



*Figure 9 (Untitled Goose Game, 2019)*

requiring their own specific and obscure solution. For example, one of the games objectives on the gardening level, is to get the gardener wet. There are actually a few ways the player can achieve this they can steal something of value to the guard like their keys and lead them into the local pond as seen in figure 9

or as seen in figure 10 they can trick them to going near the sprinkler in the garden by dragging an object of value by the sprinkler and turning it on when within proximity of the



Figure 10 (Untitled Goose Game, 2019)

sprinkler.

These new spins on the conventions of other genres helps the player remain surprised as there is a familiarity with the genre but as the puzzle element brings new elements of play that the user is less familiar with the emotional outcome it most likely to be joyful.

Another aspect of psychology that explores the triggers of joy and strengthens the argument that surprise often results in joy can be seen in the writings of Daniel Gilbert, his argument states that triggers of joy lay within the organisation of chaos, Surprise, and through experience. It is a purely intrinsic emotion which occurs when the personal conditions of happiness are met, subverted or challenged. He states that “Emotional Happiness is an experience, it can only be approximately defined by its antecedents and its relation to other experiences” (gilbert,2007, p.33) This, however, is more complex than it seems, the human brain is continually running through simulations of future event’s both positive and negative. Both of which can lead to joy. Gilbert refers to this phenomenon as ‘Nexting’ (gilbert,2007, p.7,8)

This is because predictions tend to be solitary long-term affairs in reference to a singular outcome for a very specific instance. ‘Nexting’ as Gilbert calls it refers to the constant

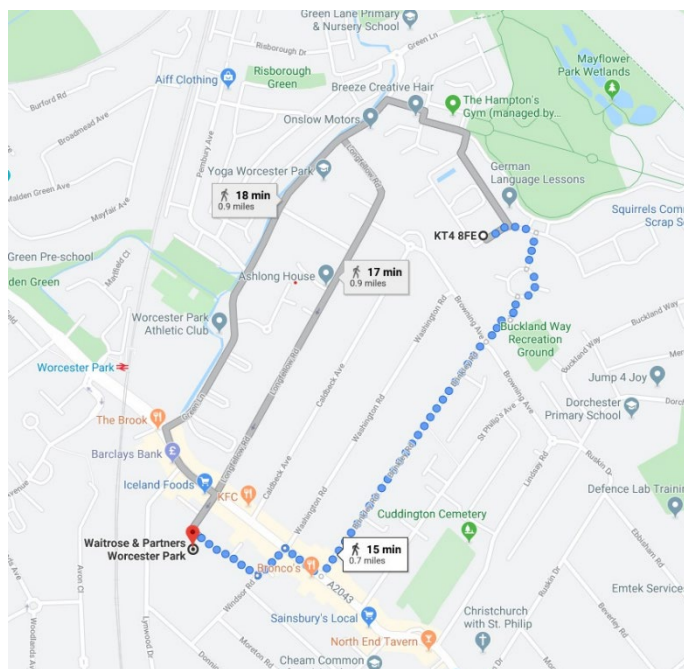
forecasting of future events that our brains work tirelessly to produce, as our ‘Nexting’ brains work dependant on the stimulation joy can take different forms.

### **Gestalt Design Principles**

One example of when “Nexting” can take place during play can be found when exploring the idea of control and when we are presented with chaotic situations. The Objectives in Goose game can arguably be described as chaotic as they require the player to experiment and think laterally as seen in the previous example’s figure 4 Having established that joy can be derived from the organisation of chaos, a design principle that harnesses this is the gestalt design principle. The Gestalt design principle can be defined as

Every individual perceptual element has its own nature and characteristics, but the nature of individual elements alone cannot account for how a group of elements will be perceived. (Chang, D., Nesbit, k. and Wilkins, K., 2007, p.2).

This in terms of game design can be used in the same way it would be used in real world applications. For example, in the below figure 10. we see a screenshot from Google Maps with a blue dotted line that can be perceived as a route to take.



*Figure 11 (Google, 2020)*



This can be clearly seen when playing *Goose Game* in the below figures where the pathway breaks into small paving slabs that move in the direction of exit to the level giving a subtle guide towards progression.



Figure 12 Annotations my Own, All one image (Untitled Goose Game, 2020)

This makes a key part of the level more organised in a very subtle un-intrusive way. This evidence highlights that even though there can be a great deal happening within a level, with objectives, non-player characters and an interactable environment. All these things can be



given a subtle organised structure that doesn't impede on the core tenets of a games design. Aiding the player in creating order out of chaos, finding their way to and through intended paths. This evidence climaxing in the success and joy felt when playing influenced through these niche yet important design choices. Continuing this investigation in the next segment this thesis explores the level design of Goose game and how effective level design can elicit joy.

### **Designing Joyful spaces**

In his chapter *A brief history of architecture* and level design Totten writes about the key elements of level design and how each must support each other. The three pillars his design philosophies, Functional requirements, Usability and Delight (Totten, 2014, p.6,7). *Goose Game* works hard to emulate this design philosophy through creating interesting experimental goals requiring a degree of lateral thinking to overcome its obstacles and use of emergent spaces within the levels (secret tunnels, creating shortcuts). The game in terms of usability succeeds in using subtle Gestalt design choices for example the paving slabs in figure 11 that point in the direction of the exit of the level. These subtle design choices help guide the player towards key areas for progression, whilst encouraging exploration and free reign to engage with its environment. Finally, with regards to delight, the game guides the player through surprise and rewarding them with comical outcomes of their engagement with the strange and creative objectives.

### **Designing soft failure**

Danish game designer, and theorist in the field of game design studies Jesper Juul (Juul, 2013) has written at length about the effect video games have on society, how failure is an inherent part of game design which its self is paradoxical in that we crave experiences we know are designed to make us fail. We generally avoid failure when we can, its not something sought after in everyday life (Juul, 2013, p.32) This may be somewhat informed when we think of the previously investigated magic circle. We accept the rules and spaces we play in. When we enter these worlds and spaces, we know it is for a limited time. Knowing this we accept the possibility of failure. But according to Huizinga's writings on the magic circle he also states humans have an innate desire to dominate and compete. Humans enter in play because we

wish to dominate and feel superior, superiority provides esteem which, Huizinga details first and foremost we enter into play for the chance of victory itself. (Huizinga, 1992,p.50). Goose game enables this through what this thesis defines as soft lose conditions. The game's challenges presented are always challenges that will eventually result in victory. The player can fail or be foiled by a non-player character but the states that enable the challenges always reset themselves when a loss occurs within the game loop. From Juul's definition of the paradox of failure being that we seek out play knowing the chance of failure will lower out esteem(Juul,2013,p.4), *Goose game* supersedes this by eliminating the chance of a hard loss this meaning the game will never stop the game loop to inform the player of their loss through game conventions such as a game over screen, a common convention within games design, where the player in terms of a hard loss would mean the game has ended, and the player can no longer act towards their goals until they restart. A soft loss can be defined as a game allowing the game to continue and let the player reattempt the challenge without being stopped by the game. This doesn't affect the players self-esteem and may even result in them looking on their failure in a more positive light, an immediate learning experience where as in the goose game though it's mechanics and visual aesthetic be comical see figure resulting in a more joyful reaction.



Figure 13 (*Untitled Goose Game*, 2019)

Finally, the next segment will be a discussion of what we have learnt from this case study.

## **Discussion of Case Study two**

On review this case study has shown that Joy can be attained in multiple ways. It has been established that joy can be derived from the organisation of chaos and we can aid in this pursuit through the use of gestalt design principles giving subtle but crucial hints towards progression. It has been evidenced that through an understanding of lose conditions we can design experiences that keeping the player engaged can be achieved through not presenting a lose condition that that's the player out of the game. It has been made clear that surprise plays a large role in eliciting joy and Goose Game allows for this through it's lateral based objectives. Finally, we have established that the game with absolute certainty attains and maintains the Core Player Fantasy through its duration.

# **Discussion**

On examination the case studies, on reviewing fear it has been established that the genre of horror largely influences the design choices made to better reflect the film and tv counterparts. Use of manipulative colour palettes that don't draw the players attention better set the player up for surprise, a clever use of sound can be used as a shortcut to placing the player in a state of shock, preparation and apprehension. Key to building tension resulting in fear is withholding information from the player so they do not have the opportunity to plan, also making sure the player has a space to plan and be safe within the games worlds places more value on things such as light. The drawbacks of this investigation however have shown that, through sticking to conventions established in films within the horror genre, this doesn't leave a great deal of space to explore the emotional triggers as through lack of experimentation the ways in which we can elicit emotional design become stunted. Through examining joy it can be seen that a key aspect of joy in design is use of experimentation and allowing the player to think laterally about the challenges presented to them. With a large emphasis on controlling chaos within the games world. One key drawback to the emotion of joy as a case study is that joy is inherently a subjective emotion so ascertaining which design choices prove effective is difficult. More the psychological aspects of joy and why we feel are what is used to elicit the emotion.

# **Conclusion**

The case studies have given some detailed insight into how the emotions of fear and joy can be elicited in their design choices. This thesis has established a key part of eliciting a fearful emotion lies in emulating conventions from their film counterparts but making sure that player agency is upheld as a platform to create moments that build tension. This is enhanced through use of sound design and how it can both build tension and assert player agency. Also, it has been shown, the knowledge of how colour can be used to lessen focus. All these design techniques used in tandem create a strong emotional response. The literature used to inform these design choices has been thorough and highlighted other key areas of research that can be investigated. As when fear was defined in the thesis the psychological elements of fear could have been more conclusive. But there is room for expansion into this field of research. The review of core player fantasy helped inform contextually why the design choices used are effective, showing that when a genre heavy emotion has borrowed conventions from already existing media like film and tv, working with these conventions helps to build an emotional familiarity with game meaning when the game works to amplify these conventions through game design choices such as creating meaningful choice then fear can be successfully made. A common theme identified in both case studies is the emotion of surprise, in the context of fear it would be withholding information with the purpose of building anxiety and making the player apprehensive, as with the second case study investigating joy showed using surprise to elicit joy can be done through not identifying what is possible for the player during play, enticing them to explore and experiment within play.

While looking into eliciting joy the thesis identified that a core tenet of joy within design lays within the organisation of chaos, the implementation of gestalt design principles help exemplify this core tenet, it is made clear understanding the conditions to maintain joy were pivotal in the exploration of soft lose conditions and the element of surprise. The thesis has achieved its goal understanding of how game designers elicit emotions. It has been established why we feel joy during play and how we can make design choices tailored to making players feel it. Furthermore, it has built an understanding of how we elicit fear and informed why people crave it. This thesis has resulted in the construction of a strong platform

for understanding how game designers elicit emotion and builds a foundation for more research to continue.

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