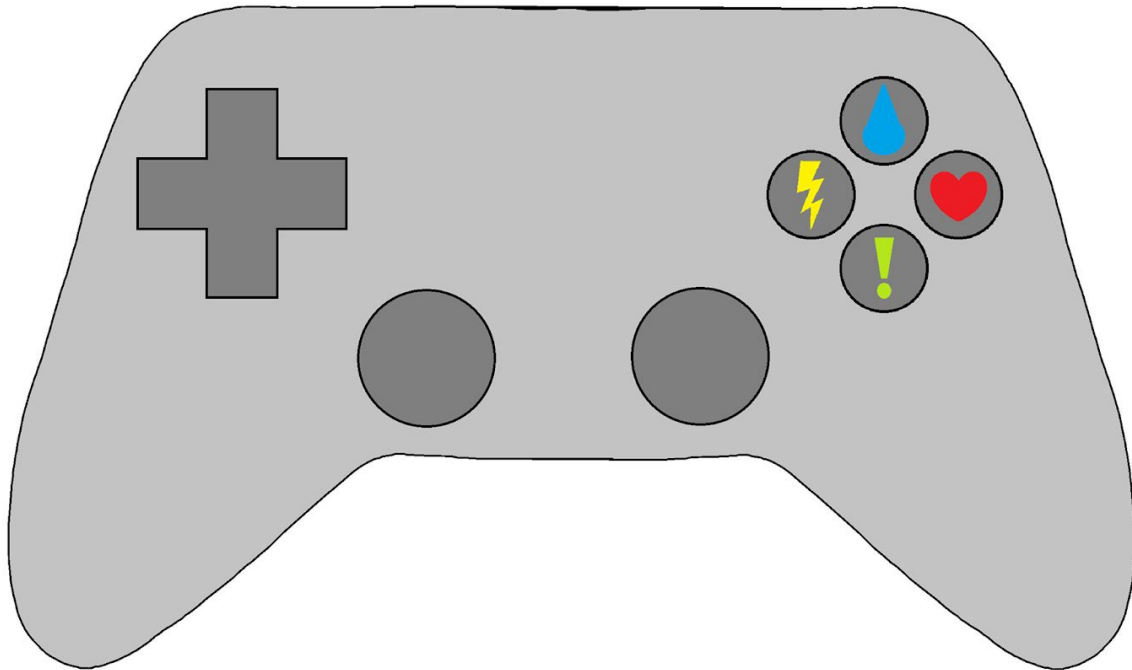# When Pressing Buttons Becomes Emotional:

How Games Can Uniquely Evoke Emotions

Researcher: *Astrid Knappmann*

Supervisor: Espen Aarseth
School: IT University of Copenhagen
Contact: astk@itu.dk

Astrid Knappmann   astk@itu.dk

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Astrid Knappmann   astk@itu.dk

Abstract

Evoking emotions is a staple in the entertainment industry and art in general. The different media have different strengths and weaknesses when it comes to evoking emotions, yet it seems that games still rely on established methods from movies and novels. I've analyzed what is unique to games, and then looked at what other discussions on evoking emotion in games focus on. The unique aspects of games are rarely in focus, so I've analyzed 38 different single player games to come up with a list of 5 tools that can be used to evoke emotion, unique to the games medium. I have analyzed successful and failed uses of the concepts, so that designers know what to look out for and how to best use them. I have analyzed two successful games when it comes to evoking emotion. These tools help us understand why those games worked, and can be used to create similarly powerful experiences in the future, that could not have been achieved with other media.

Introduction

Video games as a medium has evolved a lot since its conception. They have gone to wildly different ends of the potential video games have, from the tense almost action movie single player experience of the *Call of Duty series* (2003-), to the relaxing experience of *FarmVille* (2009).

Video games are an evolving medium, and the potential is still being explored. There's heated discussions about whether games classify as art or not (Deardorff, 2015. Sharp, 2015. Jones, 2012.). I will not go into details about what art is, but the Oxford dictionary describes it as a work to be appreciated primarily for its beauty or emotional power. What I will focus on is the emotional power of games, as I believe games are not playing to their strengths often when it comes to delivering strong emotional experiences. I believe part of the reason for this is that game developers look to more established mediums, such as film and books and then copy their methods of evoking powerful emotions. Players play games for the experience (Lazzaro, 2004), and games have the ability to simulate emotions in a form closer to real life than films (Grodal, 2000). With this in mind, games should have the potential to have strong emotional power without or in conjunction with conventional means of evoking emotions. I want to explore the potential of games to evoke emotions and how it can be done differently than movies or novels.

I will look at various research of evoking emotions in games and how games differentiate from film when it comes to evoking emotions, to better understand where the strengths of the games medium lies. Then I will come up with several different tools that are unique to games, that can be used to effectively evoke emotions and create powerful experiences for the player. Lastly I will look at two games known for their emotional impact that are using some of these techniques to better understand how these games achieved their emotional power, by analyzing how and which of the tools have been used.

Astrid Knappmann   astk@itu.dk

What sets games apart from film?

To answer this question, I need a definition of what a game is. This is something that is sadly not as simple as it should be. Many have come up with different takes on how to define what a game is, but I won't spend time on that as it is not the focus of this thesis. This is not going to be an expansive analysis of every single thing a game can do different, my aim is to identify some general tools that can be used in mainstream games. So for the sake of this thesis, my definition of a game will be something that can be described as a digital interactive single player experience.

I'm only going to look at the main differences between games and film worth noting in this context. I have left my classification of games very open, so it is entirely possible to make games that have nothing in common, outside of being interactive in some way. So the things I will list here will be common attributes of many games, rather than set in stone attributes.

- Avatar
- Interactivity
- Dramatic agency

Avatar

The avatar is often used as a means of getting the player into the game world. There can be several avatars and they can be used in different ways, but what they have in common is that they serve as the prosthetic extension of the player. Swink (2008) compares the avatar to driving a car, which he writes is experienced as an extension of his body. In his book *Game Feel: A Game Designer's Guide to Virtual Sensation*, (2008) he thinks back on the time he learned how to drive, and realized how the sensation became similar to how playing a game felt once he got the hang of it:

> "After a while, I began to develop a sense of how far the car extended around me in each direction. I could gauge how close I could drive to other cars and whether or not my car would fit into the parking space in front of Galactican. To do this, I relied on a weird sort of intuition about how far the car extended around me, which made the car feel like a large, clumsy appendage. This was also like playing a game in a funny way. When I drove the car, as when I played *Bionic Commando* (1987), I had a sense that thing I was controlling was an extension of my body. This was the experience of game feel as an extension of the senses."

This lets the player feel like they are inside the game world, and this allows game designers to let the player feel like what the avatar goes through, they go through. It also allows for situations to have a variety of possible emotions, depending on who is playing the game, or at what point in the game they encounter it. Grodal (2000) compares the emotional experience of a film vs a video game:

> "The emotional experience of a given situation will consequently be different according to whether it is cued by a film or by a video game. When viewing a film the labeling of the emotions felt is determined by the viewer's passive appreciation of the film characters coping potentials. But when the situation is part of a video game, it is the player's assessment of his own coping potentials that determines the emotional experience. The unskilled player may feel despair when confronted with the lion, but the skilled player will fuel the arousal into a series of courageous actions. Video games therefore simulate emotions in a form that is a closer to typical real-life experiences than film: Emotions are motivators for actions and are labeled according to the player's active coping potentials."

This makes the emotions a lot more personal, albeit a lot harder for the designer to control, but it all contributes to an experience that feels a lot more real than what film can achieve, because the emotions are felt first hand, rather than second hand for a separate character.
I will look more into the avatar and what it brings to the table when I talk about the unique tools that games have.

Interactivity
Interactivity is a term that can mean a lot. I will use the term to describe actions the player can do in games. Anything that involves input from the player, be it button commands for combos in a fighting game, picking up an object and inspecting it by rotating it, or even simply moving a character around a 3d space. Input from the player that the game can react to is what I define interactivity as.

Interactivity is at the heart of what makes games games. A movie will play to the end even if no one is even present in the room. A game however, requires input of some kind to play out. This makes playing games active media consumption. This changes the body's reactions to playing games compared to film, so much so that it has a significant effect on sleep if consumed before bedtime. In a study for the Journal of Clinical Sleep Medicine (2010), playing video games was compared to watching DVDs before sleep. It found a clear relation between bigger SOL (Sleep Onset Latency) for video gaming compared to watching DVDs, which they write appears to be due to cognitive alertness.
The amount of cognitive alertness will no doubt differ depending on the game, but common to most is that there is some level of challenge to overcome. A lot of games will even prevent you from seeing the end if you are not skilled enough at the interactivity it allows you. Games demand the player's attention and involvement in what is going on, and that can be used very effectively to evoke emotions.

Dramatic Agency
Dramatic agency (Murray, 2005) is when the player has significant agency over story elements. This is sadly not as common as I wish it was in games, but a lot of narratively focused games have embraced this to varying extent. Whether this is a recurring thing in a game, or if it's a simple choice of which ending the player wants, I believe it's an important

difference that brings the player into the narrative, rather than subjecting them completely to a film director's choice. Atkins (2006) describes this very well:

> "Video games prioritize the participation of the player as he or she plays, and that player always apprehends the game as a matrix of future possibility. The focus, always, is not on what is before us or the 'what happens next' of traditionally unfolding narrative but on the 'what happens next if I' that places the player at the center of experience as its principle creator, necessarily engaged in an imaginative act..."

This small change in mentality means a lot for what and how emotions can be evoked, as it is no longer a film director who made these things happen, it was you. The player will feel a lot more responsibility for what happens in the narrative, even if her actual influence is very low.

Now that I have specified some main differences between film and games in the context of evoking emotions, I will look at what other people say on the subject of evoking emotions in games.

Evoking emotions in games

There are different opinions on what games should be and what their strengths are. In this chapter I will look at some views on this and argue why I believe that this is not the direction games should go. We already have movies and novels, and they each have their strengths and weaknesses that they are working around. Games should realize their own strengths and weaknesses and then work towards something that takes full advantage of those strengths, instead of trying to copy the successes of movies and novels. This does not mean that games should strive to have nothing in common with them however, but rather put the focus elsewhere or use well established tools in conjunction with the strength of games to create something unique. Steve Gaynor (2008) wrote about the strengths and weaknesses of games:

> "The player is an agent of chaos, making the medium ill-equipped to convey a pre-authored narrative with anywhere near the effectiveness of books or film."

Gaynor writes that games are ill-equipped to convey pre-authored narratives, which I think is correct to some extent, but what exactly are pre-authored narratives? Film and books are very good at telling unisequential narratives, but neither of them are good at multisequential narratives, as film and books usually go from start to end. Games can seamlessly incorporate branching narrative that feels natural, which feels really awkward in film and books. Multisequential narratives can be pre-authored, it just requires the author to think

differently than usual. While the player is an agent of chaos, the player can be constrained to predetermined actions with predetermined outcomes, which the author can work with and make a narrative for. This is going to require more resources than creating a unisequential narrative, but it has benefits of allowing the player dramatic agency, making the experience a lot different from movies and novels. Dramatic agency is one of the unique tools I will write about in the next chapter.

Katherine Isbister (2016) wrote a book about evoking emotions in video games called *How Games Move Us*. It has a lot of interesting ideas about the subject, but I think game developers should be careful in what they take out of it. Isbister writes:

> "In 2008, a student (Corey Nolan) and I surveyed a range of players on what moments in games had actually made them cry… The most frequently cited moments involved the death of NPCs with whom players had spent considerable time during gameplay. Players wept over losing valued and trustworthy companions."

The number one example from that survey was from *Planetfall* (1983), a text based adventure game, which had a very likable character, Floyd, who died at the end of the game. Death of well written characters evokes emotion, no matter the medium. Floyd's death is no doubt a powerful moment, but it does not hold up to today's standards. The game was released in 1983, where the limitations of the medium were a lot bigger than they are today. We have a lot more to work with now beyond interactive text narratives, and we should aim higher. Floyd's death was very notable at its time, because he helped the player, and the player developed a relationship to Floyd. It uses a basic version of the tool "Transfer of Identity", which I will detail further in next chapter.

Isbister also writes about a game for the Nintendo DS, *LovePlus* (2009), which has the player choose between 3 girls to attempt to date. The game simulates dating in highschool, putting the player in the shoes of a student at the same highschool as the 3 girls. Isbister writes about the dating experience in the game:

> "the player gets to take part in this process, thanks to the game's artful use of NPCs and the human brain's experience of intimacy as it emerges from the small actions and reactions of everyday interaction between sweethearts. This experience can feel so real, in fact, that some players seem to prefer it to flesh-and-blood romance. In 2009, a *LovePlus* player went to Guam and officially married Nene, one of the three girls in the game."

Like with the experience in *Planetfall*, *LovePlus* puts the player into the story in a similar fashion. Isbister briefly mentions some of the interactions, but doesn't go into detail. Instead she uses the *LovePlus* player marrying one of the characters as a sign of the game's success. While I agree that the game has done well at reaching its goal, I think it deserves a deeper dive into why it works, and what makes it different from its closest relatives, anime and manga.

Having feelings for fictional characters is far from unique to games. The term "Waifu" has been used years before the release of *LovePlus*, mainly being used in anime relations. Dictionary.com writes about the term:

> "Anime fans began using waifu to refer to a character they were particularly fond of, one they viewed as being special to them. The earliest Urban Dictionary entry for this use of the word dates from 2007, and there's evidence that the term dates back in its anime sense to at least 2006...In anime and related otaku culture, waifu can be used with varying levels of intensity...Some fans might casually call their favorite female character in a game or anime their waifu. But others are more earnest about it, viewing their waifu as a part of their life. For these people, their feelings, even though they're well aware the character is fictional, are serious."

Having serious feelings for fictional characters is a real thing and not just a one off occurrence. While the marriage to a *LovePlus* character might be the first occurrence of marrying a fictional character, it is not the only one. Lee Jin-gyu from Korea has married a bodypillow, which is a human sized pillow with a picture of a fictional character on it. His bodypillow resembles a character from the anime show *Magical Girl Lyrical Nanoha*, and although it happened shortly after the *LovePlus* marriage, it is not just an answer to that. His friends got interviewed by the media around the time of the marriage saying:

> "'He is completely obsessed with this pillow and takes it everywhere,' said one friend. 'They go out to the park or the funfair where it will go on all the rides with him. Then when he goes out to eat he takes it with him and it gets its own seat and its own meal,' they added."

I'm not going to start comparing how much fictional characters can be loved depending on the medium they're presented in, but one interesting thing to take from it is what the friends say that Lee Jin-gyu did with his beloved. Having feelings for a character from a non interactive medium is going to keep the watcher/reader out of it. It's going to be like watching your crush go out with someone else, and no matter what you do, you cannot take part in whatever the character is doing. The affection some people feel for these fictional characters cannot be expressed to a character on a screen that cannot be interacted with. This is why Lee Jin-gyu married a body pillow with the character on it, because that allows some interaction, although the body pillow cannot give any feedback to the interactions, it is the closest you can get to an anime character.

An interactive medium like games allows some of the interactions desired, and allows the character to reciprocate the feelings. Games allow the player to interact in certain ways that can help the experience feeling real, whether that is love, taking care of someone or even brutally murdering people in games like *God of War* (2005). I will write more about how interactions can be used to evoke emotions in the next chapter.

What unique tools exist?

Having looked at what others write about evoking emotions in games, and focusing on the traits that are unique to video games, I have come up with a list of tools that games can utilize to evoke emotions in a unique fashion.

- Transfer of Identity
- Dramatic Agency
- Simulated Actions
- Interactive Discomfort
- Challenge

Each of these can be used separately, but can also be used in conjunction with each other to create an experience that is significantly different than what passive media can create. I will describe each of them and provide examples for how they're used. When I have written about all of them, I will look at a selection of games that are known for evoking emotion and find out which tools they use and how. First I will look at one of the core abilities of games, Transfer of Identity.

Transfer of Identity

Transfer of identity is a term that Swink used in his book *Game Feel* (2008). Transfer of identity is when a human transfers their identity to encompass something outside their body. Just like how Swink's car was part of his identity when he crashed it. This is often used when using tools in some way. Jerry Kelly (2001) writes about how to be a good striker in baseball:

> "It's feeling the fat part of the bat as an extension of your hands, knowing where that bat-head is in the same way that you know where your fingers are, or the point of your chin - thoughtlessly."

Here he is talking about transferring his identity to encompass the baseball bat. It becomes part of his body and in turn, part of him. The same concept can work in games if designed for it. An avatar is often used for the player to transfer her identity to. This can be a representation of a human, but just like a baseball player can encompass a bat and a driver can encompass a car, so too can a player encompass other objects into their identity. Playing *FlatOut 2* (2006) the player will transfer her identity to encompass the car, rather than the little human driver sitting inside. This is because the player is in direct control of the car, while the actual driver is merely decoration, a tool for making crashes feel better and more fun when you see the driver flying out the window.

The key to transfer of identity is control. This means that any object, real or abstract, can become part of the players identity, whether it's an unexplained invisible spirit that's being

Astrid Knappmann   astk@itu.dk

controlled in first person, or if it's a piece of toast, the player will extend her identity to encompass it if the controls are right. Swink (2008) describes it:

> "Extension of identity isn't something you can design for directly. It grows naturally out of real-time control, and it can be disrupted by too much frustration, boredom or ambiguity between intent and outcome. It can also happen to greater or lesser degrees depending on the sensitivity of control."

He writes that it's not something that can be designed for directly, but I think it's a wrong statement to make. While a designer can never force a player to feel or think a certain way, they can design an experience that is expected to have a certain result. Having a helpful character like Floyd from *Planetfall* end up sacrificing himself for the player can be expected to evoke sadness in the player. There's a million potential reasons for why any given player may not feel sad from the experience, but that doesn't mean that designers should give up trying to create powerful emotional experiences altogether.

In the same quote Swink describes what leads to extension of identity as concrete things that can be designed for. While it's never going to be completely given that a player will transfer her identity to an intended object, a designer can do a lot to maximize the effects of it. Real time control, direct relation between intent and outcome and sensitive controls are all contributors to this state of identity.

Real time control here is when you have direct control of something in real time. When the control is turn based, the transfer of identity does not happen as readily, because it becomes more like the player is a controller of objects, like moving pieces on a chess board, rather than being the object herself. When control is not direct, a similar thing happens. Point and click controls can be in real time, but because the player issues orders rather than completes the action herself, the transfer of identity doesn't happen in the same way.

Intent and outcome should be conjoined to keep a strong sense of identity. This can materialize in different ways and is most noticeable when intent and outcome are not in line. Narratively focused games often rely on the player transferring identity to the main character, but this feeling of identity can be broken immediately if a dialogue option turns out to be different from what the player expected it to be. She wanted to say one thing, but the character says and acts in a different way. A user on Giantbomb's forum describes their experience with the dialogue wheel from *Dragon Age II* (2011):

> "With the wheel, I feel like I'm suggesting things for Hawke to say, but Hawke just decides 'ok well this is what you meant right?' Hawke is always going to be Hawke, just with a different temper, and a different opinion on what to do with mages."[1]

This can alienate the player and may break the bond that held her together with the character, because it now feels as if the character is acting on their own accord. To a lesser

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[1]

https://www.giantbomb.com/dragon-age-ii/3030-30995/forums/the-dialogue-wheel-why-i-hate-it-with-a-passion-486305/

extent, the same can happen with controls. Everyone who has played *Super Mario 64* (1996) has tried running up to a pit with the intent of long jumping over it, but accidentally pressing the buttons in the wrong order, which makes Mario jump slightly, then ground pound straight into the pit. While it is a hilarious experience the first time, it does damage the feeling of identity because intent and outcome were two very different things, and for every consecutive time this happens, the damage becomes greater as it is now accompanied by frustration. This means that a skilled player and a less skilled player will have different experiences of transfer of identity. The skilled player will rarely mess up Mario's long jump, retaining the transfer of identity effect regardless of the difficult controls. A player who is new to the game and maybe new to playing games in general, will mess up the long jump a lot more and are at risk of losing the effects of transfer of identity.

One way to diminish this problem is to make the controls easy, but that itself has its own downsides. The skilled player may get bored quickly, due to the lack of the aesthetic pleasure of mastering a skill. *Super Mario 64*'s level design brilliantly allows both the skilled and the new player to feel engaged without too much frustration based on controls. It does that by having levels that are completable with only using the basic jump. Even the last level can be completed without using any of the more advanced jumps at Mario's disposal. This allows the less skilled player to play without having to use the difficult jumps, which in turn eliminates much of the risk of ruining the transfer of identity due to difficult controls. The skilled player will use the advanced jumps in creative ways to skip parts of the level, staying sufficiently challenged.

Tekken 3 (1998) solves the problem in a similar fashion. The control scheme is simple. There's 4 buttons on the Playstation controller that are associated with a limb each. The less skilled player can have the intent of kicking, and can easily get that outcome by pressing one of the two buttons associated with the legs. The skilled player will instead think in combos, requiring a combination of button presses timed correctly, that differ from character to character. The game can be played through without ever getting past the intent of simply wanting to kick the other guy in the face and pressing a kick button repeatedly. While the skilled player will fare better, both of them can still enjoy the game and keep the feeling of transfer of identity, because the controls allow for both new and skilled players.

Sensitive controls are important for the transfer of identity as well. If we look at *Wolfenstein 3D* (1992), we have a game where the player can move around freely in a 3D space. It is not possible to move vertically in any way, not even jumping, but this is not a big detriment because the levels are designed in such a way that the player most likely won't even be thinking about moving vertically in the very flat levels. The controls were made primarily for a keyboard, so the controls were limited to binary values of key presses. Turning left or right was done with the arrow keys, and due to the nature of the keyboard as a controller, the character would turn in the chosen direction at a set speed when the key was pressed down, then stop turning once the key is let go of. This constrained way of controlling the character holds back the transfer of identity effect. If the character's rotation was controlled using an analog stick, the player would have a way more agency over how fast the character rotates, making the controls more sensitive and leading to a more effective transfer of identity. To go even further than analog sticks, *Wolfenstein: The New Order* (2014) uses the mouse as the

input for rotation, which gives the player much more control. The mouse is an incredibly sensitive input device, as it is linked directly how fast the player moves her hand in a two-dimensional plane. This maximizes the potential of transfer of identity's effect from sensitive controls. The mouse as an input device has some limitations however, and should not blindly be used wherever possible. The possible movement of the mouse is usually limited to a relatively small area (a mousepad), so it is not suitable for consistent movement to one side. What control scheme will work best depends on what it is for, but to get the best effect from transfer of identity, the designer should aim to give the player sensitive controls with as much freedom as possible.

Transfer of Identity has several benefits for evoking emotions. Since the player has transferred her identity to include the object she is controlling in the game, that object becomes a link to her. Things happening to that object is now experienced differently than if the transfer of identity was not present. Swink (2008) writes:

> "The extending of identity also gives a player the sensation of direct physical contact. It's a muted sensation—getting hit with a rocket in *Quake* (1996) is, one assumes, not the sensation of being hit with one in real life—but intimate nonetheless. When I'm bumped, jostled, flung or impaled, it feels bad because it's as though it's happening to me physically. It's the same sensation I had hitting a pole in my parents ' Volvo; it's not literally painful, but it feels like a personal injury. Likewise, when I'm grabbing, throwing, slashing or hitting, it feels good because I'm reaching into the game and affecting things directly with a part of my extended virtual body...Through a combination of polish and simulation, the designer can have players feeling they've hit or been hit, shaping those interactions with great precision."

With transfer of identity everything the player does in the game feels as if she was doing it herself. This has myriads of applications for evoking emotion, and transfer of identity is present in many games in varying degrees. It is often used together with other tools to accentuate their effects. In *Outlast 2* (2017) the player has transferred her identity to Blake Langermann, the character that she controls throughout the game. The transfer of identity is strong because of the sensitive real time controls, without control ambiguity. With the players identity transferred to Blake, the designers now have the opportunity to evoke emotions effectively. During a cutscene Blake gets caught by some cultists who look disgusting and repulsive. One of the cultists stabs his own hand, and force feeds the blood to Blake. This is a really uncomfortable scene, made even more uncomfortable because the player has transferred her identity to Blake, so it feels like it is done to her. Shortly thereafter it is taken to the next level. Blake is getting crucified by the cultists. The great sound design and visual polish makes this particular scene really difficult to go through for many players, as can be seen from ChristopherOdd's (2017) playthrough of this scene. When he realizes that the cultist is about to force feed him blood, he cries out "noo", followed by sounds of disgust. When the first nail is hammered into his hand, he stops a sentence halfway through and groans. After the second hand is nailed to the cross, he says it is unbearable.

This cutscene would not be the same if the player had not been playing the game for a while and gained the effects of transfer of identity, but transfer of identity can be used in many more ways, one of which is the next tool on my list.

Dramatic Agency

I will use J. Murray's description of the term, as she uses it in her book *Inventing The Medium* (2011):

> "The experience of agency within a procedural and participatory environment that makes use of compelling story elements, such as an adventure game or a interactive narrative.   To create dramatic agency the designer must create transparent interaction conventions (like clicking on the image of a garment to put it on the player's avatar)   and map them onto actions which suggest rich story possibilities (like donning a magic cloak and suddenly becoming invisible) within clear story stories with dramatically focused episodes   (such as, an opportunity to spy on enemy conspirators in a fantasy role playing game)."

Dramatic agency is one of the unique tools the video games medium allows, which conventional books and film do not. Some books allow for dramatic agency, such as *The Warlock of Firetop Mountain* (1982), but the limitations of the medium takes away from the experience. Dramatic agency benefits a lot from transfer of identity, but looking at how to achieve transfer of identity, it is not easy to do in book format. Netflix has produced an interactive movie *Black Mirror: Bandersnatch,* which incorporates dramatic agency by having the watcher choose between 2 options at set points in the movie. This has the same difficulties achieving transfer of identity as it is simply presenting choices for the watcher. *Detroit: Become Human* (2018) is an interactive experience taking dramatic agency to the extreme. The lines between what is a game and what is not becomes blurry when it comes to interactive narratives, but *Detroit: Become Human* lets the player take direct control of the characters outside of scripted cutscenes, making transfer of identity a lot easier to accomplish. I won't get into the discussion of exactly what it takes to be considered a game or an interactive movie, instead I will focus on experiences with dramatic agency where transfer of identity has strong potential, such as *Detroit: Become Human*.
Dramatic agency coupled with transfer of identity gains some unique possibilities. Will Wright (2006) said:

> "People talk about how games don't have the emotional impact of movies. I think they do—they just have a different palette. I never felt pride, or guilt, watching a movie."

Movies and novels can evoke those emotions, but it is done in a different way. The narrative subgenre "Whodunit", with works such as *Murder on the Orient Express* (1934), is all about engaging the reader/watcher and letting them be part of a crime investigation. The crime and the clues are presented in such a way that the reader/watcher gets a chance to deduce who

the culprit is, before the big reveal when the protagonist puts together all the clues and reveals who the culprit is. This allows the reader/watcher to feel like a crime detective themselves, and when they manage to guess who the culprit is, they feel pride. Proud of being as good at deducing and analysing clues as the protagonist.

Guilt can also be evoked, like in *Harry Potter and the Philosopher's Stone* (2001) where Snape is portrayed as evil in the beginning. Hermione catches Snape in casting a spell while Harry's broom is acting up, so she, and the viewer, believes Snape is the culprit. This scene is set up so that the viewer will despise Snape, so that when it is revealed later that Snape was actually saving Harry from the real culprit, then Hermione, and potentially the viewer, feel guilty for blaming Snape earlier.

While these experiences can be really powerful and fulfilling, those specific emotions can work differently when evoked using dramatic agency together with transfer of identity. *Life is Strange* (2015) is a narratively focused game where the player takes control of Max, and she is presented with explicit and implicit choices that have meaningful impact on the narrative. The player controls Max in real time with good controls, so the transfer of identity is strong. The game explicitly states that all the player's actions have consequences and will impact the past, present and the future. This is not an entirely honest statement, as it implies that the player has more narrative control than what she really has. It is a really important statement however, because it makes the player feel like she has dramatic agency even when she does not. This is useful because the more dramatic agency the player has, the more content has to be made, and if not treated carefully the workload will get out of control. There are ways of working around this, one of which is to make each choice a small deviation from each other, and then converge shortly after. One such example is in the interactive movie *Black Mirror: Bandersnatch*, where the protagonist is offered a drug. The narrative requires the drug to be taken, so if the watcher refuses, it will be put into his drink while he is not looking. Those who chose to refuse the drug may have felt cheated, but those who chose to take the drug would feel a great sense of dramatic agency, and wonder what would have happened if they did not take it. Twitter user @TCEL_Danzter chose not to take the drugs, and his reaction to having them slipped into his drink anyway, was posting a picture saying "Am I a joke to you?"[2]. He felt let down by the choice having no influence at all. Another twitter user replied to the status saying

> "ohh so this is what happens........ well i'm glad now that i wasn't abstemious with that decision haha"

This twitter user showed interest in what could have happened if she did not choose to take the drug, because she also expected it to be a meaningful choice. This kind of choice works well if the designer's desired path is chosen, but it can be really bad if the other option is chosen. This has to be done carefully, as the illusion of having great dramatic agency will be broken if this happens often. Thankfully there are tricks to mitigate the amount of players who will choose what the designer does not want. K. and J. Tanenbaum (2009) wrote a paper about agency in which they write:

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[2] https://twitter.com/TCEL_Danzter/status/1078644591035908101

Astrid Knappmann   astk@itu.dk

> "... a recent study by Roberts et al (2009) looked at using principles of Influence Theory from social psychology as a way of guiding player behavior in an interactive narrative. By adding carefully crafted influence statements to the story, the authors were able to increase the number of people who selected one specific action over another. Crucially, in the post-study questionnaire, players who got the control story and players treated with the influenced stories showed no differences in terms of reported agency or feelings of manipulation. Despite having their actions manipulated and controlled in this way, their engagement with the story and their own commitment and feeling of agency was unaffected."

Using Influence Theory the designer can guide the player in a certain direction. Influencing players may have significant results, but ultimately the decision is made by the player, so no matter how much influencing the designer does, they should always be prepared for handling the players who choose the undesired path. *Bandersnatch* uses various techniques of social influence to make the watcher choose the paths that the designer wants for a lot of the choices, and then leaving the big choices open with significant variation depending on the choice. The scene with the drug mentioned earlier has a respected character that the protagonist looks up to, be the one to offer the drug. That character also uses peer pressure to further influence the watcher into choosing the desired path, taking the drug. *Bandersnatch* has a relatively good way of handling those who choose the undesired path of refusing the drug, by having them take the drug involuntarily when it is slipped into the protagonist's drink.

Bandersnatch makes use of these kinds of choices a lot, and not every undesired path is saved as gracefully. One scene has the protagonist talk to a psychologist, who wants to talk about the protagonist's mother. This is a choice, which is peer pressured like the other one, but if the watcher still takes the undesired path, there is no graceful way of continuing on for good. There is a considerable amount of content that requires you to talk about the mother, so once the narrative gets to a point where you cannot go further without the mother scene, it brings you back in time so you can change your choice. This way of reversing back in time to change a choice greatly reduces the effect of dramatic agency. Once this feeling of not having any dramatic agency sets in, it's difficult to get the watcher/player out of that state of mind and feel like they have agency again. It's better to not have a choice at all if the watcher/player will be forced to choose a specific option, with no tangible effects to the other options, like opting out of talking about the mother. Since there is a choice, the watcher/player expects the choice to matter in some way, and when it turns out that her choice did not matter at all, she will feel disappointed and like she is not in control, much like the twitter user did when his choice of refusing the drug had no narrative significance. With this particular scene however it is worse, because the choice seems to be put in just to have a choice for the sake of it, destroying the watcher's expectation of choices mattering. Portnow et al from Extra Credits (2013) calls this Negative Possibility Space. It does not take much effort to prevent negative possibility space, but the effects can be very harmful if left unattended. They say:

> "Look at *The Walking Dead* (2012), Telltale designers would generally pick a few sweeping choices early in each chapter and make the consequences to those choices abundantly clear form the get go to establish the idea that your choices mattered, which led you to as a player to assume that any decision you made would have an impact, even if many of them didn't. On top of that, when the player was making a narrative decision, the designers would often have small messages pop up, like 'Clementine will remember this', thus, fulfilling that expectation, filling that Negative Possibility Space in the player's mind, even if the choice being made really did nothing other than make that message appear on screen."

Like *Life is Strange*, *The Walking Dead* ensures that the player believes that every choice matters, and once that illusion is set up, even small acknowledgements of the players choice is enough to keep it up. The messages popping up when an action or choice has occurred, serve as instant gratification. This is especially useful in situations where the choice doesn't have a big immediate effect, as the player might feel it as Negative Possibility Space if nothing happens at all for a while. While it is important to fulfill the player's expectation, a powerful technique to make the player feel great dramatic agency, is to take a seemingly inconsequential choice and make it have significant consequences.

In *Life is Strange 2*, you play as the big brother, taking care of his younger brother. You're on the run, and food is scarce. You come across a deserted car, which has your brothers favourite chocolate bar laying in the window. It looks like you can reach it through the window. Do you take it and give it to your brother, who is hungry and clearly not feeling good from the long travel? The car looks like it hasn't been touched in days, and you need the food way more than they do. Will they even notice that a chocolate bar is missing, if someone is even coming back in the first place? The consequences seem like they have low probability and low impact, and you really want to make your brother happy. Taking that chocolate bar will come back to haunt you later however, in a much worse way than most anticipated. If you chose to steal the chocolate bar, your brother will think that stealing things is okay, so he steals from someone who has helped you a lot along your journey. This in itself is potentially a really strong emotional moment in the game, but it serves a dual purpose. The player is now constantly on edge, because she knows that every single decision she makes can end up having much graver consequences than she can predict. This single consequence to a choice will give the player great feeling of dramatic agency, because it proves that even the small things she does matters, even if it is relatively inconsequential for the overall narrative, these things matter a lot when it comes to the feeling of dramatic agency.

Seeing your little brother steal, because you taught him it was okay, intentionally or not, can evoke the feeling of guilt. One very effective recipe for evoking this emotion is transfer of agency together with dramatic agency. Cambridge dictionary describes guilt as:

> "A feeling of worry or unhappiness that you have because you have done something wrong, such as causing harm to another person"

Astrid Knappmann   astk@itu.dk

The watcher of *Harry Potter* may feel guilt when blaming Snape wrongly, but no matter how much you think badly of Snape, nothing you do will ever cause harm or affect him at all. The fact that you cannot reach into the story and make Snape feel you blaming him, puts a limit to how strong the emotion of guilt can be. With dramatic agency the player can directly affect the feelings, albeit virtual, of the other characters in the story, and with transfer of identity the player can feel responsible for it. If we go back to the first *Life is Strange* game, there is a scene that can really effectively evoke both guilt or pride, depending on the player's skills and previous decisions. Kate is a character who Max (the player) goes to school with. She is struggling with some things and has people bully and harass her. Max and Kate are friends, but how close they are depends on the player. If the player decides to check out Kate's room and talk to her, she will learn crucial facts for later. Kate calls Max at a really unlucky time, and Max is peer pressured into not answering. All these things and more all lead up to the big episode finale where Kate stands on a rooftop about to jump off. Max uses her time powers to get up to the roof with her, but her powers are limited, she cannot use them to save Kate. The player has to talk Kate out of jumping.

This is when earlier decisions matter. Everything the player has done for Kate is part of the conversation, and if the player has neglected Kate earlier, or isn't good enough at talking her down, Kate will jump off the rooftop and successfully commit suicide. If the player has been there for her and remembers what is important for Kate, then she can talk her down and save her. Through clever dialogue writing the designers can evoke a strong feeling of guilt if the player has neglected Kate. Kate is depressed over not mattering to anyone, and if the player tries to convince her otherwise, she will remind her of that time where she did not pick up the phone. Only then is it clear how important that phone call was, and that can evoke a really strong sense of guilt and regret in the player, because she succumbed to mere peer pressure, which hurt Kate so badly that she is about to commit suicide. It is made clear to the player how every little action she did has hurt Kate, and the player has no one to blame but herself. The game will keep reminding the player about Kate's suicide afterwards. With many conversations about it and memorials for her passing. A constant reminder to how the player failed her friend. To make everything worse, the game shows statistics after each episode showing how many people managed to save Kate, and how many who did not. This does not just serve as anonymous shaming, it also serves as a message to the player. You could have saved her. Similarly, if the player does manage to successfully talk Kate down, she is saved. Instead of guilt, this can evoke a strong feeling of pride. The clever dialogue writing makes sure to acknowledge every good thing the player has done for Kate, which makes it clear to the player that Kate was saved because of her actions. Just like with Kate's suicide, her rescue is kept fresh in the player's memory by conversations and even a scene where Max visits Kate in the hospital.

This way of evoking pride and guilt is really well suited for games. One strong point of dramatic agency is that the player can feel responsible for how the narrative pans out. This feeling of being responsible is what allows such strong feelings of guilt and pride. I asked my girlfriend to play Life is Strange while I watched. I didn't tell her why or give her any other instructions other than to play it. While she was playing one of the more emotional parts of the game, she exclaimed "What have I done?". She was feeling guilty of how the narrative panned out. She wasn't actually to blame, as it was a predetermined section of the game. She did not know that however, and she believed it was her own doing because of how the

game made sure to let her know that her actions had consequences. Exactly what is predetermined and what is not becomes unclear when there is no Negative Possibility Space and the game has a lot of dramatic agency. This leads to the player feeling responsible for the actions of whatever character or object she has transferred her identity to, even if those actions are unavoidable.

This feeling of being responsible has some interesting effects. When Brooke Leigh Thorne (2015) played *Life is Strange*, she got very emotional during a section of the game where Max has gone back in the past to change one thing, which led to her best friend ending up in a wheelchair. This is a predetermined section of the game that you get to no matter what, but she did not know that, and blames herself for putting her friend in a wheelchair. After spending some time with her friends, Max is asked to give her an overdose of morphine, to help her commit suicide. This is a choice that the player has to choose between, but due to the nature of the game and Max's time travel abilities, the player can try both options before deciding on which one to go for. Thorne starts out by choosing the option of not helping her, and she expresses curiosity about what happens if you choose to help her overdose, so she time travels back to the point of choosing. She considers it for a few seconds, before she declares that she cannot get herself to do it. Even while knowing that she could go back and choose not to help, the thought of helping her friend commit suicide was too much for her. Her feelings of guilt and sorrow outweighed her curiosity. She simply cannot get herself to be responsible for her friend's death.

Dramatic agency can be used really effectively together with transfer of identity to evoke emotions differently than conventional movies and novels. Through clever design the designer can make the player feel responsible for way more than she really was, which can give a rich experience without too many resources spent on wildly varying branching paths.

Simulated Actions

Simulated actions are when interactivity goes beyond just being functional user interface. The controls can be designed in such a way that it evokes emotions, if connected to a fitting action. It is often done by imitating the use of physical objects, so that the controls have a resemblance to how the action is in real life, but more generally it is simulating reality. Grodal (2000) writes about the effects that game-world-generated time (time passes regardless of player actions) has on the player's experience:

> "Game-world-generated time provides other gratifications because it evokes much stronger emotions. The problems need to be solved under severe time constraints similar to those in emotional peak situations in real life. The player has to integrate perceptions, cognitions, emotions, and actions fast in order to survive and is provided with a strong feeling of interaction. The closer a game experience gets to the player's optimal mental and motor capacity, the less capacity is available for being conscious about the game being just a game: the game provides total immersion."

A time constraint, direct or indirect, will help evoke strong emotions and keep the player immersed in the game. The indirect time constraints can be things like enemies acting in real time. When you start a game of *StarCraft II: Wings of Liberty* (2010), there is no timer counting down, but you know that you need to act, because the enemy is increasing their army for every minute that passes by. This creates a very tense gaming experience that can be fatiguing. One user on the Blizzard forums[3] wrote about his experience with the multiplayer part of *StarCraft II*:

> "First off i know I sound really fat right now but does anyone else feel exhausted when playing for about 5-7 games? Whenever i play call of duty i can sit on my ass and game all day but when i play Sc2 i feel very tired and drained."

This exhaustion comes from the constant mental activity from playing the game, as the game works exclusively with game world generated time, the player never gets a chance to rest while a game is going on. So it can be beneficial to have some moments that are time constrained and some that are not. The user mentions *Call of Duty* as a game that is not as tiring, while it is also game world generated time, your objectives do not have a time constraint in the same fashion that *Starcraft II* games have. In *Call of Duty* there is downtime regularly, where the player doesn't have to be at peak mental capacity, such as when she has died and is waiting for respawning, or while running in perceived safe areas.

Factorio (early access 2014) has a mix between game world generated time and player generated time (time passes based on player actions). The enemies are slowly evolving over time and will send attack waves toward the player occasionally, which puts the player on the spot. She knows she has to act and advance her technology so she can deal with their attacks. The evolution of the enemies is very slow by itself, so if the player takes a few minutes to relax, it's not a big deal, which makes the game experience a lot less tense than *StarCraft*. Instead the enemies evolve faster based on what the player does. This also functions as a way of balancing play for experienced and inexperienced players, all while making the player feel that time passes like in real life and that time cannot be wasted, making the experience feel very real.

The Walking Dead (2012) has two kinds of gameplay. There's some parts that allow you to walk around and explore and inspect your surroundings, as well as have conversations with everyone around. These sections are usually using player generated time, giving the player as much time as she wants. This serves as a place for the player to relax after the more intense parts of the game. *The Walking Dead* has very stressful and emotional scenes where the player has to make tough decisions. These stressful scenes only work because the designers have put a time limit on the player's decision making time. The time constraint itself adds a lot to the stressful feeling of the game, but because the decisions you have to take are never easy, and often has many potential consequences that can be difficult to process in the short time you have to decide, the experience becomes super stressful. The

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[3] https://us.battle.net/forums/en/sc2/topic/2416115008

experience also becomes very immersive, because the way it works is very similar to real life, and the player's mental capacity is being spent entirely on considering the choices.

Imitating the use of physical objects is another way of simulating actions. This can be done in many ways, that all depend on the situation and the object which you are imitating the use of. It depends a lot on the controller the player is using as well, and some controllers are built solely for this purpose, such as flight sticks or steering wheels. The purpose of this way of controlling is to get one step closer to reality, which helps evoke stronger and more real emotions. Nintendo has had a lot of focus on this particular tool to evoke emotions. The Wii was released with a specific set of controllers using motion sensing technology, to allow developers much more freedom when designing their control scheme for the purpose of imitating the use of physical objects. *Red Steel* (2006) is a first person shooter game utilizing the Wii's controller, the wiimote, to have the player point at the screen with a crosshair, as if aiming with a real gun. Due to technical limitations, the feeling wasn't as lifelike as it could have been, but it did give a different feel to aiming. *The Legend of Zelda: Twilight Princess* (2006) also used the Wii Remote to imitate the use of a physical object, this time a sword. The player has to swing her arm as if she was the one holding the sword. That was the idea at least, but due to how fatiguing that is, many players would instead sit down and flick their wrist instead to make Link swing his sword. This problem made the simulation lose it's link to the physical object, as flicking your wrist doesn't feel like simulating swinging a sword. Link is famously left handed as well, which did not work with the wiimote being used in the right hand, so the entire game was mirrored for the Wii version, so that Link could use his right hand as his sword hand. A lot of effort went into making this simulated action work, but ultimately it ended up being ignored by many players.

The Legend of Zelda: Skyward Sword (2011) used the Wii Remote controller with the Wii MotionPlus, which is an addon that increases the accuracy of the motion controls. This meant that the player now had to swing to Wii Remote like intended, which worked well for the feeling of simulated actions, but it made the game physically straining to play for longer periods of time. A user on the GameFAQ forum[4] explained he wanted a remake of *Legend of Zelda: Skyward Sword*:

> "Skyward Sword, please.
> It could benefit with an update. It was just too exhausting to play having to swing the Wii Remote. In Twilight Princess for the Wii, you could get by with the Wii Remote because you didn't have to swing it must, just a light shake. But Wii Motion Plus made Skyward Sword a painful experience."

Simulated actions is something that can easily end up being a detriment to the experience if it is not done well, but when it is done well, it can add a lot. In an article for The Verge, A. Webster wrote about his experience of playing *Pokémon: Let's Go, Pikachu!* (2018) with his daughter:

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[4] https://gamefaqs.gamespot.com/boards/183128-the-legend-of-zelda-twilight-princess-hd/73459941

> "Many of the features that seemed to me like forgettable add-ons are the ones she treasures most — in particular, the ability to use the motion controls or the touchscreen to feed and pet her new Pikachu buddy, which has provided a lot of entertainment."

The designers of *Pokémon: Let's Go, Pikachu!* have done really well with the feature of playing with your pokémon. The polish is great, with Pikachu showing its appreciation clearly when you pet it and hearts flying out when you do it. If the game is played in handheld mode on the Switch, then petting Pikachu can feel very real because of the controls simulating the real world action of petting. You pet Pikachu like you would pet any tiny mouse. Put your finger on a spot it likes being petted on and then move your finger around. Pikachu's instant feedback to your petting makes the experience feel very real.

Another way of using simulated actions is to use the controls to simulate the actions a little more abstractly. In *God of War* (2005) you take control of Kratos, a muscular spartan warrior. He does not wear a shirt, so the player is very aware of how strong he is. Along his journey, Kratos comes across some gates that can be opened. The animation for opening these gates emphasizes how heavy they are. The game then simulates the action for the player, not by simulating the actual physical movement of Kratos, but simulating what he goes through, a physical struggle. This struggle is simulated by making the player press the trigger buttons on the controller repeatedly as fast as possible. It is physically straining to mash a button, so the player gets to feel a muted sensation of what Kratos goes through. The *God of War* games have used this up until the eighth and latest installment as of this thesis, simply called *God of War* (2018). It is by no means unique to the *God of War* series, but it is occurring frequently in those games. So much so that C. Wood still mashes the button in the latest game, even though it is not needed. He writes about his experience (2018):

> "When grabbing that lower part of a heavy metal gate or wedging his fingers in between the cracks of a stone door, he appears to struggle for some moments before hurling those apertures open. I'm conditioned to assist with struggle. I'm not sure if it's in earnest of getting the ingress opened more quickly, or a simple desire not to fail in breaching whatever port Kratos is struggling with, but I always mash circle."

Wood mentions how he sees the act of mashing the button as assisting Kratos with opening the gate. This is one way that simulated actions can be used successfully to evoke emotions by letting the player partake in whatever the avatar is going through. This has to be used sparingly and with thought however, as mashing a button is not enjoyable in itself for many players. *Thief* (2014) used the button mashing in a very similar way to *God of War* to open windows, but the reception to this design choice was not good. One user on the Steam forums writes[5]:

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[5] https://steamcommunity.com/app/239160/discussions/0/558749190753286298/

> "for what gameplay reason do the button mashing window opener exist? With lockpicks there is often a patrolling guard, and how precise you lockpick decides how fast you can get something opened. But openable windows are never near any guards. And button mash as fast as you can doesn't seem to make him open the window any faster.
> I would think that someone making a game would think to themself 'how would this feature serve the gameplay'?"

This user does not understand why the mashing is needed, and I think it comes down to two main reasons. One being the fact that mashing the button does not actually speed up the animation, so the player's struggle is not directly linked to the action going on in the game world. The second reason is that the animation and context is vastly different compared to *God of War*'s opening of gates. Opening a window has an animation that looks slightly awkward, with the avatar slowly lifting it up slightly with a crowbar, before lifting it the rest of the way with his hands. It does not look like it is a struggle to open, and you would expect the window to be easy to open after the first time you used your crowbar on it, but that is not the case. Every time you pass through a window, you have to struggle with the crowbar to lift a small wooden window. It makes little sense that it is required to do, and even less sense that the avatar is struggling with lifting up an unlocked window.

The mistake the designers of *Thief* did was to make the button mashing part of a seamless loading screen. Opening a window has to be slow, because the game is loading during the cutscene. This puts limitations on the speed of the animation, which does not work well with this kind of simulated action. Instead of assisting the avatar with his struggle, the button mashing has lost its intended purpose and seems to serve no purpose other than wasting the player's time.

The different effects of the same simulated action in *God of War* and *Thief,* indicates that the simulated action has to be accompanied with other stimuli, such as visual or auditory to give the action context. The motion of swinging the Wii Remote in *The Legend of Zelda* is very similar to the motion of playing the tennis minigame in *Wii Sports* (2006), but the context given by the visuals especially makes the experience different.

Brothers: A tale of Two Sons (2013) and *What Remains of Edith Finch* (2017) both have interesting uses of simulated actions, which I will write about later in the thesis in their respective sections.

Interactive Discomfort

Video games don't have to be about fun. Like other media, video games can explore all kinds of different emotions and experiences. Discomfort can be evoked in many different ways, and while it sounds like a negative thing to evoke discomfort in players, it can be a positive experience. K. Jørgensen wrote about uncomfortable game content and transgression of player taste (2019), where she interviewed players about uncomfortable experiences in video games. On the topic of discomfort being a negative or positive experience, she wrote:

> "When discussing the difference between positive and negative senses of discomfort, the respondents expressed that discomfort often is experienced as positive if it feels meaningfully integrated into the specific context, either by having a role in the narrative context or by providing new experiences or by inviting reflection on game actions as well as on life in general. A sense of meaningfulness is central to empathic engagement in the game fiction."

The respondents emphasize how it should be a seamless part of the whole, and it should make sense narratively. These conditions the respondents mentioned are very subjective, so it is going to be difficult to fulfill them, and players are different, so there will always be a risk that some do not get a positive experience out of it. *Tomb Raider* (2013) continued the series' tradition of showing the death of Lara when the player messed up and died. The graphics has improved a lot since *Tomb Raider* (1996), which was the first game in the series. There's Youtube compilations of Lara's deaths from the different games, but even though the two games use the same concept, the reception of the death scenes are very different. A compilation of deaths from *Tomb Raider* (1996) by Foolish Banana (2013) has this description:

> "After a long let's play of the game, I thought it would be cool to do a bonus video after beating the game. Lara Croft dies in many ways in the first Tomb Raider game. It's hilarious seeing the many deaths of Lara Croft! XD"

Lara dies in gruesome ways in that video, but because the graphics are much more cartoony than in the newer game, the deaths do not cause the discomfort that Tomb Raider (2013) does. In a video of the deaths from that game, uploaded by youtube user 【XCV//】(2013), the discussion is very different. One user comments:

> "Every time i play this game i really dont want lara to die seeing those death scenes"

This user is experiencing discomfort from those death scenes, which in turn makes them want to avoid dying even more. The increase in graphic fidelity has made these scenes a lot tougher to watch. The death scenes fit into the game seamlessly when you play, but some people do not like these death scenes, now that the graphics have gotten so good that the deaths seem realistic. Mark Brown (2018) wrote an article about the subject saying:

> "Now, I'm not a prude. I'm down for protagonists' violent death animations that crop up in games like *Dead Space 2*, where Isaac can be stabbed in the eye if you balls up a particular minigame. And *Resident Evil 4*, where Leon's head can be lopped clean off by a madman with a chainsaw.
> And they're horrible, and I'll wince like the baby that I am, but they totally make sense, and I wouldn't call for them to be toned down. These are horror games, after all, and they come from a lineage of horror movies where gruesome violence and bloody giblets and organs flopping out all over the place are a genre expectation.

> The *Tomb Raider* games, however, are far more action adventure and obviously inspired by the *Uncharted* games — games that don't feel the need to show Nathan Drake's bloody corpse writhing in agony on a rusty spike after you screw up a jump."

While the death scenes fit into the game's flow, Brown argues that they do not fit into the game on a meta level. He argues that action adventure games should not have gruesome death scenes. While I agree that it's generally important for a game to meet a player's expectations, I do not agree that certain violence should be reserved to certain genres. The game has a PEGI 18 rating, so the player has a fair warning, if violence or other adult rated themes are a concern. The violent death scenes can cause discomfort, and like the youtube user commented, it can cause the player to play more carefully, fearing death in a different way than usual. With Transfer of Identity the death scenes can become really harsh to watch, especially when they happen because of the player's mistakes.

Brown argues in the same article that there are different ways of making players want to avoid dying. He writes:

> "No one wants to die in *Dark Souls*, and every death is a kick in the gut. But not because you see your character torn to pieces. In fact, deaths in the Souls games are mostly bloodless affairs that simply see your hero slump down in defeat. It's because you've just lost loads of progress and are close to losing loads of souls. That hurts way more than seeing a character's esophagus get friendly with a tree branch."

Dying in *Dark Souls* (2011) does indeed hurt. It hurts because you lose progress and have to redo the same content again. I personally quit playing *Dark Souls* because I did not enjoy being punished by having to waste my time with doing a considerable amount of content again, before I could get to the challenge I had to overcome. Dying felt bad. During my time in the DADIU[6] course in 2018, T. Howalt (2018) told us time and time again to make failing fun. He said that life gives you a slap on the wrist every time you make a mistake, games don't need to do that. Make failing fun.

Dying in *Dark Souls* cannot be described as fun. It was such a hard slap on the wrist that I decided it wasn't worth my time. The death scenes in *Tomb Raider* (2013) had a completely different effect on me. When I got to a new area I was always curious about how I could die. If I did an area well on my first attempt I would even consider dying on purpose, just to sate my curiosity. Dying was maybe not fun, but it was interesting.

While I had a positive experience with the death scenes evoking some morbid curiosity, and consequently making me feel guilty for causing suffering, some others like Brown did not have a positive experience. Trying to evoke discomfort is risky, as it can have some harsh consequences if it does not work out. Jørgensen (2019) writes:

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[6] http://www.dadiu.dk/

> "When the respondents find uncomfortable game experiences to be negative, such experiences tend to create a sense of distancing. … the distance i address here is a state created by a disruption that threatens to break the ability to engage with the work. … such provocations may alienate the player of a videogame and prevent full involvement with the game."

The distancing she talks about here is what would stop Transfer of Identity. The worst case scenario is that the player completely stops engaging with the game by quitting and not playing anymore, but even the distancing effect in itself can be very harmful for the rest of the game. Transfer of Identity is crucial to boost the potential of the other tools to evoke emotions, so designers have to be careful when designing for discomfort, if they rely on the effects of Transfer of Identity.

The levels of discomfort that are tolerable depend on the player base, as well as the context and the type. The player base consists of individuals with their own tolerance levels, but in general there will be greater tolerance in a player base for a game like *Outlast 2* compared to the player base of *Farmville*. The context is important as well, as players will play certain games for the discomfort, like horror games, but they can react negatively if the discomfort comes in a context they did not want, like Brown's reaction to the death scenes in *Tomb Raider*.

The type of discomfort has a big impact on how it is experienced for the player. The death scenes in Tomb Raider (2013) show Lara getting her throat impaled, which is a universal way of evoking the emotion disgust (Curtis, V., & Biran, A. 2001). Disgust is one of six emotions P. Ekman (1971) classified as basic universal emotions, yet it is rarely talked about. J. A. Bopp (2015) did a study analyzing negative emotions evoked in games, leading to positive experiences. Of the six basic emotions, disgust is the only one that is not mentioned in any way. Instead, the players talked about sadness a lot, as an emotion that leads to a positive experience. Bopp Writes:

> "A variety of typically negatively valenced emotions were reported in our study, with sadness as the most frequently mentioned emotion. Nevertheless, players rated emotionally moving game experiences high on enjoyment and appreciation. Moreover, not only did negatively valenced emotions and high enjoyment ratings coexist, but experiencing emotions, as well as sad affect significantly predicted enjoyment and appreciation. Taken together, this indicates that players did value their experience not in spite of negative emotions, but actually thanks to the game inspiring strong emotional reactions, including sadness"

Sadness seems to be a really useful emotion to evoke, as it is a lot more risk free than disgust. Interactive Discomfort can help evoke sadness in different ways. *Grand Theft Auto V* (2013) has a controversial mission which forces the player to choose which instrument to use to torture a man. A participant of Bopp's (2015) study described the experience as:

> "I really hated it and did not want to do it but the game didn't leave the choice to me. (...) It was really disturbing"

The study showed that these experiences can evoke anger or helplessness, depending on how it is implemented. The interesting part of the *Grand Theft Auto V* mission is that the act of torturing this man is very effective at evoking a lot of different emotions. The morality of torture can evoke disgust, as well as seeing the torture carried out (Curtis, V., & Biran, A. 2001). Being unable to avoid torturing him can evoke the feeling of helplessness and guilt for carrying it out. The scene uses Simulated Actions to make it feel even more like the player is actually torturing the man.

After the torture, the player is tasked with taking care of the man. It is implied that he has to be executed, but the protagonist decides to drive him to the airport instead. During this drive to the airport, the man talks about his family and how he wishes to be with them. This evoked sadness in many players. On a Youtube video[7] of the mission, one commenter writes:

> "This mission was hard to watch and do. I felt sorry for the guy, he hasn't done anything to them. I know it's a game but it's a good game that makes things feel real with characters you end up sympathizing with"

It is a tough mission to handle emotionally, and it was not liked by many, but it did effectively make players reflect on the real world. Another commenter wrote:

> "just think somebody around the world is going through this right now"

As of writing, that comment has 585 upvotes. While actually playing the mission might feel horrible, it does satisfy one of the mentioned conditions of a positive experience, the reflection on the action. Torture is a very controversial topic, but this is a very emotionally strong way of forcing the discussion, which can be very important, especially now that the current President of the United States of America, Trump, has openly said he supports torture[8].

Interactive Discomfort can be used in a much less risky way, while still having potential to evoke strong emotions in the player. In the earlier example where Thorne (2015) played *Life is Strange* (2015), she was presented with the choice of helping a liked character, Chloe, commit suicide. Assisted suicide is also a controversial topic, which is illegal in most parts of the world (Emanuel et al, 2016). An important difference in how this was implemented compared to the torture scene in *Grand Theft Auto V*, is that the player is allowed a choice. The choice itself forces the player to think about her stance on the subject, and allows her to choose an option that does not transgress her boundaries. When I watched my girlfriend play it, the choice prompted her to talk to me about her stance on assisted suicide, as if she had to defend her pick.

The choice itself can be moving, because it is a very emotional question about ethics. Since the game makes use of Transfer of Identity, to make the friendship with Chloe feel personal,

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[7] https://www.youtube.com/watch?v=SFU8dTyswE0
[8] https://www.youtube.com/watch?v=Kpj3pp10wD8

and to make the player feel responsible for her feeling of Dramatic Agency, the choice becomes very powerful. It transcends beyond just taking a stance on assisted suicide, because the life of the person in question feels like it matters, and the player can feel responsible for her suffering.

It is not a necessity to inspire reflection on real world topics when using Interactive Discomfort. The choice from Life is Strange that I wrote about is one of the more hard hitting choices, but the game is full of choices where the player is asked to choose between what feels like 2 bad choices. The discomfort this causes can give the player a moving experience. In a forum thread[9] discussing what choice was the hardest to do in Life is Strange, one user described their experience:

> "Hardest: revealing/not revealing the truth about Chloe´s death to David after he saved Max in dark room. On one side, I wanted to see Jefferson dead, but i couldn´t stand seeing David so hopeless and destroyed by her death"

This user wanted Jefferson dead, which is a side effect of revealing the truth to David, but the discomfort evoked by seeing David's reaction to the truth made the user reconsider their choice. The objective outcome was an easy choice, but because of the emotions evoked by David's reaction, the choice became the hardest one for this user. This kind of experience where the player gets to choose how much discomfort they want to feel to accomplish something can give really powerful experiences.

Heavy Rain (2010) has a similar experience, where the player is tasked with cutting off Ethan's (the protagonist) finger in order to get his son back. This is more than just a choice however, as *Heavy Rain* uses a lot of Simulated Actions, the player has to do everything from finding the tools to actually cutting off the finger. The entire sequence can take several minutes to complete, with everything happening designed to cause discomfort in the player. There is a countdown for how much time the player has to complete it, while Ethan is trying to calm himself down. After gathering all the tools the player can choose to take deep breaths before going through with it, which are implemented as Simulated Actions. The cutting itself depends on the tool you have gathered, but each one has a fitting input required to cut off the finger. Some of the tools do not manage to cut it off in one go, so the player gets to hear the screams of agony from Ethan for a while, before she is tasked with cutting a second time to finish the job. This is a very powerful scene that can evoke a great deal of discomfort in players. On a Youtube video[10] of the scene one user comments:

> "I was literally shaking on this scene, my hands were trembling as I was trying to decide if to cut my finger or not, I was breathing really hard and fast, I was very tense."

Another user comments:

> "Most emotionally burdening game I've ever played."

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[9] https://steamcommunity.com/app/319630/discussions/0/458605613393729120/
[10] https://www.youtube.com/watch?v=J9K_T_klwRQ

This scene has evoked strong emotions in players, and it is very reminiscent of the torture mission from *Grand Theft Auto V*. This scene has not had a lot of negative response like that mission had. The scene in *Heavy Rain* has a choice. Actually going through the worst parts of it requires the player to intentionally go through with it. The player can decide to just let time run out without cutting off the finger. The scene will still cause discomfort, as the reason to cut off the finger is to gain a clue to figure out the whereabouts of Ethan's kidnapped son. Not getting the clue is a high price to pay, as the game relies heavily on Dramatic Agency, so the player is aware that her actions can lead to all kinds of horrible narratives, and the game is designed around a strong feeling of Transfer of Identity as well, so Ethan failing to rescue his son, can feel like a personal failure of the player.
With all this on the line, the player has a strong incentive to endure the discomforting scene. This kind of goal is something the *Grand Theft Auto V* mission did not have. The player is tasked to torture, because someone tells the character to do it.

Interactive Discomfort is an interesting tool that can be used in various ways. It can be effective at making players reflect on the real world, but it can also be used to make a scene more intense. It has potential downsides, but they can be minimized by thoughtful design, by making the most discomforting part optional, or giving the action a relevant goal that can bring players through the tough scene.

Challenge

Challenge is an integral part of many video games. I will not dive into what challenge is, as many others have done that, like Malone (1981). Instead I will focus on the different kinds of challenge and what effects they can have in games. It can be argued that novels and movies can have challenge too, by having complex narrative or making use of difficult language. There's a term for books called Hi-Lo[11], (High interest, Low readability) which breaks the usual content to difficulty level of books for children. These Hi-Lo books have content fitting for older kids with lacking reading skills.

While other media has challenge, such as the whodunit genre, it is usually very different from the challenge that is used in games and much less prevalent. Reading skills are mostly universal, within a language, so if your reading skills are sufficient, you can read any new book without issues. In games that is often not true. A player who is really good at *Tomb Raider* (2013), will not be able to carry over all her skills to *StarCraft II* (2010). Some basic skills such as reaction time, multitasking and aim will carry over, but those skills often have to be used differently in different games. Some games are very similar and share most of the required skills, such as the *Call of Duty* series (2003-) and the *Battlefield* series (2002-). In rare occasions, previous skills can be a downside and increase the initial challenge. FromSoftware's *Sekiro: Shadows Die Twice* (2019) has a lot of similarities with the company's earlier games, also called *Souls* games. *Sekiro* demands that the player plays

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[11] https://www.thoughtco.com/books-for-reluctant-readers-627603

differently than the *Souls* games however, which has given veterans issues. K. MacDonald wrote this about the subject on Kotaku:

> "*Sekiro* is fundamentally different to the *Souls* games in ways I wasn't anticipating. The first couple of days I spent with it nearly prompted an existential crisis … I have been playing them for a third of my life, and *Sekiro* was kicking my arse. I've had to unlearn so many ingrained instincts that I think it would have been easier to come to *Sekiro* without ever having played another FromSoftware game."

The similarities to the *Souls* games as well as the fact that it is from the same developer, who has made very similar games for a long time, makes the player's expect that they should be played in the same way. It was not the case for *Sekiro*, which caused veterans to have a more difficult time than expected.

With all that in mind, it is safe to say that it's unfeasible to assume a certain skill level of a game's playerbase. This is important because challenge can be used to evoke emotions, and if the challenge is well tuned, the player can enter a flow state. This flow state can be enjoyment enough for people to be motivated to do an activity, even with few or no rewards (Csikszentmihalyi, M., 1975). Swink (2008) describes it:

> "Flow theory says that when a challenge you undertake is very close in difficulty to your current level of ability, you will enter the flow state, which is characterized by a loss of self-consciousness, a distorted perception of time and a host of pleasurable sensations… If your skill is much greater than the challenge offered by a given activity, you'll be bored. If your skill is far below the level of the challenge provided, you'll be frustrated."

This is the basic idea of flow theory, but it is not 100% true in all circumstances. It is a good structure to follow, as it does evoke positive emotions and helps with immersion. Many games aim to put the player into this flow state. Games can do this, because unlike books, the challenge is much more individual for games. *Sekiro* is a good example of a game that builds the player's skills over the course of the game, and has that be a big part of the enjoyment of the game. If someone started playing *Sekiro* with the skills already mastered, the experience would be lessened greatly.

Sekiro is also a game that does not follow flow theory exactly as imagined. The difficulty is higher than the player's abilities on most boss fights, and that can cause frustration. The frustration is lessened due to the nature of the bossfights' required abilities. Recognizing patterns are a big part of the bossfights in *Sekiro*, and figuring out how to counter each attack from the boss feels like progress towards killing it. To further lessen the risk of frustrating the player, the game has several routes to take, so the player can come back later to a difficult boss when she has gotten stronger and more skilled. Having the difficulty be higher than what causes most players to enter the flow state, is what has given *Sekiro* and the *Souls* games their reputation for being very difficult. Since the difficulty is like described above, the player usually overcomes the difficulties over time anyway, which can

evoke a great deal of pride for overcoming a perceived very difficult challenge.

On the other side of the spectrum, we have a game like *Diablo III* (2012). *Diablo* and most other ARPGs are designed around the difficulty being very low for a big part of it. On top of the difficulty being low, these easy sections of the game usually have a high number of enemies. Easily killing hordes of enemies can satisfy the player's power fantasy, feeling like she is super powerful. This can become boring due to the lack of difficulty, and that's why ARPGs often have small bursts of difficulty. In *Diablo III,* this is done through elite and champion monster packs, and then the bosses serve as the big climatic burst of difficulty at the end of an area. These bursts of difficulty keep the game from becoming boring in between sections of living the power fantasy.

While there's benefits of not sticking blindly to flow theory, it is important to keep it in mind, because it has to be a nice balance of difficulty fitting to the player's abilities, to gain the pleasurable emotions available from challenge. Even *Sekiro* has sequences of lower difficulty, so the experience won't get too frustrating. The non-boss enemies are usually relatively easy, and more about conserving resources than actually life or death. Since the resources are needed for the difficult boss fights, the easier non-boss enemies still feel relevant, because you want to save those resources, but they still manage to give the player a more relaxed challenge, that is designed more around putting the player into the flow state.

A different kind of challenge to consider is the punishment for failure. There's a lot of factors playing in here, like how many missteps are allowed before a failure state. What exactly happens when you reach a failure state, and how far in between each "checkpoint". The kind of punishment is also important, as some are more engaging than others. The *Souls* games are considered punishing, because just a couple of missteps can cause the player to reach the failure state of dying. The checkpoints are not very generous, so the player has to replay a big part of the level. When you die in the *Souls* games, the player drops her souls, which is a currency used for character progression. As Brown (2018) said earlier, losing your souls hurts. The souls are not lost forever at first however, they can be picked up if the player reaches the point at which she died. This system creates a fear of dying, because of all the lost progress and the chance of losing your currency. After a death, it becomes more tense, because if you die before you can pick up your dropped souls, they will be lost forever. This system works well for the most part to create an engaging punishment for failure, but the *Souls* games have another way of punishing players. Forced waiting. Dying in the *Souls* games takes a long time. There's a little wait of 8 seconds when you die in *Dark Souls III* (2016), where the game lets you look at your character fall to the ground, followed by a "You died" message. This is then followed by a loading time, which can be really long depending on what platform and hardware you play it on. A Reddit user made a thread asking what platform he should get *Dark Souls III* on[12]:

> "Hi all, I'm trying to decide which platform to play DS3 on, PS4 or PC. For anyone that played Dark Souls 3 before (beta, press etc) I was wondering what the reloading time is like after dying on PS4. I couldn't finish Bloodborne because

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[12] https://www.reddit.com/r/darksouls3/comments/4e5zfn/ps4_loading_times_after_dying/

of the painful loading times after dying."

Bloodborne (2015) is one of the *Souls* games that is exclusive to the PlayStation 4. The loading times were so long, that dying felt too punishing for some. Having to wait with nothing to look at is not a very engaging punishment, and can lead players to quit the game if it is too frequent. *Crash Bandicoot* (1996) had a small animation when the player died, that depended on what killed Crash. When Crash got exploded by a TNT box, it took roughly 4 seconds before the level reloaded, and during those 4 seconds you see the explosion and Crash disappearing, before his shoes and eyes fall down from the sky. The cartoony graphics makes this less grotesque than it sounds, and the effect is that it can be fun to die, because these animations are great and short. The subsequent loading screen was also less intrusive.

Crash Bandicoot uses checkpoints, but they are arguably sparse. By default, Crash only needs to be hit once to die. There are power ups that will allow him to take an extra hit or two, but missing a jump will still result in death and being reset back to the last checkpoint. Every mistake counts and could potentially set you back by far, which can create tension. To further increase this tension, the checkpoints are physically visible in the levels. The player can often see the next checkpoint before they reach it, meaning there's usually a challenge or two to overcome before the checkpoint is reached from when it is spotted. This can put pressure on the player, as overcoming this last hurdle can save her from having to go through the earlier challenges again. Reaching the checkpoint will then release tension and can evoke relief. The pressure, tension and relief are all multiplied by the extra life system. The player can gain extra lives throughout the levels, and if she gets low on extra lives, she can go back to earlier levels to gather more before taking on a more challenging level. Each time Crash dies and respawns at a checkpoint, one extra life is consumed. When the extra life counter reaches 0, the next time Crash dies, it is game over. This ignores any check points and sends the player back to the very start of the level with 4 extra lives. This can create a very tense experience when the player has progressed far in a difficult level with few lives left.

While *Crash Bandicoot* creates tense levels by only allowing a certain amount of deaths before it forces the player to restart the level from scratch, some games use permadeath to, among other things, create very tense situations. Permadeath, or "never-to-return death", (Bartle 2004) is when a character dies permanently when they die. Permadeath does not mean that the game restarts from zero, many games have some sort of progression on the side, but it does mean that the character and any items or upgrades are lost. One game utilizing permadeath is Supergiant Games' *Hades* (2018, early access). *Hades* is a roguelike that gives the player some choice over which random powers she wants. These powers synergize and can create different kinds of gameplay, with some combos being stronger than others. The random nature of the power acquisition makes it a different experience to some extent every restart, and when the player gets strong powers that synergize well together, it makes the life worth more than the others. Due to the sheer amount of powers, the player may not see this combination again, so when she dies, so does the chance to play with those powers. This can create pressure on the player to do well, now that she has been lucky with her powers. The closer she gets to dying, the more tense it will get, due to

the fear of losing the opportunity to get far.

Another popular use of permadeath is in a more management way. Games like *Darkest Dungeon* (2016) lets the player manage a group of heroes, who are sent into dungeons to collect loot and get stronger. Four heroes are used at a time, with more waiting back in the base, so losing a hero will not be a full reset of progress. Moving the permadeath to other characters than what the player has transferred her identity to creates a different situation. Instead of caring about her own life, she now has someone else's life in her hands. With a lot of different classes, each hero usually stands out and gets an identity from the skills they start out with. The game uses a lot of random elements that have a high chance of creating emergent storytelling, creating memorable moments for each unique hero. This helps give the heroes character and can make the player care about them. Each hero starts with a unique name, which the player can change at any point, to make the hero have even more emotional value. Scholtz (2015) wrote a review where he writes about the permadeath:

> "And because it's perma-death, it really stings when you lose one of your best "star players". You'll never be quite out of the game - you can always invest in your "farm league" and recruit someone up to the big time - but it's a definite set back, not just in game terms but even emotionally: you **do** get attached to some of these characters!"

The pressure and fear of losing both progress and a liked character can create very tense dungeon runs, as the random elements and general ruthlessness of the game never lets the player feel safe. It can be so frightening that some players don't dare use their liked heroes, like this user on the steam forums[13]:

> "this game stresses me out
> I've become too emotionally invested in my warriors and am afraid to use them because risk of dying"

There are ways to mitigate the chance of your favourite heroes dying, which usually requires putting other heroes at risk. One such strategy is sending new heroes on a suicide run. The idea is to send heroes into a dungeon with little to no supplies. They are not expected to survive, but they can still bring back loot and give the important characters time to rest. This is a very valid strategy to use, and because of the difficulty of the game, it is very tempting to do so. In a forum thread[14] discussing the strategy, one user commented:

> "That really sounds terrible…..I mean the thing about sending suicide squad. It's a bit heartless."

The difficulty of a game can tempt players to do things they normally would not want to. This can be a powerful way of evoking emotions such as disgust, as it is the player's own decision to do it. *BioShock* (2007) also uses challenge to tempt users to take immoral decisions. The player meets Little Sisters on her journey, which are small girls who harvest

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[13] https://steamcommunity.com/app/262060/discussions/0/1679189548050994044/
[14] http://www.archives.darkestdungeon.com/topic/suicide-squad-saves-money/

ADAM, which is a precious resource that the player can use to unlock new abilities. The girls are protected, but once the protection has been taken care of, the Little Sister is harmless and at the player's mercy. The player is then offered the choice of saving them or harvesting them, killing them in the process. Harvesting gives twice as much ADAM as saving them does upfront, so the immoral option can be tempting. It kind of falls apart because saving them gives the player gifts for every third Little Sister they save, with more goodies than what they've given up by not harvesting them. The idea is interesting however, and if it was done confidently it could give the player a really interesting conundrum. Using Challenge in this way together with Interactive Discomfort can create unique experiences that cannot be had in the same way with other mediums.

Challenge is often used to put the player in the flow state, which can be a very pleasurable experience, but with some creativity and thoughtful design, challenge can help evoke emotions and make the player consider options she would normally never pick.

How are they used?

I have handpicked two games that are known for their emotional impact. They are both games that take advantage of the medium's strengths. My analysis will be focused on how they use the tools to evoke emotions in the player.

Brothers: A Tale of Two Sons

Brothers: A Tale of Two Sons (2013) is an adventure game where the player takes control of two brothers, on their quest to save their father from an illness. The opening sequence shows the younger of the two brothers sitting by a tombstone. It then shows a flashback of him sitting in a boat in stormy weather, while an adult woman is in the water, struggling to swim. He tries to pull her up, but he is not strong enough. The woman sinks into the deep as the flashback ends. The older brother is carrying an old man, he is clearly unwell. They move him on a cart to someone who can help, who tells them that there is nothing he can do, but there is a way to save him. He points at a map and briefly explains before giving the map to the older brother. The two brothers then set out on their journey.

The game has very little dialogue, and it is done in a made up language without subtitles, but the characters use a lot of body language to convey what they're saying. The language is not random, so the player can pick up on the names of some of the characters. During the flashback scene the brother calls out "mama" as the woman is drowning, and when they talk about the unwell man, they call him "papa", leading the player to believe that those are their parents.

The game is unique in the way it lets the player control the brothers. Both of them are controlled at the same time using a controller with two analogue sticks. Each brother has a

side of the controller assigned to them, so they both have an analogue stick and a trigger button each. It is possible to control with a mouse and keyboard, but the game director Josef Fares urges the players to use a controller.[15] The use of a controller is suggested because the game was designed to go all in on the emotional power of Simulated Actions allowed by the controller, and because it allows better control over the brothers, making transfer of identity stronger. The game uses Challenge to put the player in the flow state when playing. It's simply used to make playing the game and completing puzzles enjoyable and to increase immersion.

Transfer of Identity is achieved by having real time controls, with sensitive controls (on a controller). Intent and outcome holds back Transfer of Identity at the beginning for most players, because it is seldom that games let the player control two entities at once with the analogue sticks. This can be a difficult brain exercise that takes some practice to do well, as can be seen in Sean Plott's (2014) playthrough of the game. Five minutes into the game he struggles with the controls as he mixes up which brother is which, while he laughingly says "Ahh, my brain, my brain!". This gets easier and easier throughout the game, as the challenge is not about moving precisely. Instead it is about solving small puzzles, so once the player has gotten more used to the controls, the issues with intent and outcome become minimal.

Since the game has two protagonists that are controlled simultaneously, the Transfer of Identity happens to both characters. Even though the brothers are two separate individuals with their own abilities and personalities, they become a single unit, much like how a car's speeder has one purpose and the wheel another, they become a part of a whole. This notion of both brothers being part of a single thing that the player extends her identity to, is very important for the emotional impact of the ending.

The game uses Simulated Actions a lot. There is only one button (per brother) that the player can use, other than the movement sticks. This button is used to "interact". It changes depending on the context, but it has one specific use that is consistent and prominent throughout the entire game, grabbing something and holding. The brothers only hold on as long as the player does. If she lets go of the button, the brother will let go as well, even if he is holding on to a ledge above a bottomless pit.

There's a bit of Simulated Actions throughout the game, like turning the analogue sticks to turn a crank, but the main one is holding on to something, like a ledge or a bar. The button that needs to be held down is the trigger button at the back of the controller. This is a button that cannot be held down easily, which makes some of the climbing sequences physically straining for the player. Again, the effect is not as prominent on a keyboard, because the layout of the keys makes the interact button a lot more comfortable to hold down, which may be part of why Fares wants the players to experience the game with a controller. John Bain (2013) talked about what he believes makes a game a game, where he used *Brothers: A Tale of Two Sons* as an example:

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[15]

https://www.digitalspy.com/videogames/a464326/brothers-should-be-played-with-controller-on-pc-says-creator-josef-fares/

> "You have the idea of marrying game mechanics with character development and the way that it [*Brothers*] does it, allows you to experience adversity. Remember what I was talking about earlier? Having to overcome that challenge, that is a game that does that, and in fact it does that in a very physical and tactile way, which is incredibly unusual. The idea of having to hold down the buttons as you climb a wall or you do various different physically challenging activities with your two characters, it makes your hands hurt, and that's deliberate. That's the really clever thing about it, it's not a poor design choice. It's a deliberate one. That feeling of struggle is something that you yourself experience in the controls of that game."

Bain mentions how he felt part of the adversity that the brothers faced, which is the effect of the well designed Simulated Action. He also talks about marrying game mechanics with character development, and he has a very specific moment in mind - the end of the game.

To fully understand the why the ending works and how, we gotta look at the brothers from the start of the game. The younger brother was in a boat with his mom when she drowned, which has given him a fear of water. The game does have some sequences where they have to swim to cross a river or similar. In the beginning the brothers get to a river that they have to swim across, but the younger brother looks frightened and gestures he can't swim. Big brother explains that he can hold unto him as he swims across. The controls for swimming across the river then becomes moving with the big brother, while holding down the trigger button for the younger brother to hold on to the big brother.

The two brothers look out for each other and often save the other when they get in trouble. Near the end of the game they fight a giant spider. The big brother uses his strength to pull out the legs of the spider one by one, but when the last one is pulled out, he gets impaled by one of the spider's legs. His skin colour changes slightly, indicating that he is poisoned. The younger brother helps him move, but has to put him down on the floor. The tree of life is right in front of them. It is what they have been searching for to cure their father's illness, so the younger brother runs off to get its healing waters to try to save his brother too. When he returns with the water, the brother is already dead. He pours some of the water into his mouth, but to no avail. The big brother is dead. It's followed by a very moving scene of the brother wishing his big brother was alive. The loss of the brother can be very powerful, and on top of losing a liked character, the player may feel that she has lost part of herself, due to the transfer of identity encompassing both brothers.

Then you see the younger brother digging a grave. The player gets control of the younger brother as he is about to retrieve and drag the body of his brother into the grave. The brother is moving very slowly now and his body language says a lot about how he feels. He is looking down, crying. The player then has to push 4 piles of dirt on top of the body after it's put into the grave. When Plott (2014) played through this part, he explained:

> "Here's what gets me, is how hard it is to move, in the game. That, is a very
> strong feeling it gives"

The slow movement of the younger brother here symbolizes how hard it is for him to move on. The player gets to feel it through the controls, as it simulates this struggle of the brother in the player.

After the burial, the brother gets a ride from a hippogryph that they befriended earlier on in the game. The hippogryph sets off the brother at his home town. The weather is raining, much like how it was from the flashback from the very beginning of the game that showed the mother drowning. It's a small trip to get to the father, and he is moving at normal speed again, but he is stopped by a body of water. When the player approaches it, it triggers a small cutscene of the brother backing away scared, and then the ghost of his mother appears, telling him to cross the body of water. He tries to hug her, but she disappears and he is alone again. Trying to swim normally does not work, the brother will simply stop at the edge of the water, but if the player uses the big brother's analogue stick to move with, the brother will swim. While swimming, you hear the big brother saying something, as the younger brother is struggling, but succeeding, to swim. Plott's (2014) reaction to this moment was:

> "Oh my God. The controls are what's emotional right now. I'm using my dead
> brothers controls … That's amazingly emotionally powerful."

This is what Bain (2013) meant when he talked about marrying game mechanics with character development. The big brother is no longer around to take care of the younger brother, so he has to do it himself. He does it by imitating his brother. Just like how he has to think of how his brother did it, so too does the player, as she has to use the controls that she once used for him. The brother has to pull a lever by himself, which he cannot do using his own controls, but the big brother could pull it, and now the younger brother can too, using his controls. He can even make a jump that required both brothers to work together. He may have lost his brother, but it has taught him to take care of himself, as his brother lives on within him. This is all felt through the controls, and as Plott (2014) says during the credits scene:

> "The moment when I held the brother's controls and he could do more, that is
> one of the strongest moments, that could only ever exist in a game. You must
> play that game, just for that moment."

What Remains of Edith Finch

What Remains of Edith Finch (2017) is a single player interactive experience that follows Edith as she explores her family home and tries to figure out why she is the last one alive. As she explores the house, she finds her family member's rooms and their stories. These stories tell how they died. When reading these stories, the player is transported into the story

and takes control of the family member who is about to die. The stories are not necessarily explicitly saying that this is how the character died, instead it is almost a fairy tale like story that is told while the player acts out their last moments.

This means that Transfer of Identity happens to many different people throughout the game. In one of the stories, the player even gets to take control of several animals. It is Molly's story, who tells that she was so hungry she could eat anything. At one point she hears a bird outside her window. Molly narrates it as:

"Then I heard chirping outside my window. It was a barn swallow going back to her nest. I reached out for her, and suddenly, I was a cat!"

As she is saying the last part, the player hears a cat meow and sees cat paws where her hands would be, as she jumps out the window to chase the bird. Now she is a cat stalking a bird on tree branches. The scene only lasts about a minute or two, and then she catches the bird and turns into an owl. Now she's flying over a field looking for food to swoop down on. After that sequence, she turns into a shark, and lastly a sea monster that eats humans on a ship. The sea monster sequence ends with her following a scent of something she had to eat. She follows the scent through the sewers and back into her own room, where she crawls under the bed, before she gets back to her own body again. This journey with all the different animals is a unique experience that is reminiscent of a child's fantasies. Giving the player good control of the animals for Transfer of Identity makes it feel like you're having the fantasy yourself.

The next family member the player hears the story of is Calvin. It's a very short and simple scene where Calvin is sitting on a swing. The player is tasked with moving Calvin's legs to get Calvin to swing faster and faster. The controls are made for the feeling of Simulated Actions. The player has to press forward to bring the legs forward, and backwards to pull them back. The swing then functions like a swing would in real life, except it keeps going faster and faster until it goes all the way around and Calvin flies off the swing, off the cliffs and over the ocean.

I chose Calvin's story when I was asked to show off a part of a game to my game design class. It's a harrowing scene, as you know that this is when he is going to die. You don't know exactly how or when, but as the swing gains speed, you start seeing where it will end. Since it is the player who has to make the swing go faster, I felt that I was the one killing Calvin. Since this game makes use of Transfer of identity, it felt like I was working towards my own death. The visuals of being on the swing that goes higher and higher resonated well with everyone watching, as most had tried pushing the limits of how high you can swing. This time we got to keep going, and it ultimately ended in death. The scene is powerful even as a watcher, but it evolves into something else when you play it, because of Transfer of Identity and Simulated Actions.

All of the stories have one thing in common. It is the death of a family member. Since it is an interactive experience, the character will not die if the player does nothing. So in a sense the game forces the player to kill the character to progress with the story. This is a kind of

Interactive Discomfort which is all over this game. Since it is reliving something that already happened, it does not feel like the game forces you to kill the character, because they're already dead. This helps mitigate the potential alienation that Interactive Discomfort can cause, while still retaining the feeling of walking into your own death.

One of the strongest uses of Interactive Discomfort is Gregory's story. Gregory died as a baby, which is already an uncomfortable thought. The story takes place in a bathtub, where Gregory is playing with a frog. The player takes control of the frog, as it is jumping around in the bathtub, jumping higher and higher. The mother is in the room, and she is stressed out. She receives a phone call that she does not want Gregory to hear, so she empties the bathtub of water and goes outside the room to take the call. While the mother is outside, the player has to use the frog to jump on top of the handle controlling the water. When the frog does that, it turns on the water. Gregory is still having fun with the frog as the water levels rise and rise, until they rise above the camera level. Then the player controls the frog as it swims underwater for a moment, and then the story ends with the narrator telling the mother that he believes it wasn't her fault.

Gregory's story hits really hard because of how real it seems. The player gets into the playful nature of the baby, who does not know what he is doing. When the water rises, Gregory keeps playing around. He does not know what is going on or the danger he is in. The Simulated Actions that has the player keep swimming around playfully simulates this feeling in the player. The player knows the danger, of course, but the gameplay tells the story of Gregory not knowing, and suddenly it is all over.

Creative director Ian Dallas (2017) said this in an interview with Gamespot:

> "When we eventually grew the initial prototypes into drafts of what you see in the game now, we found that they were most impactful during the moment where you knew the character you were playing was about to die. You found yourself joyfully marching towards your end only because you understood there's nothing else that you could do."

They discovered that this Interactive Discomfort was the most impactful moments of their prototypes, and it is the theme that connects it all together from start to the very end. The game uses Simulated Actions everywhere possible, but it is not the main tool in focus. There is one story that makes great use of Simulated Actions. Lewis' story at the cannery is all about getting into the mind of a cannery worker, whose job is to do the same small hand motions over and over every day. The story they want to tell, is that Lewis does his job without paying much attention to it, as it quickly becomes mostly muscle memory. While he does his job, his mind wanders and he starts daydreaming more and more.

Instead of just telling the story, the use of Simulated Actions makes the player feel it. The scene starts out with the player having to grab fish from the left, drag them all the way to the right where a blade cuts the head off the fish. Then the fish has to be thrown to the side and the cycle repeats. The player uses the mouse to move and hold on to the fish, which leads to a hand motion that is very similar to what Lewis is doing on the screen. It's a simple motion,

Astrid Knappmann   astk@itu.dk

and after a short while the player can do it without paying much attention to it. The fish do appear irregularly, so the player has to pay attention to that, as the fish will stack up and get in the way for the day dreaming.

The daydreaming starts simple. A small area of the screen is taken up by the daydream, where the player has to guide a character through a maze with the WASD keys. Progress through the daydream is what triggers the narrator, and the daydream becomes more and more detailed. The fish cutting is the same throughout the entire sequence, so the player's interest is pulled towards the daydream. The fish cutting becomes something that just has to be done. This is the exact mental state Lewis went through. The narration tells about how he lost touch with reality and how he wanted to stay in these daydreams. The daydreams end up taking up the entire screen, with only the fish popping in from time to time. At this point it is entirely muscle memory for the player to grab the fish, cut it and throw it away, exactly like it was for Lewis. The end of the scene is when Lewis is convinced that he would rather leave reality behind and fully enter the lands of his daydreams, so he puts his own head on the chopping block. This is a very powerful scene that feels very real because of the tools used. George Weidman (2017) made a Youtube video praising this particular scene, which he ends by saying:

> "I think the lessons applied to this cannery chapter, what goes on for just these 15 minutes here, speak to just a little bit of truth that applies to almost all games, and that is that when your controls somehow feel like the actions they represent, and when the feedback on the screen resulting from that makes you feel something about what your actions represent, the end result is just pure magic."

What he is talking about is Simulated Actions. *What Remains of Edith Finch* uses this tool perfectly in this scene to create a truly moving experience, that could only work in this way as an interactive piece.

Conclusion

Other literature on how games evoke emotion often focus on non-unique ways of evoking emotion, like the loss of a liked character. The unique ways a game can affect the player is usually secondary. I classified some often used techniques to evoke emotion into 5 tools that are unique to games.

Transfer of Identity is used in most games, often as a side effect of good controls, but it still enhances the emotional power that a game has. It can be taken advantage of to create really emotional moments, like in *Brothers: A Tale of Two Sons* and *What Remains of Edith Finch*.

Dramatic Agency is very popular in games, especially in those focused on narrative. It can be very effective at creating powerful moments, but often relies a lot on illusion of agency, as

Astrid Knappmann   astk@itu.dk

it is unfeasible to give the player full agency and create complex and unique paths to each choice. It is possible to successfully pull off this illusion like *Life is Strange* did, leading to a great sense of Dramatic Agency and potentially very powerful emotions.

Simulated Actions are often used, but they are very hit and miss. It's a big complex tool that could be split into subcategories and still deserve a full thesis each. The potential for emotional power is immense if it is designed around like *Brothers: A Tale of Two Sons*, but even as small complimentary things it can give a strong sense of realism, as seen in the petting part of *Pokémon: Let's Go, Pikachu!*.

Interactive Discomfort can be very powerful, and can be used effectively to make players reflect on a topic from their own life, that they could normally pretend didn't exist, like how *Grand Theft Auto V* made some players reflect on torture. It's a dangerous tool to use, as it can have dire consequences on immersion and Transfer of Identity, and even make players stop playing the game entirely. With thoughtful design those risks can be mitigated greatly however, while still giving a powerful experience, like the scene in *Heavy Rain* where Ethan has to pick between cutting off a finger or risk not saving his son.

Challenge is almost always present in games, but it is rarely used in a profound way to evoke emotions. It is often used to set the pacing and give structure to the game. Challenge is mostly used for getting the player in the flow state, or evoking the emotions related to high or low challenge. It has the power to make players transgress their own morals, as seen with suicide squads in *Darkest Dungeon*, or otherwise make a player choose against their better judgement, which can evoke strong emotions in a different way than if the player was forced to do it.

All these tools can be used by themselves or together to create very powerful emotions. We will only truly see the potential of what games can do once games take the unique features they have and use them as their primary tool to evoke emotion, rather than be a supporting role to the already established conventions from novels and movies. With that said, they're not all equally awe-inspiring. Transfer of Identity is usually not noticed by itself, so it needs some of the other tools to work with to get the best use out of it. Challenge can create some interesting moments, but if the intent is to evoke strong emotions, then Challenge does not have as much potential to work well as the primary method. Dramatic Agency is often used in games and the concept is well understood. It's a very powerful tool, but it is not groundbreaking. Interactive Discomfort is a dangerous tool to use if it is not used with care. It can create incredible moments and has lots of potential for creative uses. Simulated Actions has the biggest potential for powerful moments with creative use. It's a very unique way of evoking emotions that is not explored as much as it deserves.

I would suggest focusing on Interactive Discomfort and Simulated Actions to make new interesting emotional experiences. The other tools should not be ignored however, as they synergize well with each other and the more different tools are used, the more potential there is to make a unique experience for the games medium. I have written them up with their pros and cons in this table for an easy overview:

Tool	Pros	Cons
Transfer of Identity	+ Can make the experience feel more personal. + Enhances the effect of the other tools.	- Effect can be lost and can be difficult to regain.
Dramatic Agency	+ Can make the player feel responsible for how the story pans out. + Can get the player really invested in the story, as every little thing could be important. + Inherently gives replayability.	- Requires lot of work and/or relies on illusion of agency. - If the illusion is broken, the sense of Dramatic Agency is severely hampered.
Simulated Actions	+ Can make the experience feel closer to reality. + Can simulate an ingame character's mental state in the player. + Huge potential for evoking emotions.	- Can be a nuisance if the effect is not gained or appreciated. - Can lead to physical or mental exhaustion to the point of requiring breaks from playing.
Interactive Discomfort	+ Can make players reflect on and discuss taboo subjects + Has potential to create very powerful and memorable experiences.	- Can cause the player to become less invested or quit the game entirely. - Is risky, as players can react differently depending on a lot of factors.
Challenge	+ Can make players choose to do something, rather than be forced.	- Challenge outside the flow are can lead to frustration or boredom. - Some uses can make the game feel like a grind.

Area for further investigation

The tools I've listed here are all made from looking at existing games and how they evoke emotions, so the ideas are not entirely new. They give us a better understanding of how

evoking emotions can be achieved, so I would focus further research on the more difficult and complex tools, like Interactive Discomfort and Simulated Actions. Simulated Actions might even deserve to be split into two or more separate tools, at least one for the physical use of objects, and one for simulating mental states. The latter is what intrigued me the most when I did my research, and I believe that is where games has the biggest potential for evoking emotion in a completely unique way. It's often used almost as a gimmick, but as *Brothers: A Tale of Two Sons* proved, it can be used as a primary form of evoking emotion and achieve great results. I would love to see those techniques explored more and have them become the norm rather than the exception, because in my opinion this is the games medium's biggest strength.

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