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Interactive Narrative in Video Games

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Summary

A main characteristic of a part of the videogame industry is the search for realism inside the games. Through the years, graphics, animations and scenery have become more and more like the real world. And so has adapted the narrative to it, getting everchanging, adapting to the players interaction with its surroundings. But there is still a long way to go.

In this thesis, we have analysed four videogames with a high narrative interactivity variance to see how games in different genres adapt. Then, with its main strong points, developing a way to generalize these methods of adaptation and putting them together to make the feel much more realistic and natural.

By using a content analysis methodology, we try to break down those games in pieces so it's easier to extract the data from them. As a result of the analysis and posterior work with the data, developed one method that joins them in one single interactive narrative methodology to implement in games. This has obviously to be adjusted to the videogame it's being included in but it's a good start to determine a direction for a first step towards that realism talked about earlier.

Keywords

Narrative, interactivity, storytelling, video games, analysis.

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Glossary

Storytelling: the activity of telling or writing stories.

Narrative: a spoken or written account of connected events; a story.

Arcade game: game machine typically found in public places like malls, restaurants and amusement arcades, and is usually coin operated.

RPG (Role-Playing Game): game in which players assume the roles of characters in a fictional setting.

MMO (Massive Multiplayer Online): an online video game which can be played by a very large number of people simultaneously.

MMORPG (Massive Multiplayer Online Role-Playing Game): an online role-playing video game in which a very large number of people participate simultaneously.

NPC (Non-Player Character): any character in a game that is not controlled by a player.

FMV (Full-Motion Video): computer-animated movies that are created and rendered ahead of time.

Quick time event: game mechanic consisting in pressing, in a small period of time, the button shown in screen. It usually makes an action happen by just tapping the button.

1. Introduction

Video games are a new and powerful way of storytelling, evolving from films, shows, comic books or novels. It provides a new method to go around the plots, where the player interacts with its environment, the world the character is in and those who inhabit it. But it can be taken a step further with the tools provided by video games themselves.

Video games open the door to evolving characters and scenarios. This has started to be worked on with decision making based storylines and some world adaptations depending on player behaviour. But it's still far away from its maximum potential so this paper will try to dig in and develop some possible solutions.

1.1. Motivation

Since I was a child, I have been fascinated by stories and the way they are told. I have consumed a lot of books, movies and TV shows. In a later stage of my life, I began consuming video games as an entertainment form but also as a way of consuming stories the same way I do when reading a novel. However, I quickly realised the stagnation there was: most games kept developing the plot in a linear way, just showing it to the player like it is done in movies. This bugged me most of the time I read a game was great for its narrative, knowing the fact that there was so much that could be done. But when I decided to think about it from a developer perspective, it was hard to find specificities to be made. That's why I decided to work on this.

1.2 Problem formulation

The problem to solve is the stalemate state of video game narrative. Evolving its storytelling methods to fully use the power and freedom games must adapt to player choices. There have been some approaches to this but using only some available tools. The solution to be found is a combination of already existing answers to the problem added to some new approaches.

1.3 General thesis' objectives

The main objective of this work is to find the best combination of resources available in videogame development and design to create an interactive narrative inside a game. This narrative will be the best use of tools there are to achieve a maximised interactive experience.

1.4 Specific thesis' objectives

To achieve the main objective, we must get to some small objectives and combine them into the main objective.

1. The first small objective is an analysis and understanding of interactive narrative used in traditional media, its beginnings and evolutions.
2. Next, going deeper into video games themselves, it's different genres and the way interactivity is introduced in different ways in each of them. Checking its strong points and flaws.
3. Once it is chosen, based on things that are already working in the industry, try to find and develop theoretically new ways of implementing interactive narrative to games.
4. Finally, putting together a final way for a videogame to have the most interactivity and variations in its narrative.

1.5 Project range

The result of this study will be a detailed analysis of the interactive narrative of several video game genres and a theoretical development of a solution extensible to a wide range of games. This can help a lot of people, from students wanting to learn new information on the topic to working developers that want to improve and innovate their game narrative.

2. State of the Art

2.1. Narrative history

As humanity we have been telling stories for a long time, even before recorded history, and that way of telling stories has changed through time drastically. From cave paintings to movies, stories have always fascinated mankind, and despite the changing of the methods used, the urge to tell stories has remained unchanged and still impacts our daily lives.

In past times, storytellers began to arise as huge figures inside their communities (Campbell, 1988). Their ability to tell stories was a highly valuable skill as people needed to remember wars fought and deeds done. And to tell that, instead of just stating the facts chronologically, they began telling them as stories to preserve not only the facts, but the emotions of the actual event.

Mankind history is nothing but a series of stories that can teach us lessons, give insights and entertain us. Stories serve a purpose, even if it's simply delivering a message. They help us learn from mistakes and from the good things from the past.

One of the earliest found ways of storytelling was the Lascaux Caves, near the village of Montignac in France. Discovered in 1940, the caves contain a group of paintings dating back to sometime between 15,000 and 13,000 B.C. This was the way unspoken language was formed. Cave paintings would tell stories about encounters with all kinds of beasts but also would depict everyday activities, rituals, hunting practices, etc. They tell a story.

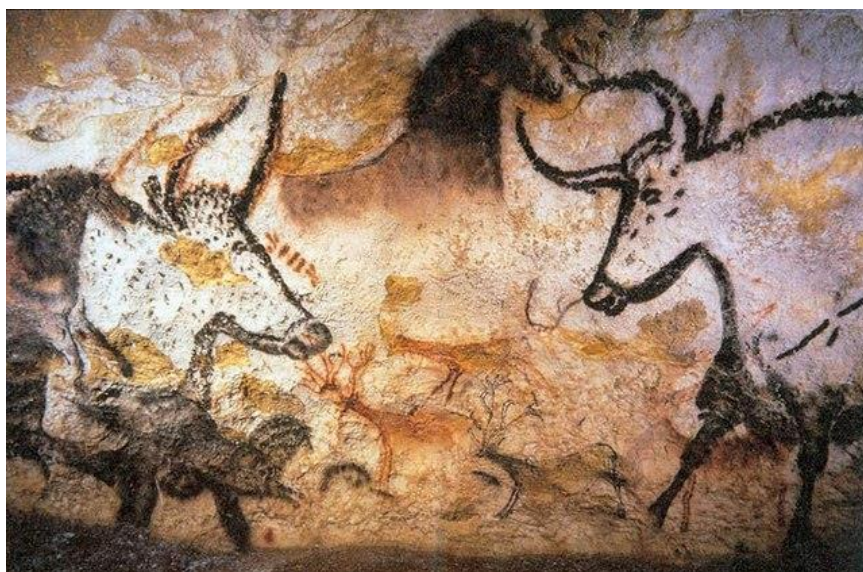


Figure 1 Paintings on the Lascaux Caves

The ancient Greeks who lived on islands and relied on fishing for food discovered a way of using their tools to carve messages into slates. They are the first known to develop writing and apply it for storytelling (Yilmaz & Cigerci, 2018), which they used for leaving messages and poetry.

It's not until the year 700 B.C where we find our first printed story, "The Epic of Gilgamesh", which was created and spread from its original Mesopotamia to Europe and Asia. That story was carved on pillars where everyone could see it and that made it go around very quickly. The story was about a man named Gilgamesh and its friend Enkidu and a journey they set off to find the key to immortality.

Around the 200s B.C. Aesop's fables were finally written down, despite him living 300 years before that happened. His stories were remembered and passed down generations with only oral storytelling until they were revered enough for them to be produced in a physical form.

Over the next centuries, writing and in extension storytelling evolved into cohesive works, starting mainly in religious texts such as The Bible. It was written around 1,000 B.C. with stories, myths and legends about gods, kings and prophets. They were lessons with religious purposes people used to learn speaking before they were written.

Long after that, William Shakespeare, an English writer born in 1564, had a huge impact on literature and was a large steppingstone in building storytelling as his work was so expansive and extremely relatable to everyone. To this day, he is still the most performed playwright and is still an inspiration to many films and other cultural work.

Not long after the era of Shakespeare, fairy tales started in France. Many of those were stories that were passed before from generations to generations, and they were simply put to paper. Tales were mostly written with children in mind, to teach them basic life lessons in the form of storytelling. This is a great example of how legends make storytelling more valuable to an audience.

Despite the printing press being invented in 1440, the first world's modern newspaper (The Spectator) was created in 1709 and was a huge starter to a massive public storytelling.

But as big as the invention of the printed word was, it was no match to the impact of printed photography. Joseph Nicéphore Niépce was the first man to ever take a photograph. Along with his brothers, he used light to reproduce images negatives and in 1813, he developed the art of lithography, where he transposed those negatives onto paper to create actual photographs as we know them.



Figure 2 First photo by Nicéphore Niépce

And having printed images working led to the biggest evolution in storytelling since written language: cinema. In 1891 the Edison Company successfully demonstrated a prototype of the Kinetoscope, which enabled one person at a time to view moving pictures. By 1894, the Kinetoscope was a huge success around the world. Finally, in 1895, the Lumière brothers presented in Paris the first projection of moving pictures with an invention of their own, the Cinématographe.

By 1914, several national film industries were established. At that time, Europe, Russia and Scandinavia were the dominant industries; America was much less important. Films became longer and storytelling, or narrative, became the dominant form. The first 30 years of cinema were characterised by the growth and consolidation of an industrial base, the establishment of the narrative form, and refinement of technology.

Colour was not used more widely until the introduction of its three-colour process in 1932. It was used for films such as *Gone with the Wind* and *The Wizard of Oz* in 1939.



Figure 3 Poster for *The Wizard of Oz* (1939)

The first attempts to add synchronised sound to projected pictures used phonographic cylinders or discs. This system proved unreliable and was soon replaced by an optical, variable density soundtrack recorded photographically along the edge of the film, developed originally for newsreels such as Movietone. By the early 1930s, nearly all feature-length movies were presented with synchronised sound, and, by the mid-1930s, some were in full colour too.

In 1939, the so-called “Magical Box” was invented, which would later be known as the television. The first broadcast was Roosevelt on NBC. After that broadcast, TVs became a huge hit. Sooner than later, televisions would become a common object in mostly every home in the world.

The first commercial arcade video game was created in 1971 and called Computer Space. Video games would go on to become one of the most popular mediums for telling simple stories of the 20th and 21st centuries. By presenting to the world a new way to be in a story, video games have made it possible for you to put yourself in the shoes of a character and go on adventures and journeys as if it were real.

In the 1980's, music videos had come to prominence and were used to give a deeper meaning to the song by using the video. This was a mixture of audio and visual that told stories in a whole new way.

The Internet has drastically changed how we tell stories. Of course, we still write, draw and communicate verbally, but many of our stories are now told digitally. Platforms such as Facebook, Instagram, Twitter and blogs have become the primary mode for sharing stories, expressing opinions and connecting with others.

Nowadays having social media means you have access to see everyone's life without being present. With social media, looking someone up on the internet has never been easier. The internet has created a space for blogs, posting pictures, and events that you attend. Social media has become the modern way we tell the stories of our lives and in the 21st-century, social media is a time capsule for all humankind.

The evolution of storytelling reflects in how people learn and communicate. Through oral storytelling or written storytelling, the voice of narration will always have a way place and a purpose. Even though the mediums have changed, the core concept of using a sequence of events in an exciting narrative has remained through time.

2.2. Interactive narrative

New technologies and the drastic shift to the consumption economy made passive media into mass-media. Audiences turned into listeners and viewers. Interactive forms of entertainment such as theatre, concerts, public performances or sports were still there but their reach was limited, and most people enjoyed them through television and radio.

Nowadays, as passive audiences are increasingly dispersed, storytellers are looking for more meaningful ways to engage with others and “real-life” experiences are as exciting and innovative as ever.

Besides interactive forms of entertainment that never died, our cultural history has also seen many attempts in transforming non-interactive media into something more. Cinema in particular was a great experimentation field. And as it turns out, some silent movies could be considered as interactive as live narrators would tell part of the story to the audience while the film was playing. This was very popular in Japan where narrators would read intertitles to a predominantly illiterate audience.

In 1979, the *Choose Your Own Adventure* gamebooks came to be, bringing with them a new and innovative approach to storytelling. Giving readers free will to choose how the story goes has inspired a lot of books, games, and even movies since then.

In many cases, when trying to make linear content into interactive content, many creators can only create an illusion of choice.

For example, in the movie *Timecode* (2000), the viewer is shown 4 films simultaneously and they can choose which they want to watch. But, the soundtrack always focuses on the most important scene, so the viewer is guided to the intended plot.

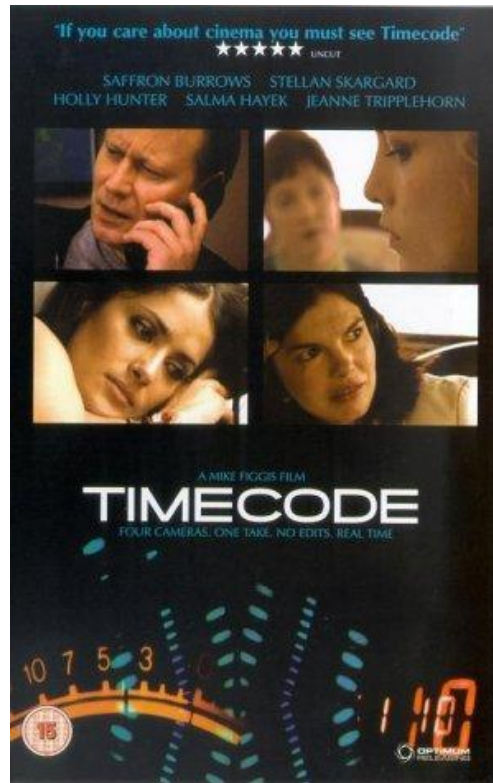


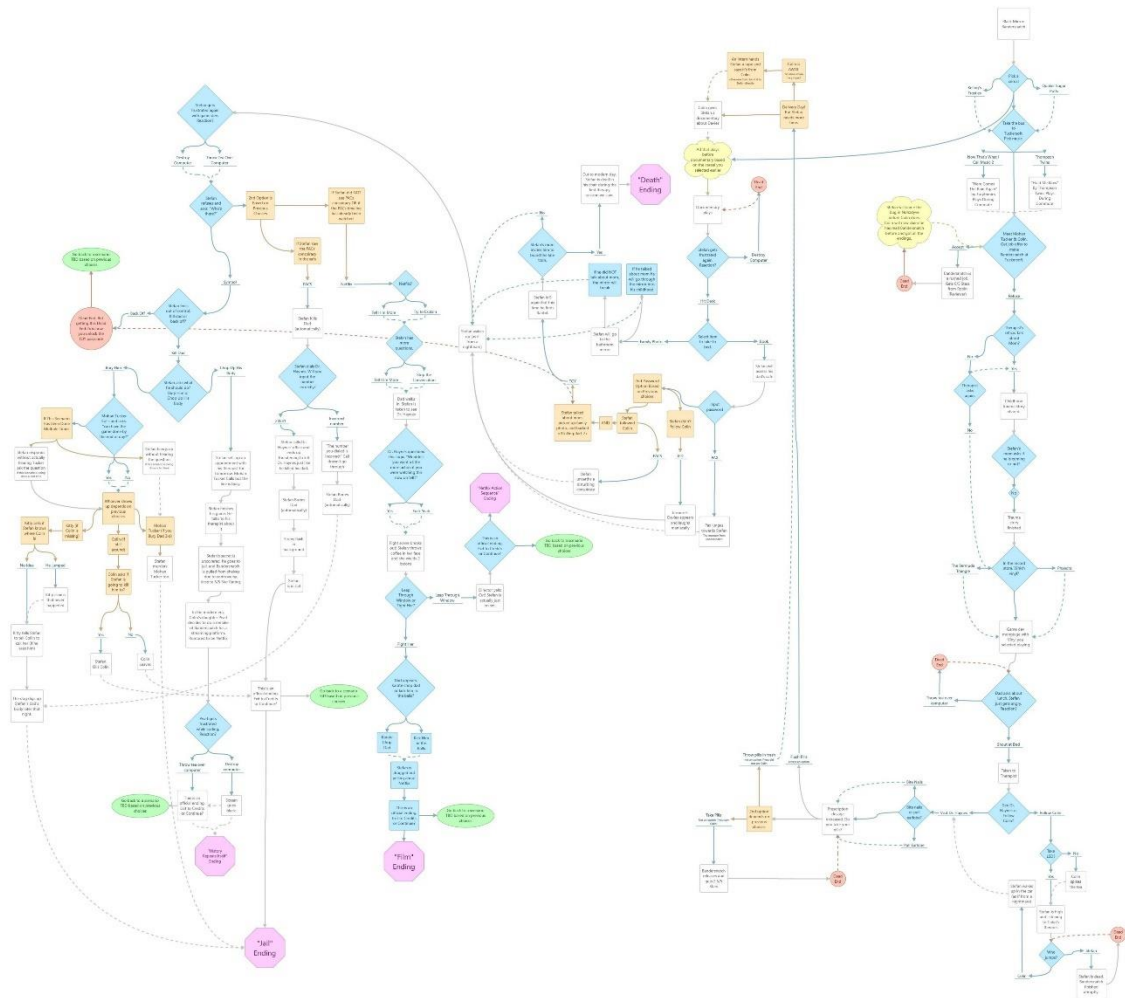
Figure 4 Poster for the film *Timecode* (2000)

Some other films have managed to go beyond that guidance and make cinema truly interactive and non-linear. For example, the film *Kinoautomat* (1967) was paused 9 times during its projection to ask the audience to make some decisions for the characters. There only were two different plots converging from all the decisions, but the interactivity was very well achieved.

Legacy: Choose Your Own Documentary (2013) is an amazing interactive movie combining all the above: a live narrator, audience taking one of the 1500+ paths by making key decisions for the main character, and the narrative structure of the famous Choose Your Own Adventure books.

When it comes to interactive movies, the first one that comes to mind is usually Netflix's *Black Mirror: Bandersnatch* (2018). Being one of the first movies to adopt such a storytelling tactic, it made waves in the industry. The movie revolves around helping the protagonist make choices throughout the film until you get to the ending.

Movie games are a bit hard to pin down in terms of category, but they can be similar to that of *Bandersnatch*. Take for example *Death Come True* (2022). This game is set up as a live-action Japanese movie. Instead of it playing out on its own, your decisions guide the protagonist's actions, but it plays like a science fiction mystery movie.



2.3. Narrative in videogames

That has since evolved with games like *Final Fantasy* (1987), *World of Warcraft* (2004), and even *PUGB* (2017). There is a whole list of more of them you can check out. The point is role-playing games keep evolving and of their own accord happen to be a part of the trend.

However, there are other mobile games that have come into the picture over the past few years and increased in popularity. Games like *Choices* (2016) and *Chapters* (2013) are a combination of both stories and games, with a bigger emphasis on the stories. Many writers have switched to apps like these because of how far they've gone. The books follow specific stories, but each choice made can improve or hinder your chances with particular leads. As most of these apps are for romantic stories, you play the role of the protagonist on the lookout for a partner.

In the earliest days of video and computer gaming, there were no such things as stories. Beginning in 1962 with the creation of *Spacewar!* (1962), the first wave of video and computer games could do little more than move a few dots and lines around a screen. Not only could they not display long lines of text, but they lacked the memory required to store it. The explosion of the arcade market following the release of *Pong* in 1972 did little to improve the situation. Due to serious hardware and memory constraints, any story was limited to a few lines of text printed on the side of the arcade cabinet. Though some arcade games managed to fit in a few words or a short cut-scene or two, it wasn't until the late 1970s (for computer games) and the early 1980s (for arcade games) that things began to change.

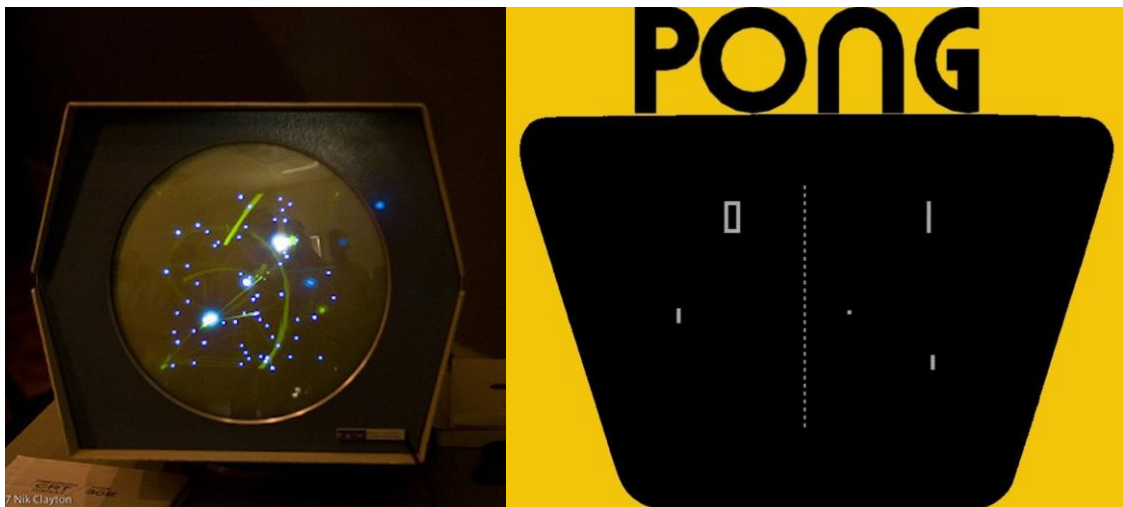


Figure 6 *Spacewar!* (1962) and *Pong* (1972)

In 1983, *Dragon's Lair* took things considerably further. It used

movie quality animation to tell its version of the classic princess-in-distress story with players helping the main character Dirk the Daring on his quest to rescue the princess from an evil dragon. With each obstacle Dirk faced, players could do nothing more than choose from one of several prompts and then watch the outcome, taking the gameplay down to a combination of luck and memorization and severely limiting replay value. Despite that, it is considered to be one of the first video games that focused on narrative and added interactivity to it, although it can be seen as an animated interactive film.



Figure 7 Scene from *Dragon's Lair* (1983)

Then, text-based games like *Colossal Cave* (1976) flooded the market. Text adventure titles were, as their name suggests, entirely devoid of graphics. Areas, items, and characters were described to the player via blocks of text and the player interacted with the game by entering simple words or phrases such as “go east,” “open door,” and “use sword.”

The stories in text adventures varied wildly, covering many different genres and writing styles. Though most cast players as nameless generic heroes who have to explore a strange area, others placed more of a focus on character development and plot-driven stories. From an interactivity standpoint, interactive traditional stories, multiple-ending stories, and branching path stories were all frequently employed, and a few titles even neared the level of freedom and choice available in open-ended stories.

Today, games with deep stories can be found in every genre, but from the late 1980s until the mid-1990s, the stories in most games tended to be simple variations of rescuing the princess or saving the world from the evil villain themes. Though there were exceptions, deep, complex stories were mostly limited to American RPGs and adventure games and Japanese RPGs.

With newer and better hardware, text adventure games were

allowed to transform into graphic adventure games. Though originally nothing but text adventures with simple static artwork, adventure games soon grew to include detailed animated graphics and more user-friendly point-and-click interfaces. This allowed the apparition of games like *The Secret of Monkey Island* (1990), *Sam & Max Hit the Road* (1993), and *Day of the Tentacle* (1993).



Figure 8 *Monkey Island* (1990)

The genre later underwent another significant change in 1993 with the release of Cyan Worlds' classic adventure game *Myst*. In a significant change of style from the games that had come before it, *Myst* used a first-person perspective and made the player, instead of a developed character, the hero. It also replaced the cartoonish 2D graphics with detailed 3D scenes, emphasised ambient sounds rather than a full musical score, and made its puzzles environmental in nature rather than inventory based.

Throughout all this, PC RPGs continued to evolve as well, led by the *Ultima* (1981) and *Might and Magic* (1986) series, though the changes were nowhere near as drastic as those seen in the adventure game genre. The increase in available memory allowed for more text, which led to longer in-game conversations and branching dialog systems in which the player could frequently choose between multiple responses to questions and inquiries posed by NPCs.

Console wise, the NES (Nintendo Entertainment System) and later Super NES and Sega Genesis were vast improvements over earlier systems such as the Atari 2600, allowing for games with better graphics, more varied gameplay, and longer and deeper stories. Though most of the popular genres of the time, like platformers and action games, kept their stories short and simple, the storytelling in RPGs rapidly improved.

Console RPGs were primarily developed by Japanese companies such as Square and Enix (which eventually merged to form Square Enix). This led to games like *Castlevania II: Simon's Quest* (1987)

which began to introduce multiple-ending storytelling, allowing players to have a say in how their stories ended.

Though the late 1990s and early 2000s were a great time for storytelling in console games, PC gamers weren't so lucky. Bioware and Black Isle managed to keep the PC RPG genre alive with classic games like *Baldur's Gate* (1998), *Neverwinter Nights* (2002), and *Planescape: Torment* (1999), and began to move the genre more in the direction of open-ended stories.

Armed with a stronger processor and far more storage space than anyone could have dreamed of back in the days of cartridge-based systems, developers were able to make many ground-breaking titles for the PlayStation like *Final Fantasy VII* (1997).

Final Fantasy VII also introduced many gamers to full-motion videos (FMVs). They were cutting-edge for their time and allowed the artists to show important story scenes in far more detail than would have otherwise been possible, allowing players to accurately read the characters' body language and facial features, making them feel far more real and alive, and adding considerable impact to the game's biggest moments.



Figure 9 *Final Fantasy VII* (1997)

Multiple-ending stories began to become increasingly more common during this time as well, with games like *Metal Gear Solid* (1998) and *Blood Omen: Legacy of Kain* (1996) helping to popularize the concept.

In the 2000s, successive generations of PCs and gaming consoles allowed drastic improvements in graphics, to the point of surpassing many of the best FMVs of past generations.

PC RPG genre's strong focus on exploration and character development, many of these new games such as *Fallout 3* (2008) and *Borderlands* (2009) strive to provide open-ended stories with expansive worlds and a large amount of freedom for players to explore and do as they please.

Traditional PC RPGs also continue to be made by companies like

Bioware, though the genre is increasingly shifting online with MMORPGs such as the immensely popular *World of Warcraft*. Most MMOs use a form of fully player-driven storytelling, though some have used open-ended and even interactive traditional stories as well.

The point-and-click adventure game genre was revived almost single-handedly by Telltale Games. Staffed by many former LucasArts employees, Telltale brought back classic series such as *Sam & Max* (1993) and *Monkey Island* (1990) while also creating adventure games based on a variety of popular licences.

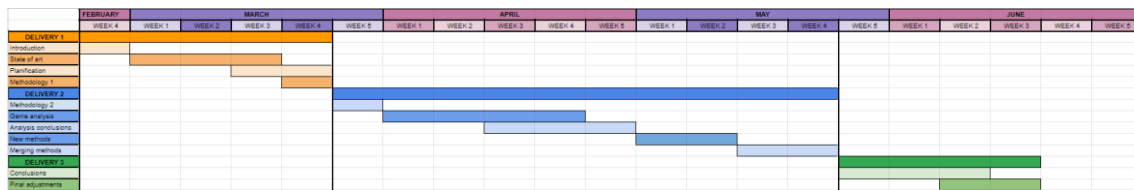
Perhaps the most important change in current game storytelling is the ongoing effort to integrate the story more tightly with the gameplay. Developers are also experimenting with making tutorials and other fourth wall–breaking gameplay elements fit more naturally into the world. With the continuous expansion of videogames and all the possibilities being explored around interactive narrative by developers, it's logical to assume that newer forms of player interaction with narrative can occur.

3. Project planning

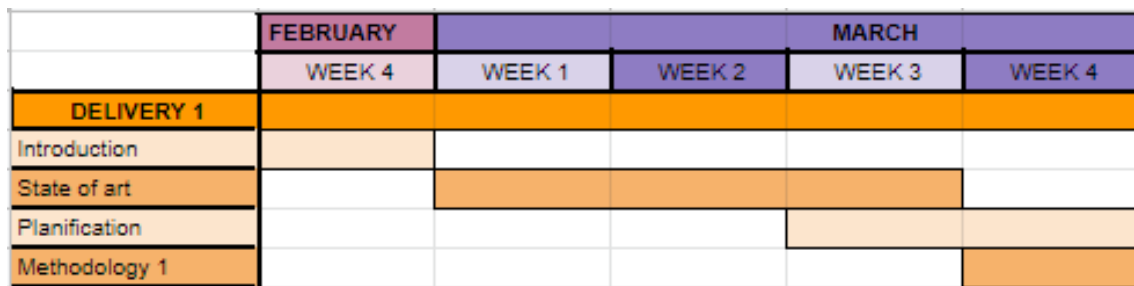
3.1. Procedure – GANTT

In this segment are presented the different stages the project will go through and the timings to properly achieve the objectives stated in segments 1.3 and 1.4.

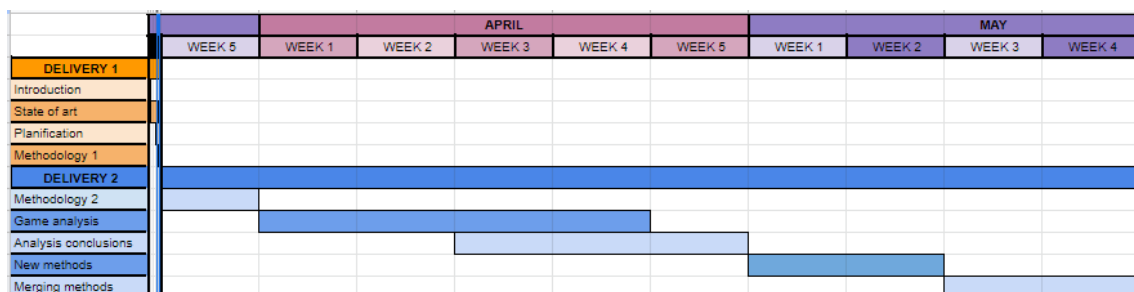
This first chart is a general overview of the project organisation schedule, from the last week of February to the fourth week of June.



The first phase of the project includes chapters from 1 to 4 and are scheduled to be developed in the first 5 weeks of work. State of Art is the longest part, so it's the one with most time assigned.



For phase two, the main objective is to analyse and write about several games, extracting conclusions from them and developing new ways of interactive narrative. This step will also include a second step to methodology, started in phase one.



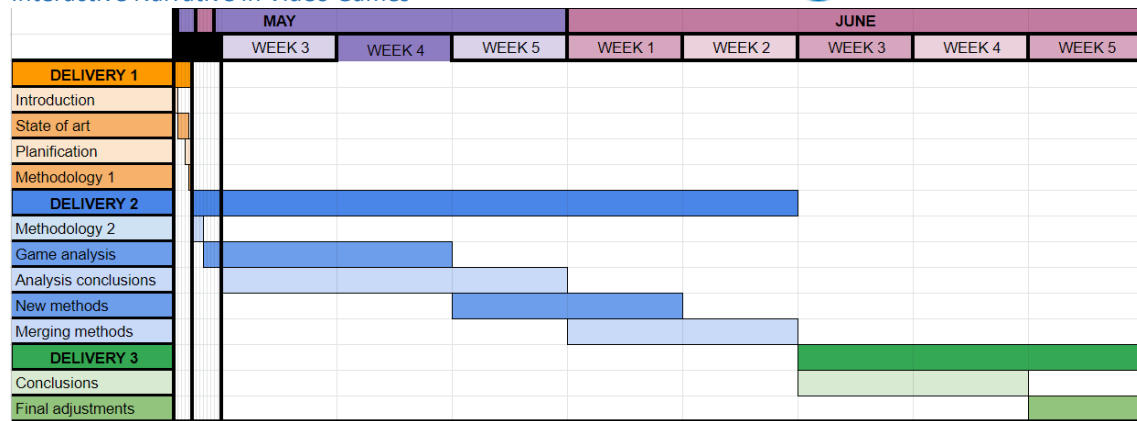
The final phase of the project is basically, reviewing and concluding the work. It's scheduled for the last 5 weeks of work.

		JUNE					
		WEEK 5	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5
DELIVERY 1							
Introduction							
State of art							
Planification							
Methodology 1							
DELIVERY 2							
Methodology 2							
Game analysis							
Analysis conclusions							
New methods							
Merging methods							
DELIVERY 3							
Conclusions							
Final adjustments							

3.1.1 Second delivery planning modifications

		APRIL					
		WEEK 5	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5
DELIVERY 1							
Introduction							
State of art							
Planification							
Methodology 1							
DELIVERY 2							
Methodology 2							
Game analysis							
Analysis conclusions							
New methods							
Merging methods							
DELIVERY 3							
Conclusions							
Final adjustments							

Second delivery time planification has been modified due to certain factors. The first factor is bad time prevision, playing games and checking all the factors that were to be considering takes a lot more time than expected. The second is considering the methodology something too accessible, and thought little time spent on it would be enough. I had to focus more on the topic and do much more research.



For the final delivery, I have redesigned the plan, to spend more time on game data collecting and then analysing it. Leaving 3 weeks to write conclusions and final adjustments seems enough time. This new planning has a new revision since there is a middle delivery before the final one.

3.2. SWOT

Analysing the strengths, weaknesses, opportunities and threats to establish a good direction for the work, points where most work has to be applied and zones of comfort inside the work.

	Positive	Negative
Internal Origin	Strengths <ul style="list-style-type: none"> - Previous knowledge of video game development and history. - Huge subject interest - Good organisational skills 	Weaknesses <ul style="list-style-type: none"> - Low experience on narrative / interactivity.
External Origin	Opportunities <ul style="list-style-type: none"> - Providing the developer community good insight in narrative matters. - Gain personal experience in this subject. 	Threats <ul style="list-style-type: none"> - Not selecting the best possible games to analyse. - Extracting wrong conclusions from the work.

3.3. Risks and contingency plan

The following risks can impact in a negative way the project's work and besides them, there are some solutions to be done in case they happen.

Risk	Solution
Information found not relevant or related to our search	<ol style="list-style-type: none">1. Work on improving searching ways2. Investing more time in the research phase, which could lead to loss of time in other sectors.
Not having all the desired time to work on the project due to other subjects, work or personal issues	<ol style="list-style-type: none">1. Work in advance to avoid setbacks2. Limit the scope of the project, reducing time needed but also results.
Not achieving notorious and varied conclusions from analysis	<ol style="list-style-type: none">1. Spend more time in the analysis tasks, reducing time from others.2. Search more varied games to analyse to get different results

3.4. Initial cost analysis

This thesis purpose is entirely academic, and as a result, there will be no gain or monetary benefit from it. The cost of the project is the addition of hardware used, software needed, either for developing the paper or games to be analysed. Also, hours of work will be tabulated. Prizes are done with an average of games instead of counting individual games, so total prize is approximated.

	Subject	Price	Units	Total
HARDWARE				
	Computer	1.450,00 €	1	1.450,00 €
	Hard disk drive	60,00 €	1	60,00 €
	Monitors	145,00 €	2	290,00 €
	Peripherals	50,00 €	3	150,00 €
SOFTWARE				
	Microsoft office (student)	0,00 €	1	0,00 €
	Games to analyze	20,00 €	10	200,00 €
TIME				
	Hours of work	10,00 €	200	2.000,00 €
TOTAL				4.050,00€

4. Methodology

For the development of this research, we will use a content analysis methodology. This step will be further elaborated in the creation of analysis fields, variables and sheets.

Phase 1: Planification

During the first phase of the project, we start by making the introduction and project planning. Researching on books, papers, articles, videos, webs and other sources, we will collect data about our topic in order to develop the state-of-the-art part.

Phase 2: Data collection

By playing games and watching other people play them and noting down what is seen, we get the data collection for further analysis. To get all the data collected, it will be written down in specifically created analysis sheets.

Phase 3: Data analysing

Once all the data has been obtained from a game, the next step is taking the data from the analysis sheets and extracting the pertinent information from them.

Extracting conclusions for each game and furthermore creating a whole extract about interactive narrative in different genres.

Phase 4: Creating new data

Based on the evidence collected and the conclusions extracted from that, elaborate new methods from scratch or combine existing ones into new and usable interactive narrative for video games.

Unitizing Content

Analysis involves assigning simplified descriptive labels to specific elements within “texts,” so that each element is classified and that different elements have different classifications. Doing so requires identifying appropriate units of analysis, pieces of content that can be subjected to coding. *Krippendorff (2004a, p. 103)* proposes five ways to distinguish units: physical, syntactical, categorical, propositional, and thematic. The first three seem particularly relevant to game analysis, and examples of each appear in the existing literature.

Physical distinctions divide content in ways independent of meaning or information.

Another possible unit distinction would be to use syntactical divisions, which rely on the “grammar of the medium of the data” (*Krippendorff, 2004a, p. 104*). This means syntactical distinctions divide

content into units that align with the intended structure of the

medium. For example, we might analyse the entire game or discrete elements within the game, if it is divided into levels or chapters.

Possible break points could include “cut scenes” or other narrative intrusions, loading screens or points where titles announce a transition to new content, or points where a victory or defeat condition is achieved.

Another option would be to employ categorical distinctions. Such units share some common trait or characteristics.

Sampling

The first step in most samples of game-related units is to select a set of games to analyse.

Most existing content analyses of games have not drawn true random samples, instead employing deliberate sample to focus on types of games or on games ranked high in sales. *Lachlan and Tamborini (2003)*

The downside of this approach is obvious: if the games are not selected randomly, then one important assumption of inferential statistics is not met, and the sample may not be representative. For example, top-selling games might contain more violence or different types of characters compared with other titles.

Regardless of which reason analysts have for selecting segments of a game, they must assess whether these segments are representative (either of the game or of all such segments). Often, researchers expend significant energy considering whether the games chosen are randomly selected or otherwise representative, only to choose segments from within those games in a way that compromises the design.

Games analysis

For this specific case of study, we will be unitizing syntactical divisions, adjusting them to the game being analysed. Depending on the game, the unit will be a complete game run or a decision moment that splits the outcomes.

The selected games for analysis will be chosen by popularity inside their type related to the topic. So, if we want to analyse interactive narrative and how the story is influenced by players choices, we will select a “Telltale type” of game, RPGs (lineal and non-lineal), open worlds, etc. based on popularity or having some specific feature that makes it relevant. The first two chosen games are “Detroit: Become Human (2018)” and “The Stanley Parable: Ultra Deluxe (2022)”

The first big decision in the game is between two doors. In a white room there's a door on the left and a door on the right. This is not a "random" choice simple as going right or left, as the narrator tells Stanley, ultimately the player, to choose the left door. We will analyse first the endings lead by choosing **left door**.

1. The Broom Closet Ending

Following the narrator instructions will make you reach the Broom Closet and if instead of continuing forward you enter it and close the door, the narrator will be mad at the player. To get the ending, you must stay forever in the room or restart the game. Whichever is chosen, the narrator remembers this and reminds it to the player every time he passes in front of the room.

2. Freedom ending

This ending is achieved by strictly following the narrators' instructions.

3. Countdown ending

This is achieved the same way as the freedom but turning the machine on.

4. Heaven ending

This ending is achieved by activating some computers in the office and restarting the game. Its something that gets the player to heaven. This ending has no narrative impact as its just following a combination of rules either randomly obtained or checking on the internet for it.

5. Mariella ending

When you reach the staircase, go down instead of up and then explore the new area you find yourself in.

6. Escape Pod Ending

Reach the boss' office and, just as you've entered the room, exit back into the hallway. The doors for the office will close and you'll be left in the hallway.

Next, backtrack to the first room and you'll discover that the door next to Stanley's office is now open. Go through this door and climb the stairs until you reach the ending.

7. Museum ending

To reach the museum, follow the narrators' instructions until you see a sign labelled 'Escape' and, when you do, head in the direction it indicates. The museum contains several images and references of another paths and endings of the game.

Now the endings lead by choosing the **right door**.

8. Apartment ending

Take the elevator in the warehouse to the upper floor and follow the corridor until you reach a door. Next, go through the door and pick up the phone.

9. Art ending

For this ending, you need to travel on the elevator in the warehouse until it's going over the catwalk. At this point, drop down the catwalk and walk forward to reach two coloured doors.

You now need to go through the blue door three times. At this point, The Narrator will return you to the original door room, but, this time, there will be a third door.

Then, you'll have to play the baby game for four hours, if you lose that game, the ending will be different.

10. Cold feet ending

Walk onto the elevator in the warehouse and, just as it starts moving, walk back onto the platform behind you. After doing this, jump from the platform onto the ground below.

11. Confusion ending

After leaving the employee lounge, take the door on the left and go down the elevator.

12. Games ending

You reach this ending by jumping down onto the catwalk in the warehouse while travelling on the elevator. Next, you must go through the blue door three times and, afterwards, follow The Narrator's instructions until you reach the baby game, which you have to fail.

13. Not Stanley ending

Take the elevator in the warehouse to the upper level and follow the corridor along until you reach the phone room. Next, crouch down by the plug socket and interact with it to unplug the phone.

You now need to return to the doors room and, once they open, head through the right door. Finding your way blocked, backtrack and go through the left door.

After the game resets, go through the right door again.

The Narrator will reset the game once more and, this time, you need to head through the left door and visit the boss' office.

14. Powerful ending

In the warehouse, walk off the elevator to the floor below.

15. Zending ending

Get on the elevator in the warehouse and wait until it's passing over the catwalk. When this happens, drop down to the catwalk. If you miss, you'll receive the Cold Feet ending.

Once you're on the catwalk, keep moving forward until you reach the two-coloured doors. From here, follow The Narrator's instructions and he'll take you to the starry dome.

When you've reached the starry dome, exit again by the door and travel down the corridor to reach a staircase. You now need to jump off the staircase until the game resets.

Pre-Doors endings in The Stanley Parable

The following endings occur before you reach the two doors in both The Stanley Parable and The Stanley Parable: Ultra Deluxe.

16. Coward Ending

Close the door for Stanley's office and wait.

17. Out of the Window Ending

Walk onto the chair for desk 434 to climb onto the desk itself. Crouch down once you're on the desk and walk out of the window.

The narrator will ask you a question during this ending and, depending on your answer, it will conclude in a different way.



Figure 11 Stanley Parable Out of the Window Ending

18. Whiteboard Ending

Sometimes, when the story resets, you'll discover that the office adjoining Stanley's has been transformed into a blue room.

When this occurs, you can open door 426 and discover the Whiteboard ending. On the whiteboard, you'll find the code for or the option to switch on 'Bark,' which causes a barking sound to occur whenever you press the Interact button.

The blue office occurs randomly.

Once you've finished looking at the whiteboard, you can continue playing the game as normal.

19. The Memory Zone Ending

To begin the path for this ending, you need to go through the door labelled 'New Content' and feel satisfied with the enjoyment the said new content gives you. Once you've reached peak enjoyment, the game will reset.

Next, you need to follow the narrator into the vent. If, however, you go up the stairs, you'll be returned to the offices and can play out another ending.

By going through the vent, you'll reach The Memory Zone and you need to explore it until your way is blocked by boxes.

At this point, you need to go into the previous room where the door to Memory Zone Maintenance (which is down the stairs) will be open. Now continue forward until you reach the Skip Button room.

Keep pressing the Skip Button, listening to as much or as little dialogue as you like, until you're able to leave the room. Do so and walk until the game resets.

20. The Stanley Parable 2 Ending

To reach this ending, you must first complete The Memory Zone ending.

After doing so, you'll find that The Narrator has placed a neon sign next to the 'New Content' door. Head through the door and explore the new offices, until you reach the expo hall.

Here there are several features you can enjoy, but, to progress, you must visit the Reassurance Bucket and Collectibles.

When you're ready, go up the stairs located to the left of the Collectibles exhibit. Once The Narrator is finished, the game will reset.

21. Bottom of the Mind Control Facility Ending

To reach this ending, you need to climb atop the first desk in the mind control facility and drop down over the railing. You can turn the lights on first, but it won't affect the ending.

Climb atop the desk and then go over the rail.

22. Elevator Ending

To get this ending you need to first take the elevator down to the Mind Control Facility. Instead of heading forward, however, you need to press the up button in the elevator and return to the boss' office.

The elevator can now return to the boss' office.

Keep repeating this until The Narrator takes you to a new location and, with it, a new ending.

23. Vent Ending

For this ending, you need to visit the warehouse where, near a pile of boxes, you'll find a plank you can climb onto. Doing so will allow you to drop down to a plank pathway below.

After doing so, turn to your immediate left and head through the vent to reach a new section of the office.

24. Reassurance Bucket Endings

Carrying the Reassurance will change a significant number of the ending in The Stanley Parable: Ultra Deluxe.

Head to the warehouse and drop down to the catwalk while travelling on the elevator. Next head through the open door and follow the narrator's instructions until you reach the What is a Bucket? room. The answers you give won't change the ending.

Unless stated otherwise, you reach the Reassurance Bucket endings by following the steps outlined in the previous sections.

25. Collectibles Ending

To obtain this ending, you need to find all six of the Stanley collectibles The Narrator has hidden throughout the office.

Once you've found all six, finish whichever ending you're currently doing and, when the game resets, the Collectibles ending will begin. To finish it, follow The Narrator's instructions.

26. Epilogue

To unlock the Epilogue, you need to fully restart Ultra Deluxe itself until you're no longer receiving dialogue from the mysterious person who really likes sliders and experience the Collectibles Ending.

Once both requirements have been met, the Epilogue will appear as an option in the main menu.

The rest of the 43 endings are variations achieved through the reassurance buckets.

5.1.1.2 The Stanley Parable: Ultra Deluxe narrative conclusions

Stanley parable offers the player choices and paths using mainly its environment. The office paths to be followed affect the results of what the player does without him knowing.

The narrator is deeply involved in those choices, as he speaks to the player, influencing some of its actions just by saying them. The player must choose to obey the narrators' path or to ignore it, both options lead carefully to different outcomes.

Stanley Parable is an amazing game to analyse due to its great guidance of the player towards its diverse endings. The player just goes through the game following its guts and ends up in totally different paths every time it switches some detail in its playthrough.

5.1.2 Detroit: Become Human

Detroit: Become Human follows the story of three androids around a world where humans and robots live together. It explores sci-fi topics like android humanity, freedom of technology, etc.

The playstyle and mechanics of the game are simple: player needs to walk a bit in the scenarios, interact with objects, small quick time events and decision making (with a time counter and without it).

The game itself divides into chapters, and a chart is shown with the paths chosen by the player in each one of them.

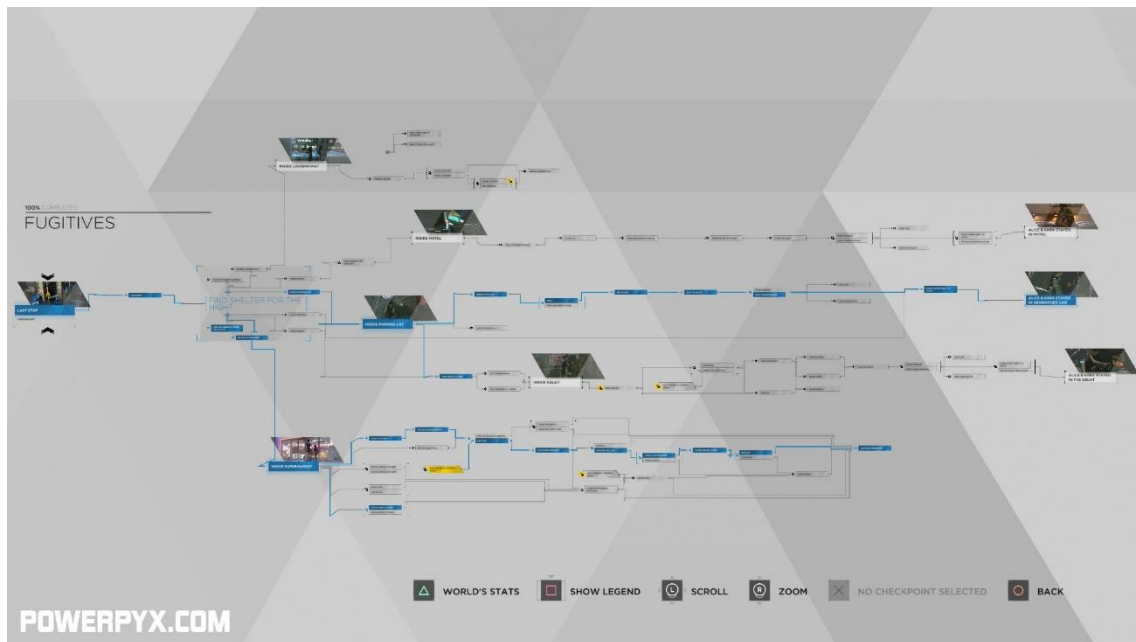


Figure 12 Detroit: Become Human chapter end choice chart

This game analysis is separated by characters and its relevant choices and endings they lead to.

The three characters the plot follows are: Kara, who escapes her owner to explore her newfound sentience and protect a young girl; Connor whose job is to hunt down sentient androids; and Markus, who devotes himself to releasing other androids from servitude.

KARA ENDINGS

1. Kara and Alice survive

You can guide Kara and Alice safe passage to the Canadian border if you can keep all the main characters alive in the game.

2. Murdered by Todd

During Stormy Night, if you fail to protect Alice, he will kill both characters.

3. Killed at the Canadian border

If you've directed Markus to lead a violent revolution, a sacrifice will be made at the Canadian border. If Kara doesn't sacrifice anyone she will be killed. If Luther is with you at this point, he will also be killed.

4. Kara lives and Alice dies

There are several aspects to this ending, either way it's not a nice one. If Alice is unhappy during the part at the recycling center, she will get into trouble requiring you to intervene. If you don't intervene in time, she will be shot. You can escape the recycling center without her as an alternative.

5. Kara dies and Alice lives

You can choose to sacrifice yourself (Kara) at the Canadian border for Alice to escape in one piece.

KARA CHOICES

1. In Chapter 5, she can find a gun in the bedside table while cleaning Todd's room, as well as a potential escape route from the house by opening the window in Alice's Room. These provide options when confronting Todd during Chapter 7: Stormy Night.

2. Chapter 7: Stormy Night - If Kara chooses to become deviant and protect Alice from Todd, it can play out in several ways:

Kara threatens Todd with the gun mentioned above and accidentally shoots him in self-defence.

Alice shoots Todd if Kara fails or ignores the QTE with the gun.

If Kara reaches Alice before Todd, she can lock the door and help Alice escape out the window mentioned above.

Kara can decide to remain obedient, but this will result in both Alice death and Kara's destruction.

CONNOR ENDINGS

1. Connor dies

During the game there are multiple occasions where Connor can die. The easiest way for Connor to die is to fail a load of quick time events (QTEs).

2. Connor survives

Connor can survive both as a machine or a deviant. If you decide Connor is going to stay as a machine, he will need to fight Markus (or whoever is the leader). If you choose to become deviant, then you will need to escape from Amanda's hack.

CONNOR CHOICES

1. How Connor deals with the deviant in Chapter 1: The Hostage is irrelevant.
2. In the opening of Chapter 6: Partners, Connor can begin to change Hank's mind about androids by buying him a drink. This will improve his relationship with the lieutenant, while the other two options would result in a negative first impression.
3. In the investigatory portion of Chapter 6, Connor can discover the deviant in the house. This will unlock Chapter 9: The Interrogation, wherein Connor and Hank will gain important information about their case. Use our full walkthrough for Partners to find the deviant.
4. In the Interrogation, after analysing the deviant, choose Convince as your discussion tactic to convince the android to confess. When the officer becomes entangled with the android, choose to Intervene and keep the android alive. This will unlock information on the deviant colony known as Jericho.



Figure 13 Connor in the Interrogation chapter

MARKUS ENDINGS

1. Killed during the Freedom March

If you choose to stand your ground at the end of the freedom march, Markus will be shot.

2. Peaceful protest, make a deal

If you choose to make a deal during the peaceful protest, Markus will be shot.

3. Markus lives through the peaceful protest

If you don't accept the deal during the peaceful protest, Markus won't be shot. When you're cornered at the end, if you choose to kiss North or sing to the soldiers, Markus will survive.

4. Markus is killed by Connor

If you don't break Connor and he remains a fully-fledged Android, he may choose to tear Markus apart and kill him.

MARKUS CHOICES

Markus's first big decision comes when confronted by Carl's son Leo in Chapter 8: Broken. When harassed by Leo, Markus must decide to obey Carl and not retaliate, or defend himself. If Markus chooses to listen to his master, Carl will exhaust himself attempting to stop Leo, resulting in a fatal heart attack. If Markus chooses to defend himself and push Leo, the painter's son will fall hard against his father's mechanical lift, breaking his neck.

Regardless of which path Markus takes, the police will arrive and decommission him.

CONSTANT FACTORS

While there are several specific choices that will seriously impact the narrative, there are also several factors that continuously affect the way the story plays out.

The deviant hunter

Connor's story path is unique in Detroit because, unlike Kara or Markus, Connor will be rebuilt and put back in the field if he gets killed. This not only affects Connor's relationship with his partner Hank, but also changes the way he can interact with deviant androids.

If Connor moves through the story without being killed (there are many opportunities for this to occur), he develops more and more empathy for the "deviant" androids he encounters. This means that he may unlock unique conversation options, or even the ability to become a deviant himself. Conversely, when Connor is killed in action his memory is reset and those empathetic impulses are removed from his programming, closing off those dialogue/story paths.

Public opinion

Depending on the choices that you make as Markus on behalf of the androids at Jericho, the human population's view of the revolution will shift. Choices that indicate the android awakening is a peaceful call for equality will earn the sympathy of the people.

If, however, Markus chooses more forceful or violent means - such as inciting a riot or killing members of the police force - the public's opinion of the uprising will be sceptical, fearful and in some cases equally violent.

Connor and Hank relationship

The relationship between the robotic Connor and the Lt. Hank is pulled straight from the buddy cop hall of fame - but there are plenty of ways that this investigative odd couple's relationship can vary based on how Connor's actions affect Hank's perception of his android partner.

Detroit: Become Human is one of the more recent and popular games of its genre. Choosing your path type of narrative is appealing for the audience and the millions of sells show it.

The game railroads the player through a plot and stops to make decisions that affect the moment they are happening in, without telling the player which way it will modify future scenarios.

Mechanically speaking, the game is mainly a “cinematic” adaptation of a “choose your own adventure” book, offering only small room to investigate in scenarios, little interaction in most of the scenes apart from some option-selecting or quick time event.

But when it comes to tell a story and making the player involved, it achieves it without a problem. It uses characters easy to empathise with, plots and sub-plots that most people have a formed opinion on or where its easy to take a side

5.1.3 Firewatch

Firewatch is an adventure game that follows the story of a fire lookout named Henry in the Shoshone National Forest. A month after his first day at work, strange things begin happening to him and his supervisor Delilah, which connects to a conspired mystery that happened years ago.

Henry interacts with Delilah using a walkie-talkie, with the player choosing from dialog options to communicate. His exchanges with Delilah inform the process by which their relationship is developed.

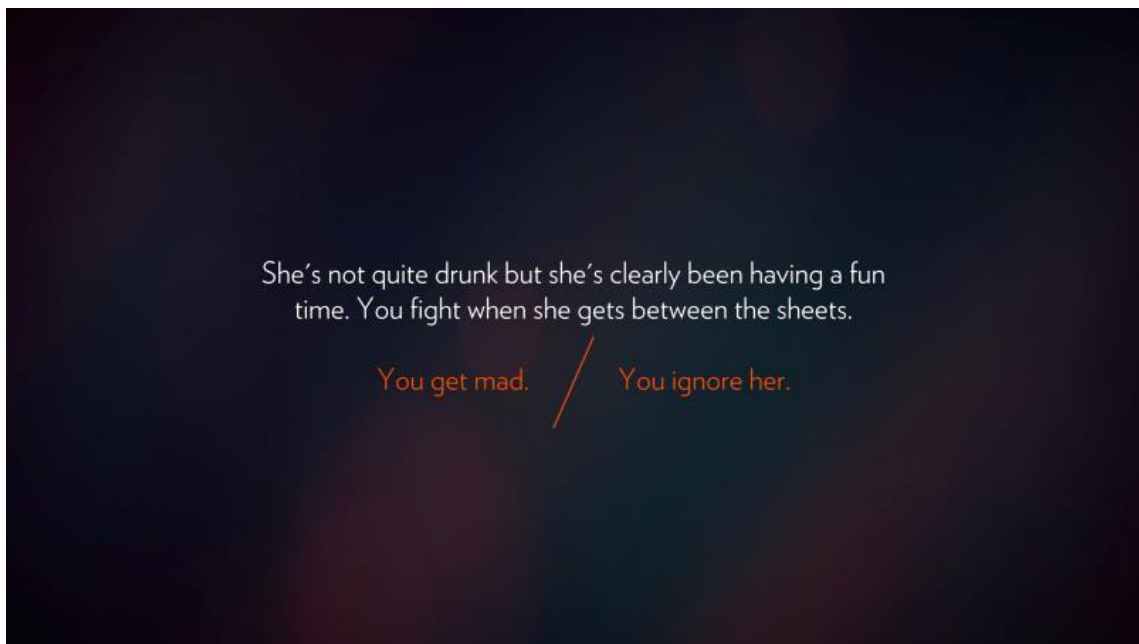


Figure 14 Firewatch choice making

5.1.3.1 Firewatch playthrough

The beginning of the game is nothing more than text on the screen, which you advance through by selecting what Henry does next. At first, you only have a single option, but soon you encounter choices between two possible actions which 'branch' down different paths.

For example, in the first choice, the player must decide between two ways to break the ice with Julia, Henry's future wife, in a bar.

They can either open with a compliment, or they can ask about her degree. It's a small choice, and each will give a slightly different text on the next screen.

This teaches the player that choices must be made, and that they alter Henry's path.

The next four decision points introduce slightly more consequential choices. Now they sometimes stick around (like choosing a dog) or are emotionally heavy (like choosing whether to yell at or ignore Julia).

The branches are very short, rarely lasting longer than a passage before the narrative paths converge. One such initially innocent dilemma is the fifth choice in which Julia asks you to strike a pose for her to draw.

Later on the game, Henry picks up a journal and opens it to Julia's drawing of him. Depending on your earlier choice, the drawing is different. This is the first time the player sees their narrative choices will impact Henry's present.

It's not just differently text passages, and although the teaching example here is a drawing.

In choice 9 lays the most traumatic dilemma, and the only true branching point in the whole introduction to the game. Julia's dementia is unbearable. The choices are to put her in a nursing home or to continue taking care of her by yourself.

Later, the repercussions will affect both Julia's present-day location and Henry's motivation for taking the fire-watching job.

This is just the introduction and shapes the way Henry will be at the beginning of the game. The range of options are not wide, as the character is designed in a certain way but by using those choices, the player will not only get to know who they will be playing as, but also adding their own personal flavour to it.

Once the introduction is over, the real gameplay begins, and choices apparently disappear from the player. But they are just hidden in dialogues and actions that develop all over the game.

Deliah is the character our protagonist is going to talk to during the game and is the one who will show the player the consequence of their actions, mainly on voice lines. She will act differently depending on actions of the player.

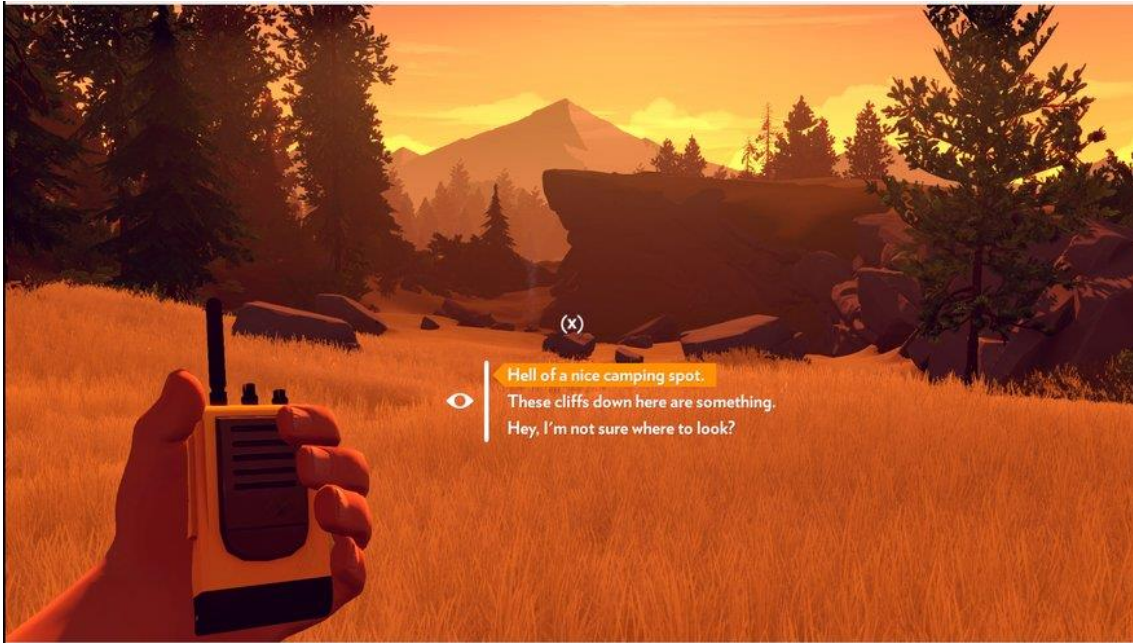


Figure 15 Firewatch dialogue options through the game

As an example of that kind of behaviour, there's a moment of the game where she asks Henry to take only his own food. If the player takes extra food to supply lookouts that have not been allotted to the player, she will get mad at the player.

Chris Remo, story designer and audio director, said on an interview that the game was focused on small choices and changes on dialog and music.

"We ended up focusing a lot more on what you could sort of call micro choices happening all the time, as opposed to big, chunky branching choices." (Remo, 2021)

Firewatch is a game that lets the player have a classic choice introduction to shape its character but most importantly, its an introduction to choices and repercussions.

These are just for the concept to get stuck in the players head, because they will not appear again in game again.

From now on, the obvious choices will appear in the center of the screen as dialogue options to say through your walkie-talkie. This will forge the relationship between Henry and Deliah.

But everything is being monitored so that the game knows how to respond to player actions and behaviour. They mainly affect dialogue and music, but just because the game is intended to be that way, about to forge a relationship over a walkie-talkie with someone you've never seen.

And it achieves it with flying colours.

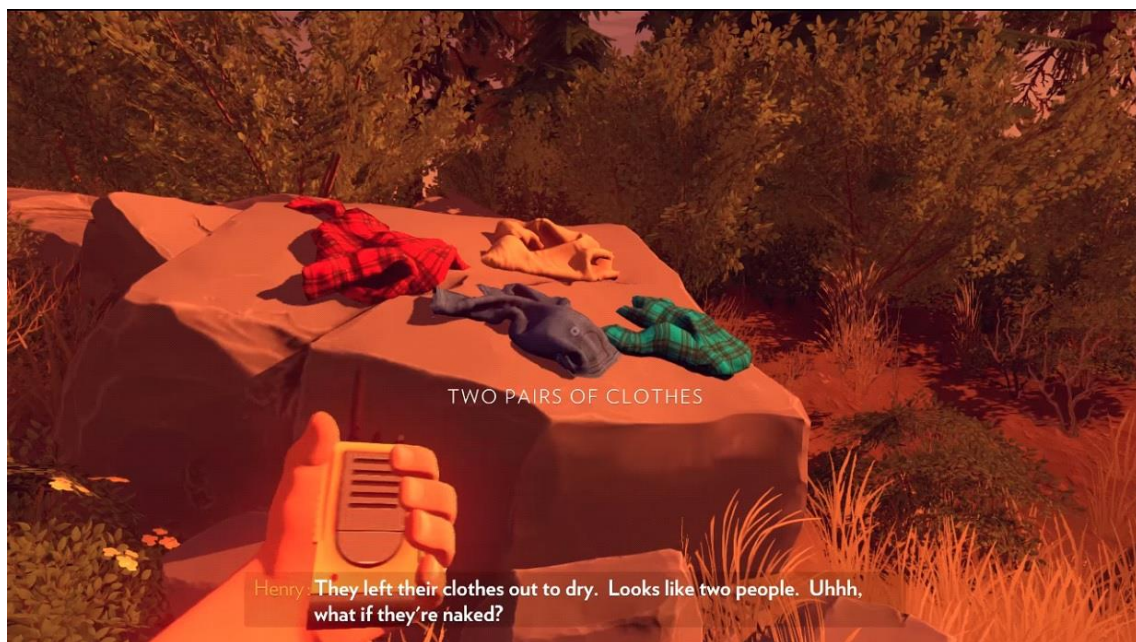


Figure 16 Firewatch choice situation mid-game

5.1.4 Red Dead Redemption 2

Red Dead Redemption 2 is set in an open world consisting of five American regions, which the player can explore as they proceed with the story. As Arthur Morgan, players can interact with the game world in several ways, including story missions, side quests, challenges, randomized events, and hunting.

Rob Nelson, Co-Studio Head at Rockstar North said: “We try to give you options within a lot of these missions to choose how you approach it”. This game has several ways to modify narrative depending on how the player approaches situations.



Figure 17 Red Dead Redemption 2 Honour system

5.1.4.1 Red Dead Redemption 2 playthrough

In Red Dead Redemption 2, the player gets to make some choices that will have consequences down the line.

Many of the choices and consequences in Red Dead Redemption 2 revolve around the honour system. Completing tasks for strangers, helping people in need, this can all increase your honour rating which impacts how you interact with the world around you. Opposed to that, robbing civilians, larceny, these kinds of activities have a negative effect on your honour.

There are some meaningful choices throughout the game that have a direct impact on the development of the plot, besides the honour system.

1. Kill or Spare O Driscoll Bandit

Your first choice will be to kill or spare an O Driscoll Bandit in a barn.

Spare – He will leave and possibly it adds a new man to the camp.

Kill – Arthur will tell Dutch it has been taken care of.

2. Train Robbery Choice

At the end of the train robbery, you have another choice. Spare the guards or kill them, Dutch lets you make the call.

Spare – They will take the train to its intended destination.

Kill – You off the men and they don't come back to haunt you later. This is considered a dishonourable move by the game.



Figure 18 Red Dead Redemption 2 Train Robbery

3. The Man from Blackwater

While in town with Unc and the girls a man from Blackwater will spot you. Chase him down and you can help him up from the cliff or let him fall.

Spare – If you help him up, he will thank you and say everything is cool now. He will also give you a pen. This is an honourable deed.

Kill – You step on his hands, and he falls to his death. This is a dishonourable deed. If you loot his corpse, he has some cash and a gold wedding ring.

4. Bear Hunting

You need to choose to lay the bait or split up and search for the bear.

Split Up – With this option you and Hosea split up to look for clues about the bear. You will find a clue and the bear will find Hosea. He will run and you need to shoot the bear to scare it away.

Leave Bait – IF you leave the bait, the bear will come and you shoot it. It will run and no one will be hurt.

With both options you can stay behind and track the bear if you wish.

5. Bar choice

When you return to the bar with Lenny you will get a choice.

Charm – If you charm him, he will walk away. You and Lenny get drunk and dance, have a slapping match and dunk that stranger in the trough.

Threaten – You tell the man you will rip his head clear off his shoulders if he doesn't leave.

6. Stagecoach Robbery

You need to decide if you want to attack at night or during the day.

Day – You will have to rob the house yourself.

Night – You rob the house at night while Hosea grabs the coach from the barn.

7. Help Mary or don't Help Mary

Help Mary – If you choose to help Mary you will have to rescue her brother. When you go to save him, you have two main response paths to take. You can choose to take them seriously

or as a joke. If you take them seriously, you get to speak with Jamie without serious issue. Once you track him down, aim to shoot the gun from his hand.

Don't Help Mary – Arthur says there is just too much history and says no. She will tell him she misses him, and Arthur will say he does as well. There is no mission if you say no.

8. Accept Fishing or Decline Fishing

Accept Fishing – If you accept the fishing invitation you will go fishing with Dutch and Hosea.

Decline Fishing – You just head back to camp alone and the other two go fishing.

9. Shoot the Dynamite or Send Lenny

Shoot The Dynamite – If you shoot the Dynamite you will blow up a few of the enemies.

Send Lenny – If you choose to send Lenny, he enters the plantation and attracts the attention of 5 or 6 of the men.

10. Lost Girl or Harlot

Lost Girl – If you choose Lost Girl, Karen enters the bank and behaves like a lost girl. She heads inside, distracts the guards and it works fine.

Harlot – Karen will go into the bank acting drunk and making a scene. She will then pull her gun and you all enter, no problems here.

11. Help Mary or don't Help Mary 2

Help Mary – If you choose to help Mary again, she will ask you to save her father. It's a simple mission, just trailing her father. At the end you can go on a date to the theatre or leave Mary alone.

Don't Help Mary – Arthur says he can't. Mary will say she misses Arthur and Arthur will say he misses her as well. Then he says it's done now and walks away.

12. Kill Anthony Foreman Or Spare Him

Tilly wants him to tell his gang to leave her alone while Susan wants him dead.

Kill – Arthur says that he agrees that you guys can't take chances with men like him and kills Foreman.

Spare – This is what Tilly wants and you shoot him away without killing him.

13. Help Captain Monroe or don't

Help Captain Monroe – Agree to help Captain Monroe and you will unlock new missions you can do with him at the reservation.

Don't Help Captain Monroe – Nothing happens. You tell the Captain he's on his own

14. Help Sadie or don't

Sadie wants to take out some O Driscoll boys and wants your help.

Help Sadie – Arthur agrees to help Sadie if she helps John, Abi, and Jack. You can ride with her right away or set yourself up and meet her at camp. You will have to clear out a camp of O Driscoll with her.

Don't Help Sadie – If you say no to Sadie, she will ride off alone. She will still agree to help John and his family escape.

15. Help John or Retrieve the Money

You have the option to help John or go back for some the money.

Help John – You and John must run from the Pinkertons until you can't run anymore. At that point you give John your hat and tell him to go.

Go Back for The Money – You hand John your hat and tell him to be safe as he leaves.

This last decision leads to the final of the game and its different possibilities.

If you decide to help John in the end, Van der Linde gang traitor Micah Bell and Arthur fight on the mountaintop. In the latter stages of the fight, Dutch intervenes; Micah and Arthur make pleas for Dutch's soul.

If your honour meter is high, Arthur will point out that he tried to become a better man. Dutch ultimately leaves them both, unable to choose between them. Bell leaves in anger and Arthur succumbs to his tuberculosis on the mountaintop, watching the sun rise.

If you decide to go back for the money, Arthur heads back to the burning camp of the Van der Linde gang. He gets the money, but Micah Bell ambushes him. The pair end up having a knife fight in the camp, with Micah gaining the upper hand and stabbing Arthur.

Once again, Dutch appears and Arthur fingers Micah as the Pinkerton rat. Dutch leaves, stunned at how the gang turned out. Micah stabs a crawling Arthur in the back, killing him.



Figure 19 Red Dead Redemption 2 Bad ending

5.1.4.2 Red Dead Redemption 2 narrative conclusions

Red Dead Redemption 2 is a clear example of a well-treated narrative in a sandbox game, open world with lots of content, characters, actions and missions.

There are many missions that can be approached as the player wishes, adding an important factor that no other game previously analysed here had, highlighting the course of the action instead of just the result of them. Many missions and events in Red Dead Redemption 2 have the same outcome despite how they are approached. If a character must die after a mission, it does. But in the meantime, the action could have been a pacific, conversational mission, or a run and gun show. This adds a new layer to narrative that makes the story much more customizable and memorable for the ones playing it.

The honour system is not a novelty to this game as games like Bioshock (2007) or Skyrim (2011) have done it before. But it adds an extra layer of interaction with the world and gives your character the nuances you want to give them. It's a way to measure all the actions a player does and adjust the world around the protagonist.

It can affect how NPCs treat the player, the prices in shops, places it can access or not, loot on the bodies and locations may be altered, etc. This way, the player feels how it impacts the scenery around him.

5.2 Improving games interactive narrative

Having analysed 4 games of different genres that address interactive narrative in such different ways, we now have the knowledge and tools to propose a way that combines them all into the most immersive narrative experience possible.

The main outtakes from these games have been:

1. *The Stanley Parable*: players often face ignorance as where the game is going so their decisions are instinctive based on what they see and hear from the environment. In a game with this replayability, where the player can sense changes all the way to the end of the game in less than an hour, having a lot of branches along the path makes the player want to take back and explore the other options.
2. *Detroit: Become Human*: not mechanically demanding but narratively rich, this game collects data of the choices the player takes with the different characters to arrive at the ending that these have led to. Despite that, the game feels unclear to where its heading while you play it. Certain decisions influence the ending in ways that seem unrelated.
3. *Firewatch*: the subtlety of turning small details into a part of the character behaviour and being recognized by the game to alter the surroundings and characters the player interacts with. This game is a perfect example of it but in this case, it modifies mainly dialogues with the only other character there is in the game, so its easier to script when the malleable element is just one character and its dialogue lines.
4. *Red Dead Redemption 2*: this game gives us two good points to work with. The first one is “journey before destination”, as this game has a linear story, but the way the player can approach it makes the in-between of scripted story moments a rollercoaster that the player controls. The second point is the karma system, a quantitative measurement of the good and bad the player does. This obviously has flaws because it’s hard to quantify those moral decisions, but it’s a good start to it.

Having all those points in mind it's time to join them into one system to try to achieve the best interactive narrative system possible.

The main point, and most important one that needs to be considered are Ais, Artificial Intelligences. Most games use them to adapt to the player, to manage the NPCs and their behaviours, change the environment, etc. Having a good AI developed for this matter is the most important thing but its not the question addressed in this essay but to design how to introduce a natural way of choosing to the player and merge it with the world accordingly.

As an example, the recently released *Hello Neighbor 2* (2022) uses an AI to adapt the behaviour of the villain of the game using data of the actions of ALL the players that play this game. Something like this would be the best thing to implement in any game but the amount of resources needed to accomplish this is too much to do in a game with many people to interact with.



Figure 20 Hello Neighbor AI

To begin with, the main characteristic of the system, and the one that makes it the most realistic is Firewatch best point, not making choices obvious. Let the players play the game knowing there are consequences to their actions without making the choices obvious.

Actions must be monitored, stored, analysed and transmitted to the system in a way that it allows the environment around the player to adapt. With the AI mentioned before, those data chunks can be studied as what the player does, what consequences it expects and what should happen.

After having the monitored actions hidden so the player doesn't know what actions it does affect the outcome, another key point is to have diffuse objectives. Letting the player know what to do without railroading them. In this point we can use Stanley Parable and Red Dead Redemption 2 to guide us. Stanley gives us an environment with an objective to achieve (finding out who we are, where are we, what to do...?) and lets us wander around, with some help from the narrator to get some places but whether to follow them or not is the players choice.

To add to this using the Red Dead system, actions should have multiple ways to board them. Fitting all players playstyle is important in a game which intention is to make who's playing as they are writing their story. This method fits more into a sandbox as it is the genre that gives the player more freedom in mechanics and gameplay.

So now we have hidden choices and analysed behaviours and freedom for the player. We now need a system to establish laws for the environment. The world has to be adaptative but ultimately is a way to communicate for game developers, so some consequences have to be scripted. Even though there might be a lot of narrative branches, they have to be there so the game makes sense and tells the story its intended to.

6. Conclusions

Videogames have emerged as a new way of storytelling, and they have differentiated themselves from other traditional methods with interactivity. Players interact with the game, making the actions they feel like doing. That's what makes videogames special and unique in the way they tell stories.

Taking it to the limit is the main objective here. Having a game that people can play the way they want it and have a completely different experience from each other.

In order to achieve that, there have been 4 games analysed in the narrative matter to extract their strengths and weaknesses and merge them all together in the best adaptable world system there can be.

The four games analysed have been *The Stanley Parable*, *Detroit: Become Human*, *Firewatch* and *Red Dead Redemption 2*. Four completely different games that represent their genres at their best. Stanley is a fourth wall breaking game of exploration, Detroit is an modernized game from the old genre of choosing your own adventure, Firewatch is a narrative game with the objective of simply telling a story and Red Dead is one of the best open world games ever developed.

From these four games, playing them and taking notes, we have been able to extract data like choices and their consequences, how they are shown to the player, etc. Getting all them mashed up and getting rid of all the weak points they have due to either design choices or technical limitations led us to a good way of displaying narrative games inside their environment.

Of course, something that needs to be considered is the genre of the game intended to be developed. If the intent is to have a closed environment and to tell a very specific story but letting the player, do it their way will not be the same as a huge open-world game with huge number of missions and objectives with no order whatsoever.

6.1 Future investigations

This area of study is immense and has much more to offer to study. The best thing to do would be to analyse as many games as possible, getting a huge database with how each game treats choices and consequences.

Without a doubt, theoretical work is good but getting it into practice is the main objective of this. Having a team to develop a game and generating a system specifically for that game would help a lot improve this study, as many new questions and solutions would come up while studying that.

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