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Narrative Structure of Videogames

Basics and Analysis

Sampo Besmond

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Abstract

This is a qualitative comparative bachelor's thesis for Jyväskylä University of Applied Sciences.

In 2018 students of Business Information Technology at Jyväskylä University of Applied Sciences were able to study a variety of game development related subjects. Narrative design was not one of those specializations. For that end, it was agreed that a study on the topic of narrative design would be a good way to gauge the viability of additional specialization.

Data triangulation was used as the method for analysis, as it was to ensure viability of the results. In addition, a comparative study model was the most suitable style of study, due to the author's lack of personal experience and compatibility of method and model. The three sources of data used were: authored literature, academic research, and thematic interviews.

The main goal of this work was to answer if analysis of structure could further the understanding of videogame narratives, and to provide a source of information on the topic to peers. The study was conducted sporadically between Spring of 2017 and Spring of 2019.

This work starts from the basics of narrative and continued to show those same basics in videogames. The author then examined an academic analysis framework for videogame narrative and applied it to an analysis of a videogame (The Garden's Between).

The results and discussion strongly indicated that analysis of narrative structure could benefit one's understanding of narratives.

The author concluded that this field of study might have possibly yielded multiple follow-up studies, such as comparing traditional media and game narratives, or the role of player agency on impact of videogame narratives, but that caution was recommended in supporting those avenues of research.

Keywords/tags (subjects) agency, character, design, embedding, interactivity, narrative, operational, plot, presentational, setting, space, story, structure, text, theme, time, topography, videogame
Miscellaneous (Confidential information)

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Tiivistelmä

Tämä on kvalitatiivinen AMK opinnäytetyö Jyväskylä Ammattikorkeakoululle.

Vuonna 2018 Jyväskylän Ammattikorkeakoulun Tietojenkäsittelyn tutkinto-ohjelman opiskelijoille tarjottiin useita eri pelinkehitykseen liittyviä osaamisen alueita. Narratiivin suunnittelua ei tarjottu. Tätä varten kirjoittaja ja henkilökunta sopivat, että tutkimus aiheesta olisi sopiva tapa arvioida narratiivin suunnittelun soveltuvuutta yhdeksi osaamisen alueeksi.

Tiedon kolmiomittaus valikoitui tutkimusmetodiksi, sillä sen arveltiin parantavan tulosten luotettavuutta. Työ tehtiin vertailevana tutkimuksena, sillä se sopi hyvin tekijän oman kokemuksen puutteeseen sekä yhteen käytetyn tutkimusmetodin kanssa. Lähteinä käytettiin ammattimaisesti kirjoitettua aineistoa, akateemista tutkimusaineistoa ja teemahaastatteluita.

Tutkimuksen pääasiallinen tavoite oli vastata voisiko narratiivin rakenteen analyysillä kehittää videopelien narratiivin ymmärrystä, sekä tarjota tietolähde aiheesta muille aiheesta kiinnostuneille. Opinnäytetyö tehtiin useassa osassa kevään 2017 ja kevään 2019 välillä.

Opinnäytetyön sisältö alkaa narratiivin perusteista, ja näyttää kuinka esitetyt perusteet soveltuvat videopeleihin. Tämän jälkeen käydään läpi akateemista tutkimusta analyysityökalusta, jota sovelletaan videopeliin The Gardens Between.

Tuloksissa ja analyysissä löydettiin vahvoja viitteitä, että narratiivin rakenteen analyysillä voidaan kehittää ymmärrystä narratiivista yleisellä tasolla.

Loppupäätelmissä tekijä totesi, että aihealueesta olisi mahdollista tulevaisuudessa tehdä useita jatkotutkimuksia, esimerkiksi verrata perinteistä mediaa ja pelinarratiivia toisiinsa, tai pelaajan vaikutusmahdollisuuksien vaikutusta ja roolia pelinarratiiveissa. Tekijä myös suositteli varovaisuutta alan tutkimisen kannustamisessa, sillä aihe on vaativa.

Avainsanat (asiasanat) agency, character, design, embedding, interactivity, narrative, operational, plot, presentational, setting, space, story, structure, text, theme, time, topography, videogame
Muut tiedot (salassa pidettävät liitteet)

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Glossary

Narrative Is the representation of temporally and causally connected events in a meaningful way (Wei 2011, XVI).

Plot Is an account of dramatic tension, the organized experience of the game, created by a conflict and experienced as a result of a jeopardy or challenge (Dille & Zuur Platten 2007, 26; Wei 2011, 100).

Story Is a layer of narrative, the other being Text and Plot. It is a series of logically and chronologically related events caused or experienced by actors. Not to be confused with Game Story. (Wei 2011, XVII.)

Game Story Is what happens in a game, the flow of events that can be described separate of gameplay. It is the mental image of events left with a player. (Dansky 2007, 2; Wei 2011, XVI.)

Pace Is the rate of escalation and release, of how often the tension is being increased and relieved within a story (Skolnick 2014, 17 & 70).

Game Is a "problem solving activity, approached with a playful attitude" (Schell 2015, 47). In the context of this work, game is to be understood as computer, console, handheld or mobile games.

Videogame Is a type of game which requires a device of some kind to be accessed and played. There are many kinds of devices; consoles, mobiles, handheld and of course the Personal Computer.

Traditional Media Within the scope of this work, is used to refer to literature, film and television, unless otherwise specified.

JAMK/Tiko Is the abbreviated colloquial expression for the Jyväskylä University of Applied Sciences (JAMK) School of Business' Degree Programme in Business Information Technology (Tiko – abbreviation for Tietojenkäsittelyn tutkinto-ohjelma).

Interactive Fiction Is a genre of videogames in which most of the players' interactions with the game world are through text or dialogue.

Emergent Narrative Is generally used to express that the narrative is generated via player interactions with the game, and isn't pre-written (Wei 2011, 77).

In-engine Is generally used in the context of cut scenes which are created on the fly with the same game software as is experienced by the player (Bateman 2007b, 296).

Cut scene Is a brief cinematic story or character moment, often presented to the player at specific moments in a game and generally contain interactions not available to the player.

cRPG Is the acronym for computer Role-Playing Game. Common attribute of Role-Playing Games is the player playing a specific character and role of their own choice, and having the freedom to approach problems based on those choices (Bateman 2007b, 298).

Bullet Time Is a cinematic effect best known from The Matrix in which the very short duration of a bullet's flight is stretched out and presented in slow motion. The first usage of Bullet Time in games was in Remedy Entertainment's Max Payne.

The Golden Path Is the sum total, the optimal route, through a game required to complete the game, most often used in the context of games with a linear story structure. It is common for the player to be allowed to momentarily deviate from the Golden Path, but often these side paths are created so they quickly bring the player back to the main path. (Bateman 2007b, 296; Dille & Zuur Platten 2007, 21; Heussner, Finley, Hepler & Lemay 2015, 25.)

Game World Consists of all the, often fictional, locations in which a game takes place (Bateman 2007b, 295; Wei 2011, 20).

Storyworld Is used to describe the world in which a game's story and characters exist, but it is separate from Game World in that it is the players' mental construction of the Game World as a response to making sense of the narrative space, and as such encompasses more than just the existing and interactable locations of the Game World. (Wei 2011, 33 & 51.)

NPC Is the acronym for Non-player character, a term borrowed from Role-Playing Games; a character in a videogame story not controlled by any player. (Heussner et al., 242; Dille & Zuur Platten, 212.)

MMORPG Is the acronym for Massively Multiplayer Online Role-Playing game, a group of game genres where often hundreds of players are connected to a single world simultaneously and can interact with each other (Heussner et al., 241).

1   Introduction

In his book, *Seven Basic Plots – Why we tell stories*, Booker (2004, 2) states how one key feature of our modern society is that in our drive to pursue scientific and technological advances, the secrets of the universe, and everything, most of us have all but forgotten that which defines us, humans; So fundamental is it to us that we've all but forgotten to pay attention to what an exorbitant amount of our time and effort we each use in telling or otherwise engaging with stories.

To the best of our knowledge, human beings are the only species on the planet whom share stories with each other. Storytelling, a skill learnt in childhood, can convey lessons learned, one's personal experiences, or be a tool used to see into the future. (Danuser & Seamster 2009, 2.)

In *Writing for Video Games*, Steve Ince (2006, 54) brings up how the act structure of narrative is often at the forefront of discussion of narrative. It is the most ubiquitous and easiest understood aspect of stories. These basics of act structure theory can be applied to game narrative as well, but the more open the games structure and by extention the narrative the more difficult it becomes to indentify the boundaries of each act (ibid.). The act structure has served traditional media (theater, books, film and television) well, and the narratological academic study has likely significantly contributed to the development of said media – though there is no way to objectively measure this, the quality of modern stories would seem to indicate this to be a reasonable hypothesis.

When it comes to games and better understanding videogame narratives, the approach to analysis has to be different. Videogames are not films, though it takes a small army to make both, nor books, though both have been once proclaimed detrimental to the human psyche.

For videogame narratives to evolve and keep up with the ever increasing player demands, the furthering of theoretical understanding and analysis of videogames is likely to benefit game development in equal measure to how it has for traditional media in the past. This work combines ideas of narrative structure theory from literature, professional writers experience and academic videogame narrative research with the goal of providing an overall look of game narrative and its analysis.

Videogame narrative structure is a topic rarely represented in discussions of videogames. This may be partly due to the relative newness of videogames in the cultural landscape compared to books

or even cinema, and perhaps partly due the lack of understanding of the craft of writing. According to Wei, video game theory and game studies as an academic field have their beginnings in the 1970's (Wei 2011, 29). It is also possible that as there is no single best practice for videogame narrative design, or videogame development in general, and development is extremely resource demanding, as a result there has not been much demand for such analysis.

Which led the author to the original question and eventually to this work: Can the understanding of videogame narrative structures be furthered by analysis of structure? This question was then quickly followed by: Do any tools or paradigms existed which could be useful in such analysis? These two questions, and their further definitions in the following Chapter, are the main sources of inquiry steering this work.

The goal of this work is to provide a concise and practical body of work with which students and those interested in entering the game development industry from the angle of writing and narrative design might better come to an understanding the nature of videogame narrative and the significance of narrative structure as part of crafting narratives. As well as hopefully to provide a conversation starter for furthering the field of videogame narrative design by covering topics which might benefit from more focus of examination and understanding.

In the interest of keeping this work brief, and within given guidelines, the scope has been limited to a very narrow view of videogame narrative. Topics such as Interactive Fiction, which can be considered a part of interactive narrative, will not be addressed. Similarly, chronologically linear media, such as films and books have but for a very limited number of examples, when required to aid in comprehension, been left out. Videogames with linear narratives are also considered in large part beyond the scope of interest, because the methods of analysis are so similar to traditional media analysis and those analysis materials are abundant and easy to access.

Even with the aforementioned limitations, throughout this work there are multiple examples of every theoretical and practical concept the author has been able to find, either in the acquired material used for the theorybase, or based on the author's own knowledge. Some of the source material examples given have also been expanded with more recent or interesting sources of similar phenomena. All of the examples provided are from videogames, and a comprehensive list of titles referred to can be found under Ludography, at the very end of the work.

Structurally this work begins with an inspection of the methodologies used, followed by adressing the foundations of narrative in Chapter 3, which includes an introduction to basic narrative structure. Chapter 4 focuses on interactive narrative, and how it differs from non-interactive narrative, and Chapter 5 provides a closer look at the theory of videogame narrative structure. In Chapter 7 the author provides an example analysis of a game narrative, based on the theory and tools by Huaxin Wei and her doctoral dissertation examined in detail in Chapter 6. And finally, Chapter 8 provides the findings, weaknesses and ideas for the future. Also woven into the theory sections of this work are comments from two industry professional writer / narrative designers, whom the author had the privilege to interview.

2   Methodology

2.1   Finding the subject

The Business Information Technology Degree programme (BIT or Tiko) at Jyväskylä University of Applied Sciences (JAMK) is one of four programmes operating under the university's School of Business. In the rest of the work I will refer to JAMK/Tiko when talking about the programme. A BIT student at JAMK may choose to specialize in either game development or software engineering. This work has been created in part to answer the needs if JAMK/Tiko to offer students material, and the beginning of a path, for narrative design or game writing interests.

The primary research problem which began the authors investigation into this topic was: Can the understanding of videogame narratives be furthered by analysis of structure, and do any tools or paradigms exist to assist in this task? Game narratives were chosen as the topic of interest out of both the author's personal investment and interest, and through discussions with JAMK/Tiko senior staff members on the significance of understanding narrative. The continuation the authors studies in writing and game design towards a thesis on the subject was deemed a good fit for both parties.

With some recent structural changes to the JAMK/Tiko curriculum for 2nd year students, it became apparent that aligning this work lightly towards the educating of other students about videogame narratives would further its usefulness at JAMK/Tiko.

Arriving to the topic at hand, *Narrative Structure of Videogames – Basics and Analysis*, is a result of a multi-year process. The specific topic was narrowed down to narrative structure for three reasons: suitable challenge, the availability of information, and the needs of JAMK/Tiko in providing students interested in videogame narrative with a source and a starting point of narrative material. Additionally, as expected of a thesis, this work serves to further the author's own understanding of the subject.

Like any academic work, the scope of this work is limited. In the interest of briefness some topics considered beyond the scope of this paper are: level design, pacing, emergent narrative, the role of narrative, Interactive Fiction (IF), and traditional narrative theory in anything but the very basics deemed necessary for understanding the rest of the work.

2.2   Method of Research

This study is a theoretical qualitative comparative study of professional publications on narrative design and game design (Tutkimusstrategiat, koppa.juy.fi & Vertaileva tutkimus, koppa.juy.fi).

The material for the work was gathered using a data triangulation strategy: 1) literature (and other materials) by industry professionals, 2) academic research, and 3) interviews with industry professionals. It was the author's belief that the triangulation strategy (Kananen 2008, 39–40) would improve the validity and further support the comparative nature the work. In a comparative study, multiple sources, or methods of research are compared where multiple sources of equal value on the subject are compared to each other to form a synthesis (Vertaileva tutkimus, koppa.juy.fi).

According to Kananen (2008, 24), qualitative research aims to uncover findings without the use of statistical or other quantitative methods. The goal of a qualitative study is the description, understanding and interpreting of a phenomenon in a comprehensive manner. Where analysis is generally the final stage of quantitative research, in qualitative research the process is cyclical and, in a word, free. In qualitative research the process of gathering information and analysis is repeated, which may then lead to further questions and to new discoveries and synthesis' when new information is brought to light as a result. (Kananen 2008, 24.)

Qualitative research concerns itself with discovering and explaining how people experience and see the world, as well as discovering the significance of said experiences. It is a study of processes

and phenomena which are too complex to analyze via statistical methods and is generally descriptive in nature and its main methods are inductive. (Kananen 2008, 25.)

The literature gathered for the use of this work was acquired mostly through various libraries, but also included some works previously owned or purchased during the writing of this work.

Huaxin Wei's doctoral dissertation, *Analyzing The Game Narrative: Structure And Technique*, was chosen as the primary academic source for this work due to its similarity in topic and its comprehensiveness.

For the third approach of the data triangulation strategy, thematic interviews were conducted with industry professionals. The interview subjects were chosen based on foreknowledge of experience and also largely by availability. The original intention was to interview three subjects, but despite multiple attempts, due to conflicts in scheduling and priorities only two subjects were interviewed.

These three different sources of information were eventually synthesized into the resulting thesis, and to the analysis of a game's structure, The Gardens Between in Chapter 8 using the game narrative analysis framework suggested by Wei in her dissertation.

2.3   Thematic Interview & Interviewee biographies

In a thematic interview, the questions to be asked are organized thematically prior to the interview (Kananen 2008, 73). It is beneficial to have decided upon the primary research questions prior to conducting the interview, as the research questions are a good indicator of the themes of interest, which are a prerequisite to conducting a thematic interview (ibid.).

For this work, in preparation for the interview a preliminary list of questions were written out based on the themes found via the primary research questions. Thematic interview was chosen as the most suitable method of interview due to: 1) the lack of foreknowledge of the nature of the interviewee's answers, 2) the relative lack of knowledge on the subject, 3) the subjects were to be industry professionals with a superior understanding of the subject and which is why it was deemed necessary to be able to ask additional questions, and 4) it was unknown whether the intervie subjects would have time afterwards to respond to additional questions (Routio 2007; Kananen 2008, 74).

Approximately a week prior to the interview both interview subjects were e-mailed a brief, in which along with the primary research questions the author included the question themes, and a link to the doctoral dissertation by Huaxin Wei, accompanied by a note they focus their attention on Chapter 7 of the dissertation.

The themes chosen for the interview were: Academic & Theoretical, Narrative structure, and General Narrative Design.

Prior to beginning the interview proper, both subjects were asked if they agreed to appear with their own names, and trusted the authors transgression in what was to be published. Both consented on both accounts. Additionally, as the interviews were recorded, verbal consent from both interviewees was established prior to beginning the recording.

Because of the thematic interview form, some additional questions were asked ad-hoc of each subject as was deemed necessary and beneficial for understanding of the topics discussed and the interviewee's points of view.

As suggested by Kananen (2008, 80), following the interviews, the recordings were then transcribed, meaning the recordings were written out word for word, and roughly time-stamped by the author. The resulting texts were then first highlighted by theme and further based on specific subjects discussed. The material was then used for selecting which portions of the interviews to include in the work. For this purpose to the selected passages were relistened to make sure the transcription was accurate and to add more exact timestamps to the chosen transcript segments.

For the original set of questions drafted prior the interviews, divided by theme, see Appendix 1.

A transcript of the interviews can be found under Appendices (Appendix 7 & 8). In the interest of briefness, only the questions and answers found in the work are included; The original interview transcripts are each tens of pages long and would have made an already lengthy work even more cumbersome.

Interviewee biographies

The two interviews for this thesis were conducted in July 2018, individually, and on separate occasions. The subjects were Christy Marx and Gregory Louden.

Christy Marx is a writer of comics, animation, and games, with an extensive resume in each field. With numerous titles credited to her, she is a veteran writer with more than 30 years of experience in game writing and design. Marx has also written a book on writing covering multiple disciplines called *Writing for Animation, Comics and Games*. The interview was conducted over Skype and recorded.

Gregory Louden is a game designer, writer, narrative designer, and level designer, and the Head Convict (CEO) of Convict games, founded in 2017. Louden is a former Remedy lead level designer and later narrative designer for Quantum Break, and prior to departing from remedy also the lead narrative designer for Crossfire 2 and CONTROL. After Remedy, Gregory joined 3rd Eye Studios to work on Downward Spire: Horus station as a lead designer. Working on their first game since 2017, Convict Games, a global collaboration of game developers, released STONE in September of 2018. Louden's interview was conducted in a coffee shop in Helsinki and recorded on two different devices (a phone and a tablet) to account for any issues in the recording or device malfunctions.

2.4   Research Questions and objectives

The main research questions of this work are:

- What is narrative, and narrative structure?
- What is videogame narrative and structure?
- Do any analytical tools exist for understanding videogame narrative structure, and if yes, are they useful?

It is in the interest of the author that the reader of this work comprehends the later chapters, and thus it was necessary to introduce the basics of narrative as a foundation to build further information. This is equally true of the purpose of this thesis as source material for the authors peers, others students of JAMK/Tiko, whom find the topic interesting. What is narrative, and narrative structure, and What is videogame narrative and structure assess these concerns.

Whether any analytical tools for understanding videogame narrative structure exist and how useful such tools might be for the purposes of this thesis is the third and final question, and the main research question of this work. The investigation of Huaxin Wei's doctoral dissertation was chosen

as the source to address this question. The usefulness of the analysis framework suggested by Wei is examined through application in Chapter 7.

The primary goal of this thesis is to provide JAMK/Tiko with source material for further use in the analysis of videogame narratives, and possible other related educational purposes. The secondary objective is to provide a resource for anyone interested in developing their understanding about the development of videogame narrative. Finally, the tertiary goal is to further the author's understanding of the topic.

3   Elements of Narrative

Narrative is a report of related events presented . . . in words arranged in a logical sequence. (Narrative, literarydevices.net)

The above is a narratological definition of narrative. A story is what happens within the context of the narrative, and it can be described as the flow of the narrative. In human storytelling, *characters* act as a vehicle which inhabit a setting and have a certain role within the world. *Setting* defines the world in which the events of a story take place. (Dansky 2007, 2–3.)

Plot is an "arrangement of incidents" which make up a story; it is what holds a story together (Jacobs 2007, 26). Theme is what unifies the narrative work (Schell 2015, 59). All narratives have a structure, which Chapter 3.5 will examine further; however, most human made narratives have a beginning, a middle and an end.

3.1   Plot

In a narrative or creative writing, a plot is the sequence of events that make up a story, whether it is told, written, filmed, or sung. The plot is . . . how the story develops, unfolds, and moves in time. (Plot, Literaryterms.net)

According to Dille & Zuur Platten (2007, 26), the plot of a story is what one responds to when someone asks one to tell a story. Simply: the plot is an account of dramatic tension, created by a conflict and experienced as a result of a jeopardy or challenge (ibid.).

Wei (2011, 100) describes game plot as "If text is the material artifact and story is the 'raw' sequence of events that happened in a game, plot can be seen as the organized experience of the game".

The five basic elements of a (tragic) plot, as presented by Wei (2011, 97) are: Exposition (Beginning), Rising Action, Climax (Middle), Falling Action and Resolution (End). These elements are also called a "Freytag's Triangle" or a "Freytag's Pyramid", named for Gustav Freytag who further developed and then visualized the five principles of plot originally written by Aristotle in his work *Poetics* (350 BCE) (Jacobs 2007, 26).
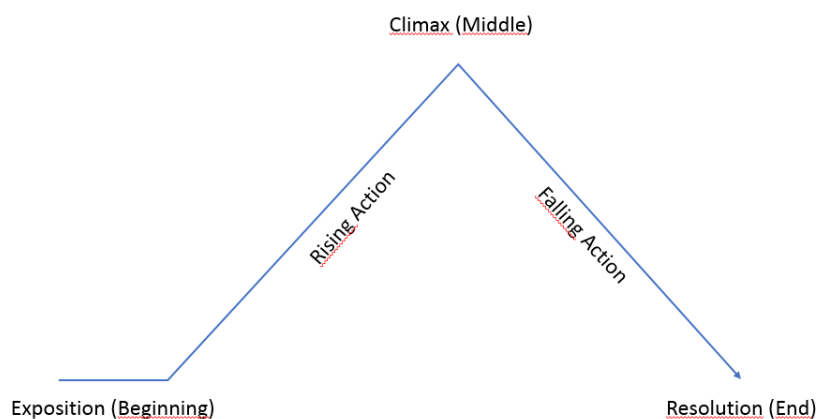
Figure 1, The five basic elements of plot, or "Freytag's Triangle" (adapted from Jacobs 2007, 27).

3.2   Character

A character is a person, animal, being, creature, or thing in a story. Writers use characters to perform the actions and speak dialogue, moving the story along a plot line. A story can have only one character (protagonist) and still be a complete story. (….) Most stories have multiple characters interacting, with one of them as the antagonist, causing a conflict for the protagonist. (Character, Literaryterms.net.)

Jacobs (2007, 35) quotes Aristotle himself having stated: "No character, no story." Regardless of the media, at least one character in a story must be relatable or interesting in some other way. The character can be likeable (evoking a feeling of empathy), or not (evoking feelings of dislike and distrust). Similarly, for a story to be meaningful, a character must change or develop either in a positive or negative way, and it is entirely possible for multiple characters to change in response to the plot. This is one of the main challenges in writing fiction and characters. (ibid., 35.)

Most characters have a physical body, a set of senses and responses, a gender (or several) and an expression of their sexuality. They also have a race they belong to, a family, a role or status in their society, desires, fears, strengths and weaknesses, flaws, history, and they have a way of expressing themselves and a nearly infinite list of other traits. (Walsh 2007, 120–121) (Dille & Zuur Platten 2007, 77–83).

Syd Field (2005, 63) states that there are four key qualities in creating a good character: dramatic need, individual point of view, a personal attitude, and they go through a change or transformation. No matter the complexity of the template a character is based on, characters are a great deal more than a list of traits and measurements; each character is a unique autonomous individual with their own set struggles and weaknesses. (Heussner, Finley, Hepler, & Lemay 2015, 85–95.)

Conflict

Conflict is the result of competing desires or the presence of obstacles that need to be overcome. Conflict is necessary to propel a narrative forward; the absence of conflict amounts to the absence of story. (Conflict, Literary Devices.)

In Video Game Storytelling, Evan Skolnick (2014, 7) writes "The fuel of fiction is conflict." In his book Screenplay (2005, 25), Syd Field states: "All Drama is Conflict. Without conflict, you have no action; without action, you have no character; without character, you have no story, and without story, you have no screenplay." In her book, Writing for Animation, Comics and Games, Christy Marx (2007, 163) states that conflict can be internal or external; physical or emotional; social; spiritual; relational or psychological.

Flint Dille and John Zuur Platten (2007, 26–28) list seven different conflicts: protagonist vs. 1) antagonist, 2) nature, 3) self, 4) destiny, 5) technology, 6) society, and 7) fate.

Dialogue

Characters express themselves through dialogue. Good dialogue often also expresses the characters' emotional state, and great dialogue gradually reveals more of the character's persona (Heussner et al. 2015, 178–179).

3.3 Setting

Setting is the time and place (or when and where) of the story. It is a literary element of literature used in novels, short stories, plays, films, etc., and usually introduced during the exposition (beginning) of the story, along with the characters. The setting may also include the environment of the story, which can be made up of the physical location, climate, weather, or social and cultural surroundings. (Setting, Literaryterms.net)

Setting defines the world in which the events of a story take place, and which includes but is not limited to all aspects of culture, science and metaphysics. The closer to the real world a setting is, the less exposition and effort is required to make it understandable, and vice versa. (Dansky 2007, 3.)

The act of creating a setting is often called worldbuilding; however, a setting does not need to be anything that grandiose; defining a setting merely means that all narratives require a sense of place and time; even if neither are highly specified. Nothing happens nowhere. (Heussner et al. 2015, 49.)

3.4   Theme

As a literary device, theme is the central topic or idea explored in a text. Usually the theme of a work of literature can be stated in one word, such as "love" or "solitude." A work of literature can, and often does, have more than one theme. The theme is generally not stated explicitly in the text, but instead is expressed through the characters' actions, words, and thoughts. (Theme, Literary Devices.com)

According to Heussner et al. (2015, 110–111) all stories and experience leave the experiencer with an implicit message whether it was the creator's intention or not. This is what a theme is; it is what the story is about, the idea, the deep meaning. Not knowing what the theme of one's story is will likely make for a much less satisfying experience (Schell 2015, 59.) (Dille & Zuur Platten 2007, 31). A theme may be about many things; some common themes are: salvation, power, love, and revenge (Dille & Zuur Platten 2007, 31). The primary role of a theme is to unify; a single theme will ensure all elements, including people, work better together and help reinforce another be it a theme of a book, of a party, or of a videogame (Schell 2015, 59).

3.5   Basic Structure

Structure is like gravity: It is the glue that holds the story in place; it is the base, the foundation, the spine, the skeleton of the story. – Syd Field (2005, 21.)

Aristotle was to the best of our modern knowledge the first to express the now ubiquitous three-act story structure in a succinct way. "A whole is what has a beginning and middle and end." (Skolnick 2014, 12).

According to Skolnick (ibid., 20), the Three-act Structure of Act I: Beginning; Act II: Middle and Act III: End can be identified within nearly all works of traditional chronologically linear media such as

books, film/TV, and theater. Similarly, it can also be found in non-fiction media such as newspapers and television news (Booker 2004, 2). As for games, the more emphasis the game experience puts on story, the more likely the elements of the three-act structure are to be found. In general, games tend to focus more on Act II and Act III (Skolnick 2014, 20).

There are many interpretations and extensions to Aristotle's work; nevertheless, his work remains a staple of crafting stories to this day, roughly 2300 years later (Jacobs 2007, 25).

The following will present two commonly used adaptations, and expansions, to the classic three-act structure.

Syd Field's Screenplay Paradigm

In 1979, Syd Field (Field 2005) published the first edition of his book *Screenwriting*, which suggested a simple expansion to the three-act story structure when applied to film, to help aspiring screenwriters better understand the structure of film and their own screenplays. The book has since been updated and republished half a dozen times. In the *Screenwriting,* using the industry standard of "one page of screenplay roughly equals one minute of film", Field's paradigm suggests specific lengths for each act in pages. Act I, which he calls Set-up, is pages 1 to 30; Act II, Confrontation is pages 30-90; Act III, Resolution is pages 90–120 (ibid., 21–30), and includes the addition of two plot points, events which signal the transition to a new act at roughly 20–27 pages and 80–90 pages of the screenplay length respectively (ibid., 143).

Field's paradigm is criticized for being overtly rigid and formulaic (Gay N.d.), although Field considered his work as a guideline or "paradigm" rather than a set of rules (Field 2005, 21 & 163), stating his work "is a form, not a formula" (ibid., 28).

The Monomyth

The Hero's Journey (1990) by Joseph Campbell, also known as The Monomyth, is combination of Carl Jung's concepts of the "collective unconsciousness" and Campbell's work from *The Hero with a Thousand Faces* (1949), originally written by Campbell as a study of folklore and myths of old. The Monomyth has been adapted as a story creation method by many storytellers in cinema and games, which is in large part thanks to *Star Wars* (1977) by George Lucas, who at the time was a vocal advocate of the theory's influences on the creation of the now classic film (Jacobs 2007, 32; Skolnick 2014, 27).

The Monomyth's most noteworthy separation from Aristotle's principles and a reason for the critique of using it as a framework for creating new stories (Schell 2015, 309) is how Campbell's theory deals with character archetypes (Skolnick 2014, 28–32; Jacobs 2007 35–38) and individual elements of story structure, which many ancient myths have in common, in finer detail than previous works on the subject (ibid., 32–36; Jacobs 2007, 27–30).

Criticism of Structure

Without context and understanding its limitations, using *The Hero's Journey* as a blueprint can have serious, industry wide adverse effects on narrative variety and richness. According to Skolnick (2014, 37), The Monomyth "will not magically turn you into a professional writer or story editor — the monomyth is not a template used to create a story from scratch", but "more of a checking tool" for "when something doesn't feel quite right–". This is echoed by Schell (2015, 309) stating that it is better to write the story first, and then see if adding "archetypal structures and elements" might improve the story, quoting Bob Bates (2004) "The Hero's Journey isn't a box of tools you can use to fix every story problem."

This is equally true for all such simplified models, as in *Story: Substance, structure, style and the principles of screenwriting* where Robert McKee (2014, 1) writes: "All notions of paradigms and foolproof story models for commercial success are nonsense." Maintaining a critical view of any shortcuts, models or paradigms is crucial to the process of creating. It is equally important to keep an open mind for their possibilities when used wisely, which is a view Gregory Louden expressed when asked about the usage of story models, stating that using pre-existing structures without remaining critical can lead to predictability, but that as a starting point these models have their uses (Louden interview, 51:23–51:40).

4 Interactive Narrative

According to Ince (2006, 47), interactive narrative can be described as an experience where the narrative unfolds as a response to the actions of a participant. In the context of videogames, the player makes these actions or gameplay choices.

Another way to describe this is that interactive narrative should convince the players they are in control of their experience (Heussner et al. 2015, 105).

The narrative may respond to the player's actions on a character, plot, or story level (Ince 2006, 49). Any combination of these responses is possible. However, according to Schell (2015, 47), games are "A problem-solving activity, approached with a playful attitude." Game design commonly favors interactive plot, or story, over character development. This is because most often the player is the character, which makes anything but the most basic character change (level, power) a major development challenge. This necessitates that the actions the player can take are included as part of the narrative, which are dependent on the narrative. (Ince 2006, 48–49.)

Several games have significant and impactful narratives; however, simply having a story in a game does not make it an interactive narrative. Several well-received games with good story deliver it in a strictly linear fashion without much interaction afforded to the player. (ibid.). Similarly, Feil states that the player's attention will always be divided between the gameplay and the narrative elements; humans are not very good at multitasking and it is thus important to pace the narrative moments between moments of gameplay (Feil 2009, 30).

Games are interactive, and many games have been designed to start with a rush of excitement, giving the player control of intense action from the very beginning, which is why games often lack Act I either entirely or it is very brief, presented as a cinematic, or as a flashback. (Ince 2006, 21 & 24.) This approach is the most common in action games, e.g. Uncharted 3: Drake's Deception (Naughty Dog 2011) which begins immediately after a train crash, the player character Nathan Drake gripping the outside of a train cart which dangles over a ravine.

4.1   Game Narrative

Defining what game narrative means is like attempting to define "the world". It is easy enough to define a single environment (game) or even country (genre) to an extent, however, while all stories have a great deal in common and are made from similar elements, game stories are vastly different to one another. For example, racing games, such as Mario Kart 8 (Nintendo EAD 2014), can be thought of to contain barely any narrative elements, yet in the case of Mario Kart 8, the story is "Mario and friends racing against each other". Compare that to a two-million-word epic like Star Wars: The Old Republic (Bioware Austin 2011). These are both games with story and narrative; yet, they are worlds apart in presentation and depth of narrative content. (Heussner et al. 2015, 107.)

It is common, even among professionals, to consider game narrative to mean nothing but story. Story is a crucial ingredient of narrative; however, not all narratives require a story. In *Game Writing: Narrative Skills for Videogames*, Richard Dansky (2007, 1) defines game narrative as: "the method by which the story materials are communicated to the audience". In other words, as part of game narrative, story is the launching point, not the entirety of game narrative (ibid.).

To further define these story materials, game narrative consists of several separate but interwoven elements, which vary from game to game: story, character, setting, backstory, cut scenes or cinematics, scripted events and in-game artifacts (ibid., 2–5). Most of these have already been presented in Chapter 3. In the following, the elements which make game narratives unique are briefly examined.

Game narrative elements

Cut scenes are generally short videos which are either made In-engine, which can be pre-rendered (the cinematic has been created by using the game engine but with much higher detail than what the game looks like when played and then captured), or created within game engine in real time, or even full motion video with real actors such as in the Command & Conquer: Red-Alert series (Westwood Studios & Electronic Arts). Cut scenes are static; for interactive cut scenes see Chapter 4.6. They are often used for exposition; to explain something to the player they might not otherwise have access to, such as events, motivations or character details. A common use of a cut scene is a mission briefing or debriefing in military themed games. (Dansky 2007, 4.)

Game introduction sequences or intros are usually cinematics, composed of editing multiple *cut scenes* together to introduce the setting, character and backstory to the player. A *scripted event* differs from a cut scene only in that during a scripted event, the player usually but not always retains some control over the game. One exception to the rule are camera cases, in which the player temporarily loses control of their avatar, while the in-game camera does something not part of the usual gameplay such as displays a looming threat, or an objective the player needs to be aware of. Half-Life 2 (Valve Corporation 2004) is a well-known example of scripted events utilized to illustrate goals and threats to the player through NPC interaction. (Dansky 2007, 4.)

In-game artifacts can be items of significance to the game and narrative progression, such as keys or passwords. The items may exist to expand the player's understanding of the setting, backstory and character motivations (e.g. diaries, e-mails or audio logs), or may have symbolic significance,

for example *The Clicker* in Alan Wake (Remedy Entertainment 2010) or any combination of these (ibid., 4–5).

According to Dansky (2007, 5), the purpose of game narrative is to bind the events of a game together. Which is not unlike in other media. Narrative in games can be called a justification or a reason, or even an excuse to engage in gameplay. When a narrative is working as intended, it can be seen to pull the player forward within the gameplay experience, feeding the player's curiosity to see what comes next as well as their desire to achieve their goals. (ibid.)

4.2   Theme

Only recently have games with meaningful themes began to emerge (Heussner et al. 2015, 110–111). This is partly due to how videogames are just now beginning to be considered a serious medium of expression (Schell 2015, 58).

As mentioned in Chapter 4.4, all stories and experiences leave the experiencer with an implicit message whether it was the creator's intention or not. Without a planned theme, games often end up with a theme of "good vs. evil" and games where the player is an anti-hero, the theme often becomes "do whatever you can to win". (Heussner et al. 2015, 110–111.)

Christy Marx has found that theme is an "extremely important part for telling a story", because theme is equal to "what does the story have to say". A theme isn't what the story is about, but what is underneath, what it says to you. (Marx interview part six, 0:38–1:35.)

Ideally, deciding on a theme informs the entire creative process of developing a game and ultimately makes the resulting game a stronger, more powerful experience for the player (Schell 2015, 59). A very common theme in videogames is heroism wrapped around Campbell's Monomyth (Ibid., 308). As detailed in Chapter 4.5, using the same structure for everything is likely not an entirely positive prospect for any form of narrative.

In interviewing Christy Marx, she observed that one common theme in games is redemption, and that it works well in games (Marx interview part six, 2:14).

Gregory Louden also stated that bringing theme into the conversation of game stories would be valuable and that thus far it hasn't been a topic commonly discussed, perhaps because on average game stories may still be a little immature (Louden interview, 55:00–56:47). This latter statement

is also echoed by Marx in stating "A great deal of game writing is shallow and trivial unfortunately" (Marx interview part six 1:56).

Marx also adds that artists especially need to know what the theme of a game is, as it is directly linked to their work in setting the visual tone (Marx interview part six, 5:54).

4.3   Interactivity

In *The Game Narrative Toolbox* Heussner et al. (2015, 105) explain that although each story and narrative is different depending on the game type and who the developer is, "the one thing even the simplest videogame stories have in common is that they are, by definition, interactive (…) interactivity sets games apart from traditional media".

For a significant portion of the history of videogames, a need to justify the lack of narrative has existed, which has been largely based on the assumption that players need to be in control of the game. The idea that a story requires explicit telling to the player has also been a contributor to this issue. As a result, story was for a long time seen as the antithesis of interactivity, and therefore of games as well (Heussner et al. 2015, 105). There are two reasons why this is no longer the case: many players demand for an engaging story and are willing to forego some of their freedom in exchange for added meaning, and narrative creators have expanded their toolbox with means to imbue gameplay with narrative in ways that do not prevent player action (ibid., 105–106).

In *Writing for Video Games*, Ince (2006, 13) states that during a movie theater experience the audience has no control over the presentation; a book only allows the turning of pages and a home theater system extends the actions possible only slightly further; however, none of these are interactions with the narrative, only the method of delivery. These traditional media experiences are as the creator intended, for everyone, every time. Interactivity is the what separates games from most other media; games are inherently interactive, and within the limits of the game system the player has a choice for how perform that interaction (ibid., 13.)

Some games such as The Elder Scrolls V: Skyrim (Bethesda Game Studios 2011) owe a significant portion of their popularity to giving players a great deal of freedom to play the game and modify it in their own way (Noclip 2018).

Most games require near constant input from the player or players to advance (Ince 2006, 15). Games react to the player's actions, give feedback of those actions and prompt further action. The interaction can be related to narrative, gameplay, or the player character or character group the player controls (ibid.). The level of interactivity depends on the type of game; older arcade games such as Pong (Allan Alcorn 1972), or Tetris (Alexey Pajitnov 1984) have a very limited scope of interaction. (ibid., 15–16).

According to Iche (ibid., 16), the amount of variety in gameplay interaction matters. Large open-world games, such as The Elder Scrolls V: Skyrim, Fallout 4 (Bethesda Game Studios 2015), and Mad Max (Avalanche Studios 2015) encourage the player to experiment and be creative, i.e. to play within the game.

4.4   Player Agency

Agency describes the players' belief in their choices and actions being the driving force behind the story and events. Simply put, when the player succeeds in a task, the next plot point follows because of their success. (Heussner et al. 2015, 106.) For example, the player has just saved an NPC named Henry from embarrassment by preventing their rival from obtaining their diary during a house party, and in return Henry offers to influence the swimming coach to let the player join, which the player needs to get closer to their love interest.

According to Boon (2007, 63) another way to view Player Agency is that it refers to the players' ability to make meaningful choices which in some way impact the game. As all games are limited systems defined by sets of rules, these rules and limitations determine what choices are possible to make (Heussner et al. 2015, 106). Similarly, in interviewing Christy Marx, she stated that when the player is given a choice it must have meaning and for that to be the case the choice must impact the game (Marx interview part five, 5:05).

Meaningful choices come in various sizes, from choosing equipment to saving a planet or a companion. Regardless of the size and impact, the choices and their consequences should, according to Heussner et al. (2015, 113), "always be visible to the player".

Agency is what often makes or breaks a game scene or even an entire game. A common perspective of fiction is that action is more interesting than reaction, and it is important the player feels

smart by coming up with ideas and solutions (action) instead of being told what to do, or worse, how things happened. (ibid., 106.)

In interviewing Gregory Louden, he expressed that one of his principles for creating game narratives is "Play, don't show" (Louden interview, 22:45), which is a twist on the screenwriters' and film makers' axiom "Show, don't tell" (Skolnick 2014, 56–58). Louden also stated that in designing game narratives he always thinks of what the story is and once that becomes clear, the focus becomes how the player is able to affect the story (Louden interview, 26:25 & 26:37).

Louden said that in adaptive storytelling, if the player (audience) is immersed and engaged, and not just being a passive observer, the story will be stronger for it because agency in terms of story impact is important to take into consideration. And without agency it would be "easier to make a movie", because on average making a narrative game experience is more expensive than a cinematic one. (Louden interview, 30:37–32:58.)

4.5   Character development & limitations

Unlike in films or novels, characters in games are not static; they are either inhabited by the player or act as NPCs with which the player can interact with and whom have a role to play in the game (Heussner et al. 2015, 79).

According to Ince (2006, 48), it is rare for the narrative to respond on a character level. Character development, as it is more commonly known, is a change in who the character is, not just an improvement of skills or increase in power.

The most common reason for the lack of character development in interactive narratives is development cost. Building a sufficiently robust engine to allow for subtlety in changes of character animation, cinematics, as well as the increases in requirements to write the dialogue of such characters—and as a result the responses from other characters dialogue—will quickly get costly to maintain and develop, especially if the character dialogue is to be voice acted. (Ince 2006, 48.)

An alternative for interactive characters without actual character development is to develop a system which responds to gameplay in a more generic fashion. For instance, in games where the player is part of a squad, the squad member's prewritten short interjections, also known as

"barks" to developers, can be given variety to allow responding and reacting to the players' actions. (Ince 2006, 48–49.)

As discussed in Chapter 3.2, without conflict there is no story, and similarly, without conflict there is no game. Conflict is when a character's desire is in opposition with someone or something else. This something prevents the character, and by proxy the player player, from fulfilling that desire (Skolnick 2014, 7). At the core, character is action, and action presents character, and like films (Field 2005, 206), games are about action. The player is the character, the actor.

It is of note that while it is beyond the scope of this work, videogame character design and creation is a crucial part of the process of narrative design. Furthermore, videogame characters have different requirements than characters in other media (Schell 2015, 345–365).

4.6   Interactive Cut Scenes and Cinematics

It is becoming increasingly common for game developers to veer away from static cut scenes and cinematics. Interactive cut scenes, also known as quick-time events, are a combination of a cinematic scene interlaced with action prompts for the player to respond to. (Iche 2006, 16.) The rebooted Tomb Raider (Crystal Dynamics 201) and its sequel Rise of the Tomb Raider (Crystal Dynamics 2013) are good examples of games with high intensity cut scenes of varying lengths where player input is required via hitting buttons in a certain way for the action presented to succeed. In these two games, player failure to respond quickly enough often results in the player character's demise.

Another example is The Walking Dead: Season One (Telltale Games 2012), where a major portion of the gameplay consists of interactive cut scenes which are often linked together to form longer interactive cinematic sequences.

4.7   Railroading

When the player is forced to make a narrative or gameplay choice which is in opposition with their previous choices, or when the they are denied access to some of the tools previously available, this is imposing authorial vision upon the player, also called railroading. For example: in Deus Ex Human Revolution (Eidos Montréal 2011), whether the player has chosen a non-lethal approach to

progress through the game or not, "the boss encounters" still require the player to kill the characters to move forward in the game. (Heussner et al. 2015, 118.)

According to Heussner et al., (ibid.) railroading is not bad by default, and it is quite common in the industry due to finite budgets and development schedules. However, if executed poorly enough or it happens too often, the player will get wise to the railroading effect and the developer risks losing players' interest (ibid., 119).

An out-of-control branching narrative will quickly sink a game project. This is one of the situations when revealing the railroad tracks can be put to good use (ibid.).

No matter how much one wishes to convey a powerful story, it is good to remain cognizant that the storytelling must work together with the game, for without the gameplay to engage in a player will quickly lose interest and look elsewhere (Danuser & Seamster 2009, 2). According to Ince (2006, 20), not counting the freedom of gameplay, the only realistic way to create interactive narrative is for the story to respond to player actions by giving the player a pre-determined choice of options.

One way to distinguish game narratives, and to offer options to the player is to design a more complex narrative structure. These structures can be divided into four rough categories: Linear, branching, foldback and Emergent narratives (Heussner et al. 2015, 107; Wei 2011, 85). The following Chapter explores these videogame narrative structures in detail.

5   Videogame Narrative Structure

Narrative in games exists to structure the game and to guide the players. Stories give meaning and motivation for the player to achieve even abstract goals. There are only so many fantasy creatures one kills with joy before a longing for meaning sets in. (Adams & Dormans 2012, 228.)

As discussed in previous chapters, like all narratives and storytelling, game narratives are created with the same basic principles as those found in books, theater, cinema or television. As Evan Skolnick writes in his book, *Video Game Storytelling (2014, 12)*:

One of the oldest and best-known story models is the Three-Act Structure. The word 'act' might seem to imply that this paradigm only applies to plays, but don't be fooled. – nearly all stories are built pretty much the same way. And it is okay.

While true and "okay", there is an aspect to videogame narratives which makes them different: the way game narratives are structured: Most videogame narratives are linear, yet, branching, and other types of, narratives are another common solution (Adams & Dormans 2012, 229). This chapter explores videogame narrative structure in more detail.

When discussing the subject with Gregory Louden, he expressed his thoughts on what narrative structure means as "the beginning middle and end of the story", and "how you define . . . the twists", but that narrative structure is also how the story of a game is conveyed, be it through cinematics or animations, whether the player is moving or not. (Louden interview, 20:25–21:03.)

Christy Marx expressed similar thoughts: Marx thinks structure is also about all the practical details of a project, the tools at her disposal, what the platform is, what genre is the game, what other parameters are there — such as the budget and target audience. The structure of a game, then, is what can be delivered within the production realities of a game development project. And that in order to know what kind of narrative structure you can create, you have to know all of these parameters in advance. (Marx interview part two, 0:23–2:40 & 10:53–11:43)

Marx also points out, that another aspect of structure is the media itself; Screenplays, TV-episodes, animation, comics all have their own types of structure and principles. But, as she got into games, Marx discovered games are different in that "there isn't just A structure, there's a whole [redacted] ton of structures. (Marx interview part two, 13:37–14:17.)

5.1   Linear Narrative Structure

In games with a linear narrative structure, the game's story is often presented to the player in between moments of gameplay (Ince 2006, 49). This has become an established solution in game design, because cognitive psychology and game user experience (UX) research has shown that the ability to pay attention to narrative during actively partaking in gameplay is limited (Hodent 2017,

55–57). Equally, linear games mean that each player experiences the same events each time (Heussner et al. 2015, 107).

Linearity should not to be confused with straightforwardness (ibid.). Games such as Prey (Arkane Studios 2017) have a linear story; though most players experience the events of the game in the same order on every play through, player agency together with plot twists makes it anything but straightforward.

In this chapter's figures, and for the remainder of this work, in figures representing narrative structure the squares are moments of gameplay, and the arrows moments narrative or fragments of story (dialogue, cut scenes, cinematics). Figure 2 below is a visualisation of a linear narrative structure, which begins with gameplay, and ends in a story moment.
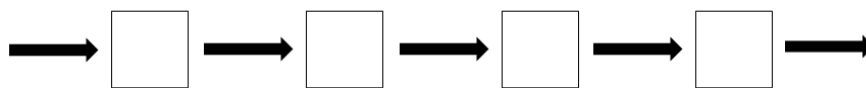
Figure 2, Linear narrative and gameplay structure (adapted from Ince 2006, 49.)

According to Heussner et al. (2015, 108), although linear narratives may at first appear to work against interactivity, many games successfully tell stories within a linear structure. Even games such as the Uncharted series (Naughty Dog), largely influenced by action movies, use linear story structure to achieve the feel of an emotional arc (ibid.).

Gameplay is considered linear when the gameplay options afforded to the player remain relatively same throughout the experience, meaning no significant alternate modes or variety are introduced, and any changes or complexity added do not affect the narrative. However, if the player has multiple ways of solving a particular problem, then gameplay is no longer considered linear. (Ince 2006, 49.)

The story fragments, can be thought of as rewards to the player for completing the gameplay section. However, it is imperative this is not made obvious to the player. The story fragments are a

type of nudge given to the player and can take the form of e.g. "here is a map of the area, there are these locations you have not visited yet", or "this character knows there is a secret entrance to where you are headed, but you will need to do something for them before they will tell you". (Ince 2006, 49).

When the player has more than one option to solve a problem, the gameplay becomes non-linear. The story can remain linear or can be designed to adapt to the players' choices. Figure 3, below, is a visualization of a linear narrative structure (arrows) with non-linear gameplay (the squares). The benefit of this type of gameplay and story structure combination is that it retains relatively open gameplay without compromising the narrative impact. (ibid., 50.)
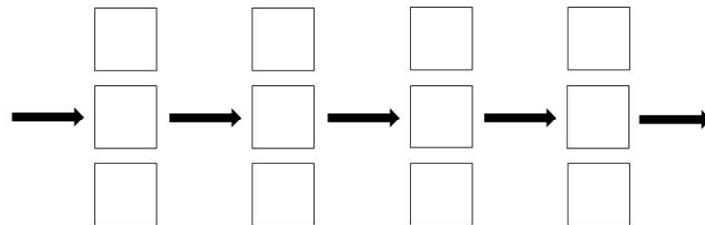
Figure 3, Linear story, Non-linear gameplay (adapted from Ince 2006, 50).

5.2   Branching Narrative Structure

Whether the story is affected by player actions is a question that needs to be addressed reasonably early in the development of a game. The cost both in time and money grows exponentially the more complex the gameplay and the structure of the game narrative are designed. (Ince 2006, 50–51.)

According to Heussner et al. (2015, 111), most if not all computer Role Playing Games (cRPG) claim to be non-linear, and yet many of the same games are considered "story-driven" by the developer. This is a contradiction, as a truly non-linear experience means high player agency but lacklustre delivery of a meaningful story (ibid.)

Games such as the Mass Effect Trilogy (Bioware 2007, 2010 & 2012) and games by Telltale Games are called branching narratives, because the player's choices affect the plot and gameplay of these games to various degrees (Heussner et al. 2015, 111). A branching narrative structure is named for its resemblance with the branches of a tree; the trunk represents the main storyline (examined further in Chapter 7.2.2) and the branches the possible variations and endings (Dille & Zuur Platten 2007, 20).

Heussner et al. (2015, 113) state that "branching narratives are all about giving the player choices" and that in order to respect player agency the "game's design must honour those choices" regardless of the level of impact, the player's choices are only meaningful if they have clear impact to the game world or characters.

If the game narrative is designed to respond to the player choices be it gameplay or dialogue, the game's narrative structure branches into multiple alternative storylines (Ince 2005, 50). Figure 4 on the following page represents branching narrative with two options offered to the player on each step. Unchanged, the branching would lead to ∞ variation.
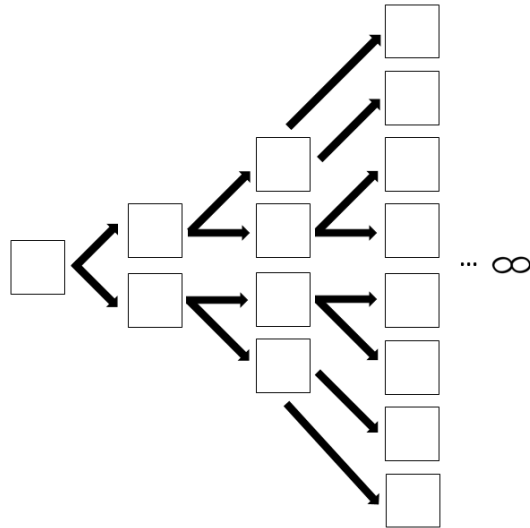
Figure 4, Branching narrative, endless (adapted from Ince 2006, 50).

The rapidity of the branching depends on the number of choices the player is offered at each step. From the player's perspective it would be ideal to have complete control over the story. However, at least for the time being, this is not feasible due to development costs, as discussed before. (Ince 2005, 50.)

Studies have found only a minority of players complete games, let alone replay games (Rouse III & Abernathy 2016).

Parallel Narrative

One approach is to give the player an early choice in the narrative and then follow their chosen path to the end of the story (Ince 2005, 51), as pictured in Figure 5 below.
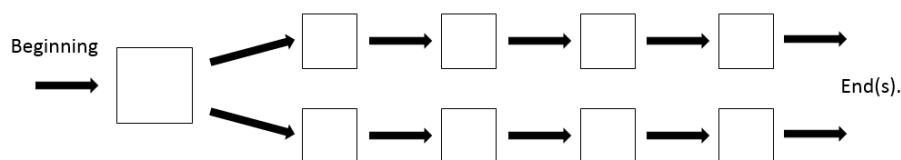
Figure 5, Parallel narrative (adapted from Ince, 51).

Parallel narrative is also called Limited Branching and was a staple of adventure game structures in the past (Dille & Zuur Platten 2007, 20). This type of choice supports both the players in their desire to make meaningful choices and the realities of game development. It is possible to create open gameplay between each story node of a parallel narrative structure. It is also a possibility to offer the player an opportunity to switch paths later, further allowing for the illusion of freedom. (Ince 2005, 51.)

As with any type of branching narrative, one potential disadvantage of parallel narrative structure is that if the player is not interested in replaying the game—or worse if the player does not feel the experience was engaging—a significant portion of the resources used in development might have been better used elsewhere (ibid.).

Non-linear story, linear gameplay

Another way to gain some of the benefits of non-linearity without sacrificing gameplay and avoiding branching is to design the narrative so the player can influence the story without affecting gameplay. Figure 6 is an example of this: the narrative changes depending on the choices the player makes within the narrative, e.g. through choices in dialogue, such as in Mass Effect 2 (Bioware 2010) (ibid., 52).
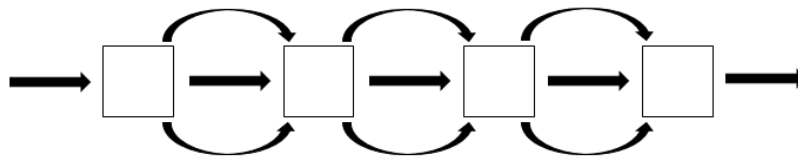
Figure 6, Linear gameplay, nonlinear story (adapted from Ince 2005, 52).

Controlled Branching

A third way to create a more complex, yet more controlled structure is controlled branching.

For the narrative and gameplay to coexist and be equal parts of the whole experience, a controlled branching approach can offer both (Ince 2005, 53). Looking at the Figure 7 below of a 5-step narrative, which first branches on the first step, and on the fourth and fifth steps the choices left begin to get narrowed down, or pruned, instead of a branching out even further.
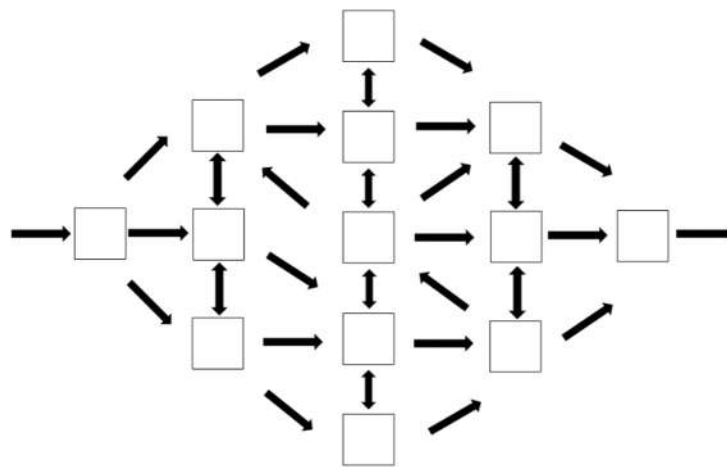
Figure 7, Controlled branching (adapted from Heussner et al. 2015, 111).

Within a Controlled Branching narrative, the player is given some agency, while the narrative is still controlled and will ultimately draw the player toward the primary story path, and ultimately the climax of the story (Heussner et al. 2015, 111). Depending on the needs of controlling the narrative, it is possible to include multiple endings within the context of controlled branching (Ince 2005, 53). Ince writes "If the ending is the same, regardless of the path taken to get there, the story is largely unaffected, and it is the plot that is interactive", or in other words, the events which lead to the end of the story are malleable, but the basic story remains the same (ibid.).

In many cRPGs, branching is achieved via offering multiple quests, of which a significant portion is optional in terms of the Critical Path (the main narrative). Players are free to discover and complete these side quests as they best see fit or not to if they so choose (Heussner et al. 2015, 112).

An alternative controlled branching method is to add more complexity by allowing the player the ability backtrack, or experience moments they may have skipped. (Ince 2005, 53.) In Figure 7 these are indicated by two-headed arrows.

Christy Marx pointed out in her interview that while budget and time are always a limitation in creating branching narratives, in controlled branching it is important to know how to prune. Pruning is also known as "pinching the narrative" to bring the player back to the main path of the narrative (Heussner et al. 2015, 111), and it is a major challenge in crafting game narratives. Finding the balance between offering real choices (see Chapter 4.4) while maintaining control. (Marx interview part three, 5:28–7:08)

Open-ended branching

Open-ended branching is the most complicated, and as a result expensive, branching structure. Effectively open-ended branching can be thought of as a near infinite-branching structure in which the player is faced with a plethora of storylines. As mentioned earlier in this Chapter, this kind of structure is not currently a feasible possibility, without significant automation, and thus far this approach is mostly limited to academic exercises. (Dille & Zuur Platten 2007, 20.)

Some attempts of using Open-ended branching have been made, namely NAME and NAME, to varying degrees of success. It is possible, but there is still much to learn before this approach will be accepted as a reasonable approach to pursue in commercial projects.

In The Art of Game Design, Jessie Schell (2015, 298) calls this approach "The Dream" because it is so far beyond what is currently possible, yet, still worth thinking about.

Open world games, also known as sandbox games, and several Massively Multiplayer Online Role-Playing Games (MMORPG) often have an entirely different approach to narrative structure. They are commonly grouped into Open Narratives.

5.3   Open Narrative

Open narratives exist primarily in open-world sandbox games, such as Just Cause 3 (Avalance Studios 2015), where the goal is to offer the player a truly non-linear experience by giving the player freedom to choose which content they wish to complete and in what order. (Heussner et al. 2015, 119.)

Unlike in linear, or even in branching narrative structures, the sequence of events in open narratives can quickly add up to a dizzying number of possible permutations. This poses a major challenge for writers and designers, because without at least a semblance of traditional narrative elements (e.g. beginning, middle, and end) any narrative rewards may leave the player feeling unfulfilled. As pictured in Figures 8 and 9 below open narratives are often designed in story blocks, which allow for a clear goal and structure within a block, but a choice in which order to complete the blocks of story (Figure 8), or if the player wishes to invest in them at all (Figure 9). This effectively results in the player creating their own story based on the choices they have made, within the confines of the blocks of narrative offered. (Heussner et al. 2015, 121.)
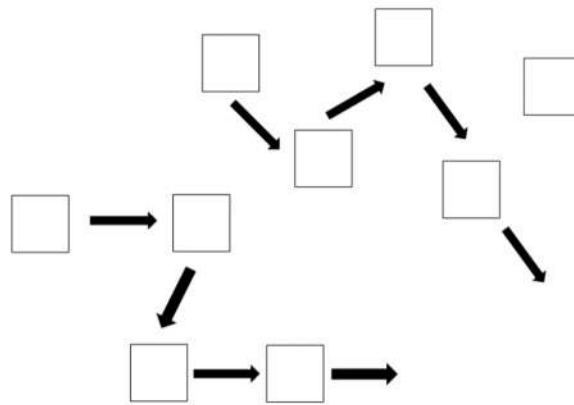
Figure 8, Open narrative choices (adapted from Heussner et al. 2015, 119).
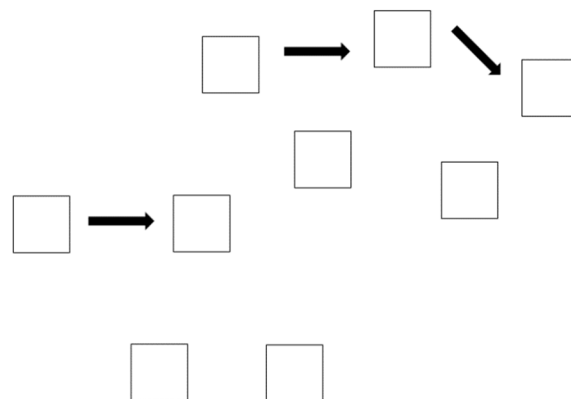
Figure 9, Open narrative alternative choices (adapted from ibid., 120).

Wei considers emergent narrative (open narrative) not to be a type of structure, because as she quotes Nicolas Szilas (2010) "–so far there is no clear understanding of the conditions under which narrative emergence can happen" (Wei 2011, 85–87). It is important to note that emergent narrative — as defined by Wei "as a change, a shift, in narrator, narrative level and/or reality" — shouldn't be confused with open world design, though the two do have some features in common. A similar view is shared by Adams & Dormans (2012, 263), stating that emergent storytelling is thus far a theoretical field of research which "seeks to resolve the inconsistency between traditional gameplay experiences and traditional story experiences". A game with such properties would use "gamelike engagement mechanics to create gameplay and emergent progression system to generate dramatically interesting plot events" (ibid.).

The most common limitation to total freedom in open narratives is player character level or skill, which provides the player with boundaries and thus a semblance of structure within a sandbox setting. (ibid.) This type of approach is also somewhat common in the early levels of MMORPGs, especially in how the player characters are often restricted from moving beyond the starting area, planet, or setting prior to reaching a certain character level, e.g. The Pandaren or Goblin starting areas in World of Warcraft (Blizzard Entertainment 2010), the starting planets in Star Wars: The Old Republic (Bioware Austin 2011), or the world of Destiny 2 (Bungie 2017) which gradually expands as the player gains levels.

In Open World and Massively Multiplayer Online games the players are generally more forgiving if their choices are not always honoured within the narrative structure, e.g. through railroading. On the other hand, some open narrative games allow players the freedom to effectively undo parts of the narrative by killing a significant NPC prior to their "story moment". The narrative might suffer as a result, but the player experiences more agency. (Heussner et al. 2015, 118 & 121.)

6 Analysis of Narrative Structure

In her 2011 dissertation, *Analyzing the Game Narrative: Structure and Technique*, Huaxin Wei establishes a perspective, combining both narratological and ludological concepts, on how video-game narratives have been lacking in analysis. She then proposes a framework which "aims to identify, analyze and represent various structural aspects of game narratives" (Wei 2011, 8).

Wei's framework is based on the concepts of Text, Plot and Story (Fabula), which Wei describes as the main levels of game narrative. Text in this case means all the content in the game which relays story, character and setting. Plot describes the events that happen during the course of the game, and story the experience of the player. (ibid., 35–36). Wei divides her work into two main categories: Time and Space. She also addresses game text and game plot which includes focalization and plot structure (ibid., 57). Figure 10, on the following page, summarizes Huaxin Wei's framework and the major narrative principles she addresses, and provides an overview of the subjects discussed in this chapter.
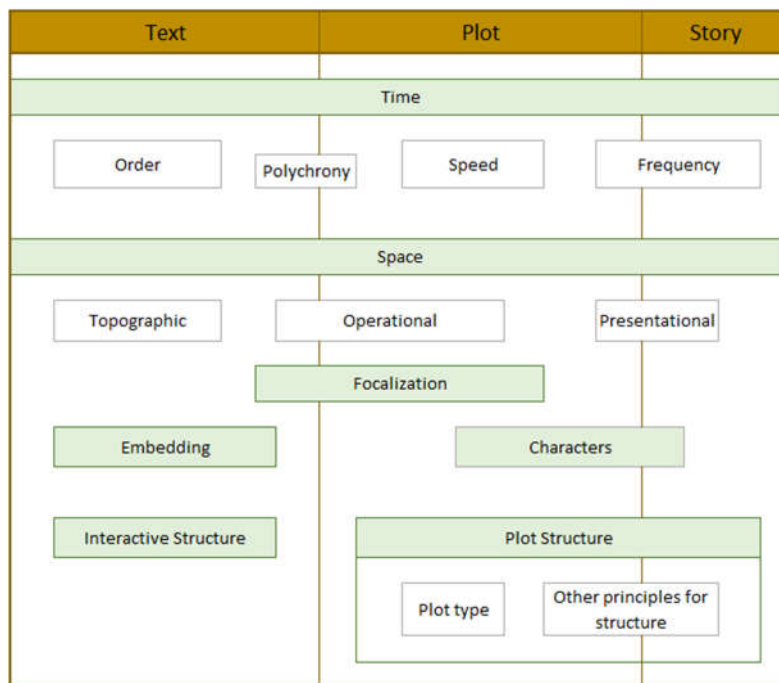
Figure 10, Major narrative principles according to Huaxin Wei (adapted from Wei 2011, 8).

6.1   Time

Unlike other time-based narrative forms (i.e. films, television and theater), games are unique in giving at least partial control of time to the player (the audience). Although games share similarities with other media in how they present time, due to their interactivity and further augmented by being run on a computer, time can have unique characteristics in videogames, which may affect the experience through both gameplay as well as narrative. (Wei 2011, 38.)

Instead of analyzing story time or discourse time which according to Wei are a popular and often adopted forms of narrative theory analysis, Wei's approach is to replace *discourse time* with *operational time*, a clear departure from traditional narrative theory in her view. Wei states that "In playing games, players do more than 'reading'; instead, they participate in the events in the story and play a part in the telling of the story, too." Therefore, the term operation time is more descriptive than "reading", or "acting" or even "screen time". In other words, the term Operation Time refers to "the running of a game driven by both the player's actions and the game's autonomous mechanisms." (ibid., 41.)

Wei further divides time into three sub-categories: order, speed, frequency and polychrony.

6.1.1   Order

According to Wei (2011, 41–42), when discussing Time, Order in games is the relationship between the sequential ordering in operation and that of the story is constructed in part by the player (audience) and how they interpret the story. When both the Operation Time and Story Time are consistent, the result is a temporally linear story (ibid.).

Traditional ways to manipulate order are flashbacks, or flash-forwards (ibid., 42). Games which use flashbacks as a significant part of their narrative include: Prince of Persia: Sands of Time (Eidos Montréal 2003), Max Payne (Remedy Entertainment 2001), Uncharted 3: Drake's Deception (Naughty Dog 2011) and The Gardens Between (The Voxel Agents 2018). The use of Flash-forwards in videogame narratives is still quite rare (ibid.).

6.1.2 Speed

The narrative Speed of a game concerns the relation between the duration of events in the story and the duration of game play. Since Speed cannot be defined exactly, and cannot be measured in absolute terms, Wei uses five relative measurements, originally created by Mieke Bal as "canonical tempi": ellipsis, summary, scene, stretch and pause – from fastest to slowest. (Wei 2011, 44.)

Wei (ibid., 44) defines distinguishing one tempo from another by comparing two disparate time schemes. The most often used tempo in games is scene, where the operational time is equal to story time (ibid., 44–45). Summary, on the other hand, is when the operational time of an event is shorter than the story time". The most common use of summary is when a longer duration of time occurs without player interaction often indicated by a text or a voice-over narration. Similarly, the use of graphic novel panels in Max Payne (Remedy Entertainment 2001) are a form of summarizing events. Stretch, the opposite of summary, is when operational time takes longer than story time. The use of "*Bullet Time*" in Max Payne is an example of how stretching time offers the player an advantage, and an interesting way to interact with the game. (ibid., 45.)

Ellipsis is a skip of story events in operational time, and is common in most media, including game stories. Teleportation from one level to another is effectively a type of ellipsis, as is the narrative statement of "five years later". The last tempus is pause, which is when the story event is suspended, while the operation is focused on something else, usually involving the player unable to control the game. A pause in gameplay is rare, and is mostly used for orientative cut scenes, such as showing the goal of a level, or a puzzle, to the player. However, a loading screen, or player induced pause, i.e. through opening a menu, can also be considered temporal pauses. (ibid., 45–46.)

Figure 11 below presents a visual summary of the set of five time-schemes as suggested by Wei.
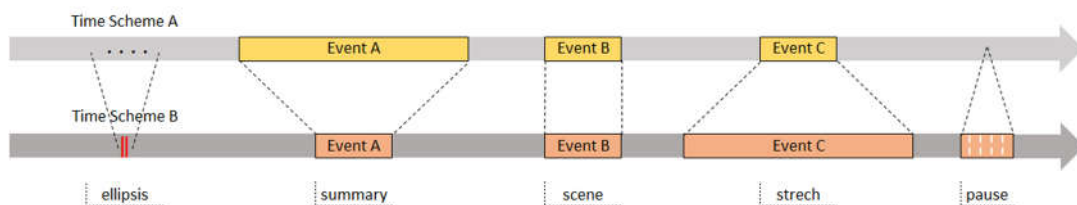
Figure 11, Time schemes (adapted from Wei 2011, 44).

6.1.3   Frequency

Frequency is the relation between the number of times an event truly happens in a story and how many times is that event shown as part of the operation. The most common expression of Frequency is "–a *singular* presentation of an event occurring only once." If a story event only ever happens once, but is, in operation, presented multiple times, that is *repetition*. *Iteration* is when an action which has occurred multiple times in story is only represented by a single operation. (Wei 2011, 46.)

According to Wei (ibid.), in games *iteration* is most often present in verbal narration, where several repetitive events or actions can be briefly summarized (i.e. "it took two months before she could walk again"). Thus, iteration in games is most often found in voice-over narration, dialogue or diaries. Repetition can be considered a very common element of games, though it mostly appears in player action rather than in narrative. For instance, in repeating a sequence of events until successful. Wei also qualifies players' choice as a type of repetition, for example moving around the game space freely. Some games have been designed to offer variation keeping this in mind, e.g. by placing enemies in different positions each time the player passes an area. Another, slightly less common type of repetition is when the player has the ability to reverse time, such as in Braid (Number None 2008), or The Gardens Between (The Voxel Agents 2018). Repetition is also present in the repetitive actions of NPCs, such as the street vendors in Assassins Creed (Ubisoft Montréal 2007), and in the player character's grinding, or repeatedly performing a task (Bycer 2017), to improve their skills or status in many *cRPGs*. (Wei 2011, 47.)

6.1.4   Polychrony

Unlike with *order, speed and frequency*, when an event or multiple events cannot be given an exact position within a narrative timeline, it becomes meaningless to look at the relation of the story time and operational time (Wei 2011, 47.)

In a polychronic narrative, events can be inexactly *ordered* (*random, alternative, multiple or partial*) or inexactly *coded* (i.e. when it is unclear where within a timeline of a narrative an event lies), or both (ibid., 48.)

According to Wei, one useful strategy in creating interactive narrative is to allow for variations in the game story (ibid.) Another way to express this is to allow for the game narrative to become

non-linear. Wei considers branching, or non-linear narrative, as a way to offer variation in ordering of events for each playthrough. Wei has found that a foldback structure, or controlled branching, is very commonly used to balance player freedom and the overall narrative structure. In conclusion to her discussion of time, Wei states that although in linear narrative games the story cannot change, due to player freedom the narrative pacing varies, and it is thus possible to consider all interactive storytelling as polychronic by definition. (Wei 2011, 48.)

In addition to being a time-based form of storytelling, games—like film—are a visual medium, and thus exist in space.

6.2   Space

As much as a game unfolds in time, so too does it unfold in space. Narrative space is crucial for the audience to mentally construct the storyworld based on the narrative text delivered to them. The storyworld, where characters exist and events take place, can hardly be formed without spatial information relevant to the narrative. If the spatial information is lacking, the audience often supplies it with their own imagination. Unlike written narratives, visual narratives including films and games tell the story through visual representations that usually have explicit spatial information. Hence, during the creation of a visual narrative, spatial elements deserve much consideration. (Huaxin Wei 2011, 51.)

In her dissertation, Wei (2011) examines games as space and constructs a new way of analyzing game spaces by building upon already established methods of analysis. She begins by dividing game spaces into three ontological, or interrelated, layers; the *topographical*, the *operational* and the *presentational*. *Topographical* forms the foundations, or "the underlying spatial reference" to the storyworld of the game, where space exists independently of action and visual representation. The second layer, *operational*, relates to the space as a space-time complex, which allows for interaction, and thus manipulation of elements. The final layer, *presentational*, acts as the means of conveying visual and auditory content of the world and to shape the way the player perceives the game world and how they think of it. (ibid., 51.)

According to Wei (2011, 51–52), these three spatial structures work together to make a game's narrative space effective and, ideally, satisfying. Wei (ibid., 56) references Zoran's (1984, 316) suggestion that in the audiences experience, there is no clear distinction between the three layers or views of space, but they are rather "–always perceived together, one through the other".

6.2.1   Topographical Structure

The *topographical view* treats space as static and free from reference to time. Terms often used in game design related to topography are *layout*, *spatial organization* and *spatial structure.* Maps with landmarks and locations, or other similar references are a common depiction of topography. (Wei 2011, 55–56.)

According to Wei (ibid., 57), "[t]he study of space has always involved typologies of spatial models based on topographical features". There are different ways of expressing and modeling space in games. Nitsche (2008) suggests: tracks and rails, labyrinths and mazes, and arenas. (ibid.). According to Adams (2013, 445–449) there are seven common layout patterns; *open*, often in outdoor areas; *linear*, which restricts and guides the player experience; *parallel*, an expansion of *linear* with multiple paths; *ring*, which ensures the players' path returns to where they started – most common in racing games; *networks* often represent indoor spaces with improved player freedom; *hub-and-spoke* is when the player starts in the middle (hub) and moves back and forth to the edges (spokes) during the course of the game, and *combination of layouts*, in which various layouts are combined for a desired effect. Together, these are called Topographical Layouts (Wei 2011, 57).

Spatial Opposition is a part of structuring the storyworld, often expressed through terms such as outside, below, at the center of, city or even continent. These types of spatial relations inform the narrative and gameplay and help create contrast. (Wei 2011, 58–59.)

6.2.2   Operational Structure

Within the *operational view*, the game story unfolds, or most often is co-generated by the player and the game, over time and space through action taking place at a location, in continuance; the space linked to the storyworld is in essence being revealed through movement in space (Wei 2011, 56).

Wei (2011, 59) explains how Zoran (1984, 316) describes chronotopic structure to address "what may be defined by an integration of spatial and temporal categories as movement and change", and further adds that according to Zoran (314) chronotopic structure is of significant importance with regards to plot, which isn't merely temporal, but also contains "routes, movements, directions, volume, simultaneity, etc." The player both experiences, and enacts the plot, forming a picture of the story and narrating the events to themselves. According to Wei, each playthrough of a particular game is ever only one instance of the available plot set, and this single traversing act takes place in the *operation* of the game. (ibid.)

The mobility of characters and objects is one fundamental characteristic in identifying plot state changes. Another, not discussed here, is characterizing movements over operation. A character or an object's spatial state is either moving or at rest, but some characters and objects can traverse between spaces. When a character or an object is attached to a space, they become part of the background, or context, of the space. Interaction with these characters or objects causes local plot changes, but they nonetheless remain part of the background. Characters whom are allowed to traverse space may play a more significant role in how the plot develops, and are more often the main characters, along with the player's character, which the plot is tied to. The more mobile the characters; the more complex the plot. Equally, objects with high mobility play a more significant role in *operation*, i.e. gameplay, and thus often contribute more to plot development. (Wei 2011, 60.)

Paths and *axes* are also worth noting in this context. On an operational level, once designated, paths form a dynamic uni- or bidirectional conduit between locations; some paths can only be traversed from A to B, while others also from B to A. Axes can be thought of both as the primary path of gameplay and story, as well as surrounding the main path, i.e. side quests, which contribute to the organization of narrative content as well as to forming the operational structure for the space in which a game takes place. (Wei 2011, 61.)

The primary path of a game is also known as *the spine*, and it is often close to — but not always equal, to *The Golden Path*, or the most optimal way to complete a game. The Golden path, or spine of the game consists of the events which are "absolutely mandatory" for the game story to move forward. Or in other words, the spine describes the elements of story which the player is always guaranteed to experience. (Bateman 2007a, 87–89.)

Characters and objects ability to move and interact, paths and their directions, and the axes to-gether with other spatial features form the operational structure of a game, and out of these the storyworld, with which the player can navigate and interact, is constructed. This also includes the embedded game mechanics, or gameplay, and which in turn lends itself to supporting an experi-ence both ludic and narrative in nature. (Wei 2011, 61.)

Wei also notes that the characteristics of *operational* and *topographical structures* are connected to one another and thus also able to influence each other (ibid., 62).

6.2.3 Presentational Structure

While the previously discussed topographical, and operation structures explore a significant por-tion of the spatial and movement related theory of a gameworld, neither of them is readily appar-ent to a player. For this, we must look at the *presentational view*, which includes such elements as: on-screen and off-screen spaces, composition, acoustic space, spatial segmentation, perspective and screen interface. (Wei 2011, 64.)

In *presentational view*, the storyworld's presentation imposes a pattern of visual, auditory and haptic ques on the structure of space (Wei 2011, 56). This view of the narrative game space in-cludes a range of aspects from organization of information to low-level representational tech-niques. These have significant correlation with aspects of film narrative spaces (ibid., 64).

Like film, a game consists of both on-screen as well as off-screen space. While the "shot space" of a movie is limited by optics and physics, in games, especially in 3D games, the camera is a virtual element of which functions extend beyond the physical; As a virtual element, the camera can be made to follow fast moving objects, and in creating "*Bullet Time*" (Max Payne, Remedy Entertain-ment 2001), also acts not just to manipulate how the player perceives space, but also how they perceive time. (ibid.)

In games which limit or disallow camera manipulation, the on-screen space can be seen independ-ent of the world, which in turn means the on-screen space can be seen equal to that of film shot space", to which screen composition techniques may then be applied. According to Wei, "[i]n the controlled presentational space, the on-screen and off-screen spaces are not necessarily con-nected", and thus whether the camera can be manipulated by the player or not has a direct im-pact on the gameworld, and equally the storyworld. The choice of how a game camera functions

will also impact the continuity of the game space, and it is important to decide how transitions between spaces are to occur. Another use of on-screen space is the interface of a game. (Wei 2011, 64–65.)

Audio or acoustic space also plays a significant role in the creation of the game space. Like other audio-visual media, sound and music are key for setting mood, building tension, and in furthering the sense of realism. Additionally, game sound plays the unique role of providing feedback for player actions, in providing hints, and — especially in 3D game spaces, cueing the player to what might be happening off-screen. In some games sound and music are made to be a core part of the game itself (e.g. Rock Band (Harmonix / Pi Studios 2007) or Audiosurf (Dylan Fitterer 2008)). (ibid., 65.)

Wei states that gameworlds are commonly divided into "distinct subspaces", with each their own "special features" and sometimes "game rules" as well. Seen from the operational view, a game space is "presented and structured in a temporal continuum", the manner in which a space is segmented is therefore of concern for thinking both in terms of the operational and presentational structure. A gameworld and its division to subspaces directly affect the players experience of fluidity of movement. The player may be asked to traverse through transitions between spaces; these transitions may take the form of a loading screens, a cut scene, a direct cut between spaces or on-screen caption. Dividing a gameworld into distinct pieces is what Wei calls Spatial Segmentation. (Wei 2011, 65–66).

No narrative is complete without perspective. Perspective can be interpreted in two ways; a psychological point of view dealing with attitudes and emotions, or the equivalent of a camera and its visual positioning in relation to a scene or moment. In either of these meanings, the source may be either subjective (a character) or objective (narrator, or neutral onlooker). Often these two interpretations of perspective are intertwined – an over the shoulder camera angle can be used to emphasize the subjective psychological experience of the character, while a static camera in a tight hallway can for example convey dread or claustrophobia as in Silent Hill 2 (Konami Computer Entertainment Tokyo 2001). It is rare to find games in which the psychological and the physical perspectives exist separately, and when it does occur, it is most commonly "realized through voice-over narration", such as in Prince of Persia: The Sands of Time (Ubisoft Montréal 2003) and Max Payne (Remedy Entertainment 2001) where the protagonist directly addresses the player, in effect changing perspective from an internal narrator to an external one. (ibid., 66–67.)

In addition to being a "presentational platform", for games the screen is also an interface between the game and the player. Thus, the Screen Interface plays a role in both the operational and the presentational layer. This can lead to a complicated view of multiple layers of information, from in-game to character details to quests to maps, compasses and a plethora of other elements which vary game to game. This layered information is presented in an interface layout, depending on the genre and style of game. For example, strategy games use a windowed view where the main window represents the game world, one window may represent a map, and third the game interface. While many action games commonly have an overlaid view where the information is presented in as opaque a manner as possible to limit the obfuscating the game world. Any elements which do not directly affect the gameworld, such as pause menus or settings, are a part of the Screen Interface. (Wei 2011, 67–68.)

6.3   Composing Game Text

Game text, according to Wei, is "narrative text in which an agent or subject presents a 'situated story'", which reacts to player actions within the game medium. In addition, Wei refers to Bal (2009) expressing layer of text to include identity, status of narrator, levels of narration and description – narrative content which isn't part of the story but provides "the details of the storyworld". (Wei 2011, 72.)

Identifying the narrator as well as the level of narration utilized can be of assistance in gauging the principle of narrative embedding, which is itself of importance in structuring narrative. The interactivity of game text is a unique trait of text in the context of games. (ibid.)

6.3.1   Forms of Narrative Content

A game as narrative text includes both narrative as well as non-narrative content. Narrative content consists of narration of events (the story skeleton) and description (details, backstory).

Wei writes: "it is debatable whether game menus of various kinds are narrative or not". In general, game menus exist to offer control options, and at times to provide additional story information. The *main menu*, or *title menu*, is "the most obvious non-narrative element" in games. Depending on how strictly one defines narrative, some content on the screen interface other such elements,

may be considered narrative content. Even when they are, the on-screen menus and information are not part of the narration of the game story, but the description. (Wei 2011,73.)

Not all *game menus* have narrative significance. The pause menu can be a part of the narrative, especially in games pursuing realism, where it is designed to be a part of, or an extension, of the gameplay. Examples of such design can be found in Batman: Arkham Asylum (Rocksteady Studios 2009), Prey (Arkane Studios 2017), and Horizon Zero Dawn (Guerilla Games 2017). Other games, such as the first God of War (SCE Santa Monica Studio 2005) or The Witness (Thekla Inc. 2016) are designed with minimal menu content to keep the player within the game flow. Whether a menu is narratively significant depends entirely on the design choices made by the developer. (ibid.)

While playing, players traverse the game text which consists of all forms of narrative content. By *forms of narrative content* Wei means narration, description and all the methods by which the narrative is conveyed (see Chapters 3 and 4). For a more detailed look at forms of narrative content as defined by Wei, see Appendices. (ibid., 73–74.)

6.3.2   Narrative Embedding

If within a storyworld character A tells a story about character B telling them a story of character C that is an embedded story – a "story within a story". In such a story, a character within a narrative becomes a narrator. This is called narrative embedding and it is a common feature in literary texts, but also in other non-literary narrative media including films and games. (Wei 2011, 76.)
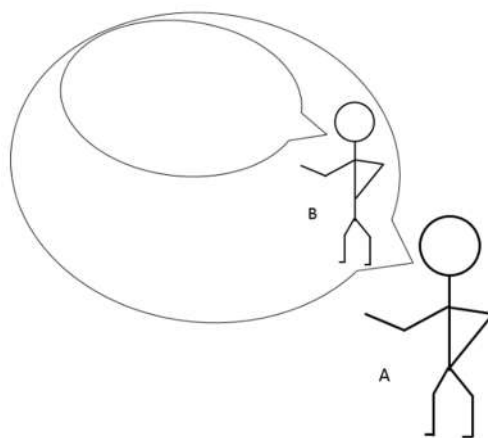
Figure 12, An illustration of Narrative Embedding (adapted from Wei 2011, 70).

According to Wei (2011, 76) "narrative embedding is widely used in games". Dialogues are a common place to find usage of embedding, i.e. a character telling a (back)story of another character to the player.

It is important to note, that as defined by Wei "embedded narrative" is not the same as "narrative embedding". Embedded narrative is an expression in common in game design and used to refer to scripted narrative elements which generally form the backstory of a game; and as its opposite is the term emergent narrative. Wei considers these definitions too simplistic to describe the complexity of narrative dynamics in games. (ibid., 76–77.)

For the sake of clarity, the author of this has chosen to use narrative embedding in how it is defined by Wei: as a change, a shift, in narrator, narrative level and/or reality. By utilizing the work of narrative theorists. (ibid., 77.)

Wei distinguishes three kinds of narrative embedding: *horizontal*, *vertical* and *modal* (ibid.).

Games are an audio-visual interactive narrative, and present story via telling, showing and interacting. Because game storytelling devices differ from other traditional narrative devices, narrative embedding in games remains "a story within a story", but without the necessity of a change in narrator. For example, in New Super Mario Bros. (Nintendo EAD 2006), each game level can be considered an embedded narrative due to the unique thematism, objects and characters presented. (ibid., 78.)

For games, Wei considers embedded narrative as a narrative unit, or a sequence, which tells a small story which deviates from the "main storyline through a shift of narrator, narrative level, or reality". This in turn allows player actions to become a part of an embedded narrative. (ibid.)

Horizontal Embedding

A game narrative is constructed procedurally during play by the player. Whether the main narrative is linear or non-linear, each play-through is only one instance, or interpretation, of the storyline. The main narrative can be thought of as both the context of the game, as well as the container of any embedded narratives. (ibid., 79.)

Wei (ibid.) states: "In most games, the narrator of the main-narrative is a *dual agent* combining an external narrator (an omniscient agent who is external to the story) with the player.". The player continually interprets and acts to fill the gaps in the story left by the narrator. Some games, such

as Max Payne (Remedy Entertainment 2001), make use of internal narrators in addition to external narration. To evaluate whether a narrative includes embedding, it is crucial to identify the type of narrator employed by the main narrative. (Wei 2011, 79.)

Horizontal embedding can be recognized by a shift in narrator, without a change in narrative level. For example, when narration of a story event is given to another character, on the same narrative level, this leads to the main story and horizontally embedded story to exist side by side. Artifacts, or in-game objects, can tell stories, often by a narrator of their own, which is why Wei states artifacts to also be "considered embedded narratives". There are two common forms of horizontal embedding: flashback sequence, and narrative artifact. (Wei 2011, 79.)

Flashback sequences, or their rarer form flashforward sequences, are temporal relation shifts in the main narrative, and work as extensions of the main storyline. Metal Gear Solid (Konami Computer Entertainment Japan 1998) is famous for the use of flashback sequences. During flashbacks, Wei writes, "–players lose their co-narrating roles, partially (when the sequence is interactive) or fully (when it is not)". The narration is either taken over by the protagonist — becoming an internal narrator — or by an external narrator to set the tone and to provide backstory for the player. In Max Payne (Remedy Entertainment 2001), the entire main storyline is presented as a flashback, narrated by the protagonist and player character, Max Payne; In effect the player is acting as Max all the while listening to his accounts of the events. (ibid., 81.)

As well as environments, game objects can also "tell" stories. Most of these *narrative artifacts*, or objects, contain text (e.g. letters or emails) but a narrative artifact in games may just as well be a picture, a sculpture, or an audio or video recording. What makes a narrative artifact horizontally embedded is how it is often unclear who the narrator of the objects mini story is. (ibid.)

Vertical Embedding

In vertical embedding, in addition to the shift of narrator, the narrative level also changes. A narrative with vertical embedding contains at least two levels of narration and multiple narrators. Where horizontal embedding is helpful in arranging narrative in temporal sequence and to organize narrative information, vertical embedding is useful in creating depth in storytelling. (ibid., 82.)

One of the ways to achieve vertical embedding is through *dialogue*. An NPC telling their own, or conveying a third character's story, helps to create mood and to raise expectations, often for something the player will later face. A vertically embedded story sits on top of the main narrative,

and often broadens and deepens both the characters as well as the main narrative. (Wei 2011, 82.)

When the "narrator" of a story telling artifact is known, the artifact in question is vertically embedded, e.g. letters of which the author is known. This is because a secondary narrator is telling a story above that of the main storyline; a story within a story – or in the case of vertical embedding, a story on top of a story. (ibid., 82.)

A *non-interactive narrative sequence which is not a flashback/flashforward* with a distinct narrator telling a story unrelated to the main storyline of the game is also an example of a vertically embedded narrative. A side quest, or an opening or ending sequence are common examples. (ibid., 82–83.)

Another example of vertical embedding is a *voice-over narration* played during gameplay, but only when the story is unrelated to the gameplay and self-contained. Again, it is necessary to know who the narrator is to know whether the narrative is vertical or horizontally embedded. Hellblade – Senua's Sacrifice (Ninja Theory 2017) is an example of a game that uses voice-over narration as vertically embedded narrative. Voice-over narration can act as a framing device, and be combined with vertically embedded narratives, as in Prince of Persia: The Sands of Time (Ubisoft Montréal 2003). (ibid., 83.)

Modal Embedding

A shift in reality, or storyworld, is what makes modal embedding unique, and is a common technique in modern games. This shift can appear as a dream sequence, a hallucination, an alternate dimension or time shifts to name some. Examples include Prey (Arkane Studios 2017), a game which is almost entirely a modally embedded narrative, and the Assassins Creed series (Ubisoft) with its modally embedded two concurrent timelines as part of the main storyline hook. Dream sequences, such as in Max Payne or the Batman: Arkham series (Rocksteady) are also examples modal embedding. (ibid., 83–84.)

As mentioned earlier, the level design of New Super Mario Bros. (Nintendo EAD 2006) can also be considered a type of modal embedding which is unique to games; thematically designed game levels, where game rules or mechanics change. (ibid.)

Transgression Boundaries

Regardless of the genre of narrative in question, narrators and characters are rarely static and content to "sit still". Sometimes they transgress the boundary of between embedded narratives, or "from an embedded narrative to the embedding narrative". Metalepsis is a narratological term which is often used to refer to a narrating character moving between levels of narrative; it is the narratological equivalent of a special effect. An example is how in Prince of Persia: The Sands of Time (Ubisoft Montréal 2003), when the prince – controlled by the player, falls to his death, a voice-over narrator (the prince himself) tells the player "Wait—that didn't happen. Let me back up a bit". In effect the internal narrator – a character the game is about, transgresses a boundary and becomes an external narrator. (Wei 2011, 84.)

Another form of boundary crossing, and metalepsis, unique to games is game modifications and customization. To illustrate this in her dissertation Wei uses and describes how in Grand Theft Auto III (DMA Design 2001), the player can add music of their choice into the game install folder and then listen to it in-game, thus transgressing the boundary between the real world and the game world, and as a result in effect making the game feel more real. (ibid.)

6.3.3 Narrative Interaction

Wei (2010, 85) defines narrative interaction as "–a player choice or action that results in a change of the direction of the plot progression and/or the ending of the plot". Narrative interactions are what makes the storytelling in games truly an interactive experience.

For a game to have narrative interaction, the game text needs to be created for variability in mind, otherwise player actions will have no effect on the story experienced and interpreted by the player. The common techniques to creating narrative variation, according to Wei (ibid, 87–88) are:

1. *For one or more sequences, the narrative text provides a fixed number of pre-structured missions (or events) that players must complete; however, there is more than one sequential order for players to go through those missions (or events).*
2. *For one or more sequences, the narrative text provides more than the required pre-structured missions (or events) for players to choose and access, in a fixed or flexible order.*

3. *In one or more sequences, the narrative text checks the current state of the narrative that resulted from player choices and actions, and uses logic to determine the next sequence, which is composed in an ad hoc manner using a set of pre-scripted smaller units. (Wei 2011, 88.)*

Often in games the above are combined in various ways. Omitted from the list, due to its lack of impact on the view of narrative interaction are changes to the game environment. The first two are commonly used in games, to varying degrees of success. The third is for the time being, more an academic exercise and subject of research due to the challenges in development it poses. (Wei 2011, 88.)

There are some examples of the use of AI scripting to create complete adaptive narratives, such as Rimworld (Ludeon Studios 2018). A similar, albeit more limited system can be found in the Left 4 Dead series' (Valve South / Valve Corporation) AI game director (Thomson 2014). The third technique is according Wei "the core technique to create the possibility space for narrative to "emerge", as opposed to being pre-designed" (ibid., 88).

6.4   Organizing the Game Plot

Under Wei's model, plot is the middle of the three layers of narrative (text, plot and story). Plot is the content of the narrative, and "[i]t presents the story in a structured way" via "dynamic patterning of representational materials and interactive events". (Wei 2011, 90.)

According to Wei (ibid.), the central issue when discussing game plot is the arrangement of story materials and how does the plot arrange the story content to achieve a desired story focus and effect. Wei considers this to be achieved through manipulation of time, space, characters and focalization in addition to several other principles of how story events should be grouped. (ibid.)

Characters

Characters — often with human characteristics and complexity — participate in the storyworld, whereas participants on the layer of story are actors whom may not have agency or human characteristics and exist to merely fill a structural role. This becomes relevant when evaluating character design in a game (character), and when evaluating roles or functions of participants (actor).

Characterization, or "the process of turning an actor into a character", is how an author or designer can create a more attractive narrative and to convey the ideologies and values of the character and the world through the portrayal of a character. (Wei 2011, 90–91.)

For constructing characters within plot and as part of the narrative structure, Wei describes four principles of concern, adapted from author Mieke Bal's work; Repetition, accumulation, relation to other characters and transformation. It is important that the player is exposed to character defining characteristics multiple times, through *repetition*, to form an impression. This includes their own avatar in games where the player doesn't see or hear their avatar, such as in Fallout 3 (Bethesda Game Studios 2008). A complex character has a broad range of characteristics, which should be exposed to the player gradually over time, in order for the player to *accumulate* a deeper understanding of them. A character's *relation to other characters* reveals who they are and can assist in creating contrast and identity. In games the unique relation between the player and their avatar poses its own set of challenges for character design. Most plots are about character change, and game characters are not exempt from *transformation*, but care needs to be taken in maintaining continuity "for the audience to recognize the character". (Wei 2011, 91–92.)

In addition, according to Wei, the players prior knowledge and the frame of reference of a game, both elements outside the plot, are of concern in creating sufficient predictability for relatable and compelling characters. (ibid., 92.)

Focalization

According to Wei (ibid., 93), Bal (2009, 149) summarizes focalization to mean "the relationship between the 'vision,' the agent that sees, and that which is seen", and gives an example of: "A says B sees what C is doing". She then explains:

> *Here the narrator A, who speaks, is clearly different from the character-bound (or internal) focalizer B, who sees. B and C, as the subject and object of focalization, can possibly be on the same (embedded) narrative level, as they apparently coexist in the same space. A, on the other hand, appears to exist on the embedding (or the framing) narrative level, which is seen through an external focalizer who is outside the story. (ibid.)*

In a third-person storyworld, a plot is often seen through a character's eyes, this character effectively becoming the "centre" of perception for the narrative. Focalization in games has much in common with cinema, largely due to the use of a virtual camera. For games presented in third-person, the focalizer is mostly external, but when the player controls the avatar, the virtual camera images becomes subjective. (Wei 2011, 93–94.)

Wei deposits that when discussing games that allow camera manipulation by the player, the game focalizer might be called the player focalizer instead, "as it is both external and internal". This is because the camera, and its movement in effect create a double identity for the player – they are the game character, and the game player. As she quotes Nitsche (2008, 154), "the focalizer functions as both the 'directing designer' and the 'interacting player'". The player focalizer further emphasizes the unique differences in focalization between games and film. (ibid., 94.)

In dream, fantasy or flashback sequences, the focalized object distorts as a reflection of the mental state of the player focalizer – these sequences often act as part of characterization and plot stylization (Wei 2011, 94). Similar effects are seamlessly added to convey the protagonists mental state in Hellblade – Senua's Sacrifice (Ninja Theory 2017).

Most often the manipulation of the virtual camera in games also affects the focalization which is not something witnessed in films. The camera may guide and direct the player focus of attention towards a specific character or object — or even emphasize direction using negative space, or simply follow the player character. (ibid.)

Plot Types

Game developers —indeed all authors — often base their narratives on canonical plot types. The ones covered are but the most frequently used. Many other styles of plot exist. As explained by Wei, "The role of plot type in constructing interactive narratives is called 'metastory'". Over time and refinement, these plot types have become so well-defined and abstract to be easily harnessed by developers. (Wei 2011, 95.)

Wei recognizes three different major plot types: the epic, the dramatic, and the epistemic plot. Of these the epic and the dramatic plot were first recognized by Aristotle, while the epistemic plot has emerged later and is best summarized by "the desire to know", for example in mystery or detective type plots. (ibid.)

A solitary hero, a focus on physical action, and often simplistic character relations and motivations are common features of an *epic plot*. Wei considers the epic plot, which is also the foundation of fairy tales, among the most popular used by game designers. This is at least partly due to the ubiquitous awareness of Joseph Campbell's work *A Hero with a Thousand Faces*, and later *The Hero's Journey*. (Wei 2011, 95–96.)

Where the epic plot focuses on physicality, a *dramatic plot* deals more with the mental, with "evolving networks of human relations" and as a result often includes significant amounts of inter-character dialogue. The most typical dramatic plot presentation is the three-act structure, often depicted by Freytag's pyramid — described in Chapter 4.1. Plotting out a dramatic arc is the goal of the act-based approach. Done well, the arc of a three-act structure, may in Wei's words: "achieve its effects without the audience's conscious awareness". Similarly, in games, the gameplay (action) and dramatic plot combine into motivating players to completing a game. The Dramatic plot most commonly means greater authorial control, which is a challenge when creating a space with player agency in mind. This may be the reason game plots are rarely a pure *dramatic plot*. (ibid., 97–99.)

At its core, an *epistemic plot* challenges an audience by withholding the truth. In essence, the epistemic plot is a mystery the audience is actively taking part in mentally solving during the experience, be it in the form of a book, a film or a game. The narrative tension in an epistemic plot is created by the rivaling forces of revealing and withholding information. Examples of an epistemic plot in games are Alan Wake (Remedy Entertainment 2010), Prey (Arkane Studios 2017) and The Vanishing of Ethan Carter (The Astronauts 2014). (ibid., 99.)

Other Principles of Structure

According to Wei (ibid., 100), due to the common use of quest structure, the most often used ordering in games is based on missions. Plots are often constructed as sequences of events following a temporal order and logic, but other solutions are possible. Both the temporal and spatial ordering can be used for structuring. Flashbacks are a way to alter the chronological order. In epic plots the hero goes on a journey through space and often multiple locations. Locations can also act as the structure of a plot, as is evident in games such as the Fable series (Lionhead & Flaming Fowl Studios) or in Horizon Zero Dawn (Guerilla Games 2017). As the Mass Effect trilogy (Bioware 2007, 2010 & 2012.) shows, relating the events of recruiting allies to each character is a type of plot

structure. And finally, as in The Last of Us (Naughty Dog 2013), plot can be structured around more than one protagonist each having a plot of their own. These are by no means an exhaustive list, but merely some of the more common methods of structuring and constructing plot in games. No matter the principles used for ordering events, a plot is always constructed from the sum of multiple contributing devices. (Wei 2011, 100.)

7   Game Analysis: The Gardens Between

7.1   Introduction

The Gardens Between is a puzzle game developed by The Voxel Agents and released in September of 2018. At the time of writing the game is available for Windows, Linux, macOS, Microsoft Xbox One, Sony Playstation 4 and Nintendo Switch.

Disclaimer: this analysis contains significant spoilers. It is the authors' opinion that this game deserves to be played without foreknowledge, and thus it is highly recommended to play the game prior to reading on.

The following analysis is based on Huaxin Wei's work, and questions she suggests as useful tools for analysis. These questions, in their original form, can be found in the Appendices (Pages 87–90).

7.2   Analysis

The Gardens Between is a calm, meditative experience. Which the aesthetics of the game have been designed to support. Aside from the very end, moments of frustration are rare, for when you get stuck, you know that it is because you have not understood something about the game. The game's progression from the simpler puzzles in the beginning to the later much more advanced stages is rewarding and gradual enough to be unnoticeable until revisiting the first levels. Visually, the cartoonish graphics style and toned-down color palette support the meditativeness, but also act as a metaphor for how time smooths out the sharpest edges of our memories. Music plays a supportive role in the game, offering suggestions of the emotional underpinnings of each level.

The music is subtle and mostly unnoticeable, yet clever enough to be worth listening to with intent.

At the core of the gameplay is the manipulation of time and space; The player is unable to interact with either of the two characters, female and male presenting Arina and Frendt, directly. The same is true for interacting with the game world. Instead, the player manipulates time, and through this gameplay mechanic, which coincidentally—and very deliberately—also affects space in the game world, the player can affect how events unfold within each level in certain, predetermined ways. Though direct interaction is limited, the player can also "ask" or "suggest" the two characters to engage with a very limited range of objects in the world.

The core concepts of The Gardens Between are:

- Dreamlike quality
- Puzzle solving
- Time manipulation
- Theme: friendship & growing up
- Meditative experience
- Bittersweet narrative
- No text or speech
  (The Gardens Between website; Maggs 2016b.)

Spatially the game is divided into a hubworld, represented as a circular horseshoe-like arrangement of islands. These islands, or levels, of which there are a total of 18 (plus another three for the Finale) are divided between three color schemes which also represent narrative acts (ACT I: green, ACT II: orange, and ACT III: gray/blue). Each act is then further divided into chapters, with each their distinct theme, symbol and narrative significance. Each set contains two to three levels, represented by individual islands, and each island is tied to a physical object such as a couch or a garden hose, which themselves act as facsimiles of a particular memory.

As the player progresses in the game, the significance of the islands, the physical objects, their arrangement, and the linked symbolism becomes gradually clearer. The sky in Gardens Between plays a peculiar and clever role: It is the metaphorical place of memories, of remembering, in narrative as well as in gameplay as most levels are built as a steadily climbing upward slope. The ascension aspect and the significance of the sky as the place of memories is never more apparent than in the Finale's three levels, where the player climbs a steep spire to the very top while solving puzzles. And even further, the sky has yet another function in the more technical how-does-it-

work design level of the game as the moments when the player is observing the memories (in the sky) is also where the game itself remembers, i.e. loads the next level. Details such as these suggest to the care and thought with which the creators have approached the making of the game.

As The Gardens Between is about time and space, or spacetime, movement in the hubworld is also tied to time, which is represented by the forward (when moving right) and backward (when moving left) procession of the stars in the sky. While this is a minor detail, and mostly irrelevant for the game except for chapter 7 level 3 (or level 7-3) where the concept of procession is used as a solution to a puzzle, this level of attention to detail is what separates The Gardens Between from many other games and gives it an air of unity and wholeness.

Three significant gameplay elements worth an elaboration are the Garden Friends, The Lantern and The Beacon (Maggs 2016a, 6 & 9). The former are small animated cube-like objects which jump around most levels, and which often play a crucial role in solving the puzzles. The Lantern is the vessel of memory, which Arina carries, and which is required to contain The Light, or memory, upon arriving to the Beacon or Altar at the end of each level for the player to proceed in the game. The Beacon is a stone platform with a pedestal in the middle, where the game's two characters, Arina and Frendt slam the Lantern.

The Gardens Between uses Camera Cases (Dansky 2007, 5) to ensure the player notices what is happening with the Garden Friends and the Lantern. These temporary losses of control usually last for a mere second, with two clear exceptions being in level 6-3, The Maelstrom, where the camera focuses on Arina and her jacket falling down, and earlier in level 4-2 in which the entire final solution involving Garden Friends and the Lantern is shown from the third-person perspective of the Garden Friend. The intent of the latter example is likely to be an award to the player, but the duration of it might distracting and forced.

The ever-slow-paced time manipulation-based gameplay paves way for the player to get into thinking about the significance of the game. This is bound to divide players, but that is the nature of entertainment, it is not possible to cater for everyone at once.

Aside from the very beginning of the game, most later levels have a unique element of gameplay, or in some cases several. The puzzles are not ever overtly complex, but there are a couple of places in the game with, most likely, unintentionally obfuscated leaps in logic, which some might find frustrating. In addition to the puzzles in each level, the games' narrative can be thought of as

the real puzzle, for it is set up to be a mystery which the player slowly uncovers progressing through the game.

The Game Structure

Figure 13 below summarizes the basic structure of the game for levels 1-1 to 7-3. The top segment of the Figure is only shown once to the player, while the bottom half of Figure 13 is repeated for 17 a total of 17 times during once playthrough of the game. The lower half of Figure 13 is thus also known as the core game loop, and it consists of: gameplay > level memory > (chapter memory) > new level. Figure 14, summarizes the game's Finale, which the player only experiences once each playthrough.
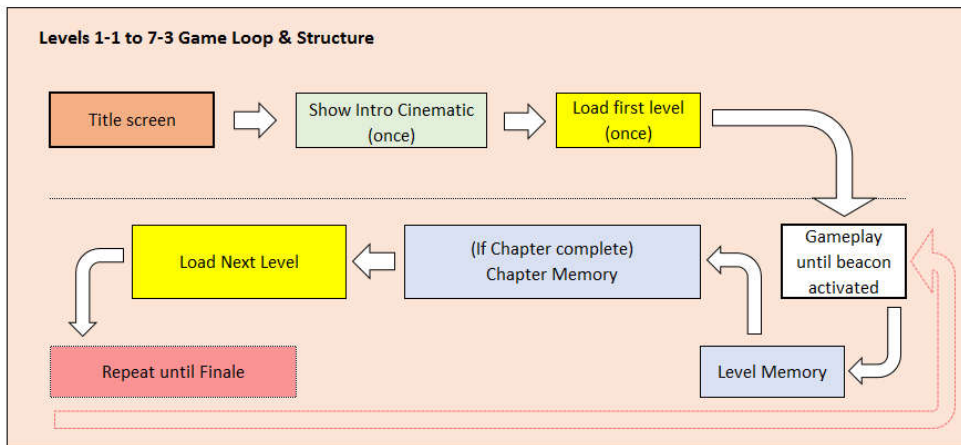

Figure 13, The structure of The Gardens Between (Levels 1-1 to 7-3)
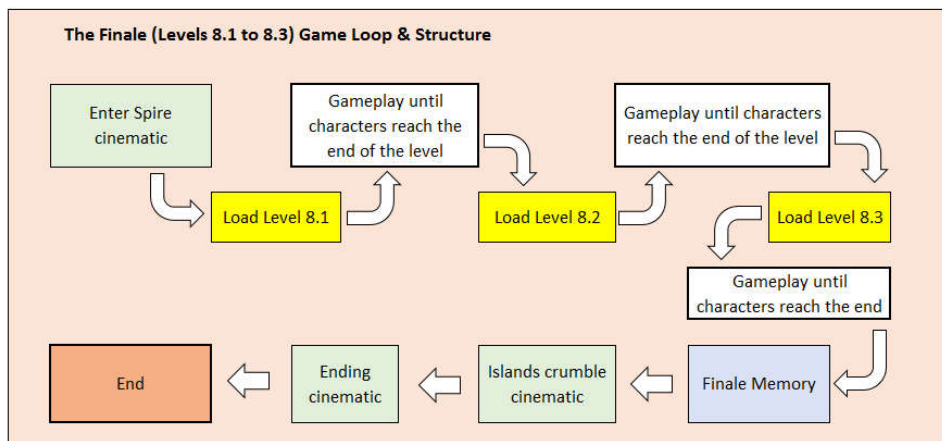
Figure 14, The structure of The Gardens Between Finale.

Forms of Narrative Content

Most of the narrative is told in subtext through narrative artefacts and cut scenes between levels. For the most part the narrator is the player (during gameplay), and the two characters (during cut scenes and memory segments). The narrating is delivered through gameplay and exploration of the world, and by the player explaining the significance of the events and cut scenes to themselves.

In terms of forms of narrative content (Wei 2011, 75), the game consists of mostly action, and the narrative relies largely on the aforementioned cut scenes, the memories. The Gardens Between has three major cut scenes: The beginning, the islands collapsing prior to the ending cut scene, and the ending cut scene. In addition, each chapter memory (after completing each level in a chapter), contains a small cut scene vignette of a moment in the characters' lives as a bookend to the themes contained in the levels of that particular chapter. From these the player can infer (Maggs 2016a, 10) the meaning of the narrative, and is to a large degree encouraged to guess what the plot is about, until the final cinematic which for a lack of a better expression is the missing piece to figuring out the significance of the narrative elements.

There is no dialogue, voice-over or text in the game, aside from the game menu. There is, however, generous gesturing from both of the two characters. These gestures are not narratively significant, but the expressive characters add depth to the world, and themselves, and support the player in experiencing empathy (Dansky 2007, 4–5; Ince 2006, 15–16; Wei 2011, 74).

The only place with any form of text is the game's main menu, and the pause menu. The pause menu is also the only on-screen interface during gameplay aside from the early tutorial level prompts in the shape of the players' controller of choice. The pause menu has four features: a brief list of choices the player has (resume, settings, and exit to map or menu) and to display a slowly rotating view of the current level, or hubworld, including the characters and any objects. According to Wei (2011, 73) the game menu and pause menu can contain narrative content, but it is debateable if this is the case for The Gardens Between as the menus themselves do not contribute to the text, plot or story of the game.

Aside from the cut scenes' explicit telling of events, most of the players' experience and interpretation of what the story is about comes from visual cues, most importantly from narrative artefacts (Wei 2011, 75). As mentioned earlier, each level is tied to an object or objects, which have

narrative significance—they are part of a memory the two characters Arina and Frendt share and within the context of the game are reliving. Though these artefacts do not contain any additional information, i.e. they do not talk or express, their mere existence and noticeability give these objects narrative significance in addition to often being of significance for puzzle solving in each level. However, it would be false conjecture to give much narrative significance to these objects, as without the cut scene context and the entirety of the game, their significance to the story would be difficult if not impossible to comprehend in the intended manner. But these objects are none the less significant as parts of the whole. (Wei 2011, 78.)

As The Gardens Between has no text or explicit story, it has no narrative repetition (Wei 2011, 46–47). The gameplay is repetitive, but beyond the choice of back and forth movement within levels, and the hubworld after exiting a level or continuing the game again after stopping, the choices are limited to gameplay and do not affect the narrative.

Vertical embedding – Story within story

The story of The Gardens Between begins in the present, but most of the game is told as a flashback (Wei 2011, 81). The shift of narrative level in the form of a new reality makes The Gardens Between a vertically embedded story (Wei 211, 82).

The gameplay levels themselves exist on the second tier of narrative: 1) In the main narrative Arina and Frendt are saying goodbye 2) the gameplay exists concurrently with the memories linked to each level 3) the third tier of narrative are the chapter memories. Further analysis of the narrative embedding has little significance, and it is easier to think of the game's story as a two-layer narrative: the embedding (saying goodbye) and the embedded narrative (the going through of memories in gameplay).

However, there is one exception to the narrative embedding analysis: In level 7-1, there is another layer of vertically embedded narrative: To proceed in this level, the player needs to manipulate a drawing on a wall of a Garden Friend, effectively controlling it like a video, along with some additional gameplay possibilities.

In its most simplified form the story of the Garden Friend is: The Garden Friend was at the playground but felt lonely, so it slid down the slide, took a spin on the carousel, rode the see-saw and then the spring rider, jumped through tyres and then, finally, reached the castle where it found a friend. In the lack of an illustration, imagine another layer of story added on top of the Chapter

Memory layer. To complicate the analysis even further, this animation is presented in such a way as to be an homage to the Super Mario platforming game franchise (Nintendo), effectively adding another, albeit short lived and insignificant to the narrative whole, layer to the story.

In Figure 15, below, the layers of memory in orange and red are the main story elements, and the embedding story (the main story) is represented by the blue cut scenes at the bottom of the Figure. The layer of gameplay is represented in green, and to the left of the ellipsis in gray/violet.
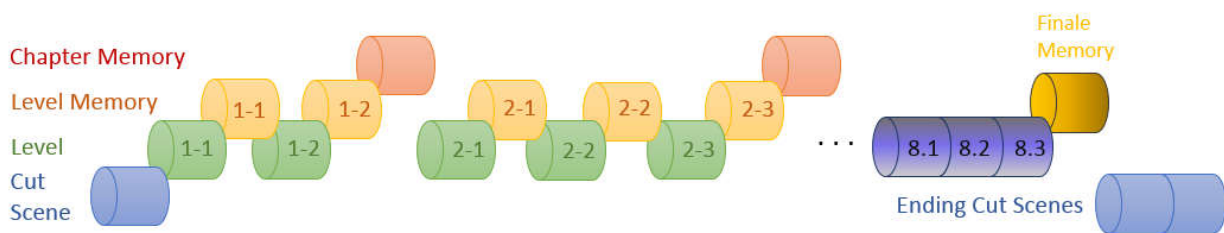
Figure 15, Narrative embedding of The Gardens Between.

Since the gameplay is tied to time, and space, it is difficult to say with certainty whether the game is ordered or inexactly ordered. The memories themselves seem to be presented in chronological order, but with the gameplay elements mudding the waters an argument could be made that the game itself is inexactly ordered. (Wei 2011, 41–43.)

Structure for Narrative Interaction

As the game gives the player no control over the narrative, but merely asks the player to come to their own conclusions and to put the narrative pieces together, The Gardens Between has no elements of narrative interaction (ibid., 85).

Plot Structure – Islands of Memory

As discussed, the game's plot is the two characters are reliving through their past experiences together, puzzling out their views to form a whole (at the end of each level), represented by slamming the lantern onto The Beacon structure, and the subsequent presentation of that memory.

The following Figures on Pages 65 to 70 are representations of the game's narrative structure, including critical gameplay and plot elements, and divided by act and further by chapter.

Figure 16, The Gardens Between Act I plot structure, part 1.

Figure 17, The Gardens Between Act I plot structure, part 2.

Figure 18, The Gardens Between Act I plot structure, part 3.

ACT II

Chapter 4 — Level 4-1 — Saw and Plank

Gameplay
1. New interaction: smoke and lantern
2. New mechanic, back and forth in time changes environment
3. Bells hidden in plain sight
4. Go back to give up light

Narrative
Going back can mean going forward. The darker theme changes the tone. New shades of reality.

Memory
Treehouse planning and construction.

Memory
Paintbucket, roller and a paintbrush.

Level 4-2 — Tyreswing

Gameplay
1. Multiple Garden Friends
2. Bigger level = longer & slower timespan
3. Camera case on solution

Narrative
Autumn colors, leaves falling. Finishing touches on the treehouse. Lots of distractions.

Level 4-3 — Treehouse Frame

Gameplay
1. Unique Mechanic: Elevator & Hourglass
2. Repeated and varied use of the Elevator

Narrative
First lifting things, but then each other as well. A sign of trust.
The treehouse is incredibly high up.

Memory
A plant, a piano and a globe. Decorating complete.

Chapter 4 Memory — Treehouse building, setting it up, working together to make it happen.

Figure 19, The Gardens Between Act II plot structure, part 1.

Chapter 5 — Level 5-1 — Technology

Gameplay
1. Unique Mechanic I: Number dials, mouse and printer to control what elements are in the level.
2. Unique mechanic 2: Remembering a number sequence.
3. Unique mechanic 3: Sound to break a container.

Narrative
Technical and mechanical, sciency, complicated, more mature and capable. The ability to do new things, the awe and mystery of it all.

Memory
Printer, numpad, a printed picture.

Memory
Dinosaur skull and a paper aeroplane.

Level 5-2 — Fossils

Gameplay
1. Revisiting hourglass & items, this time spesific positions required each time.
2. Revisiting repeated use of the same mechanic from 4-3.

Narrative
If only you could fix things. Sometimes small mistakes = big disasters. The solving of complicated puzzles, such as skeletons.

Chapter 2 Memory — At the science fair, presenting an array of neat relics. More complex hobbies and interests.
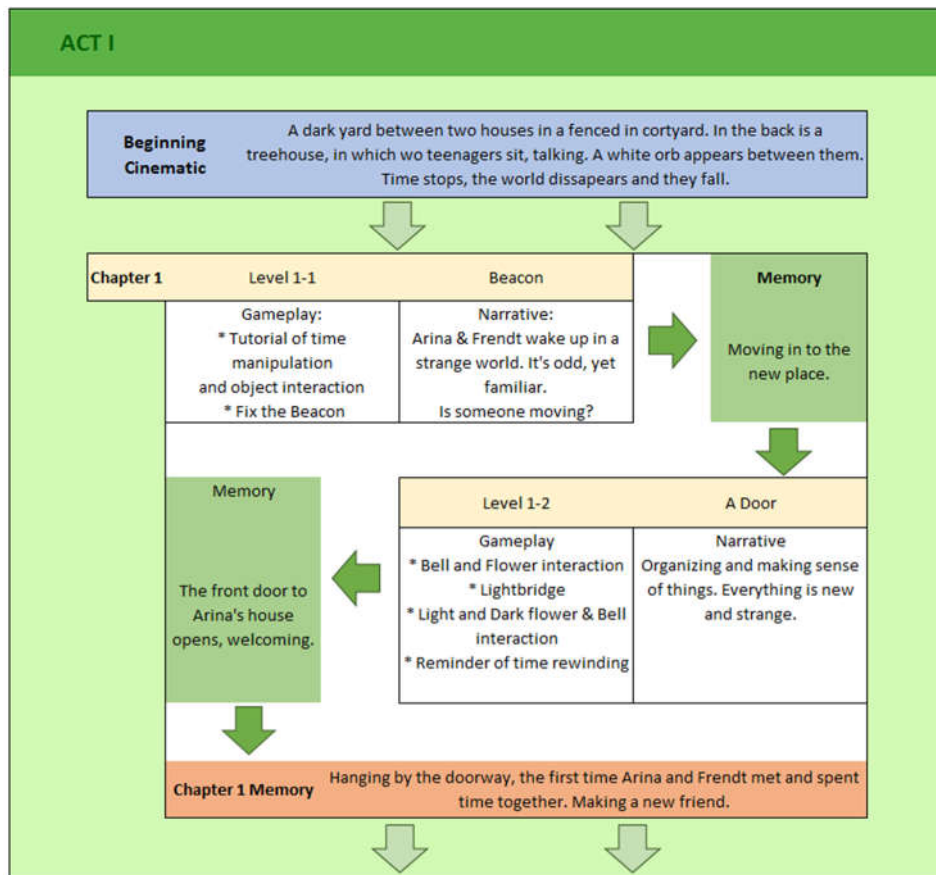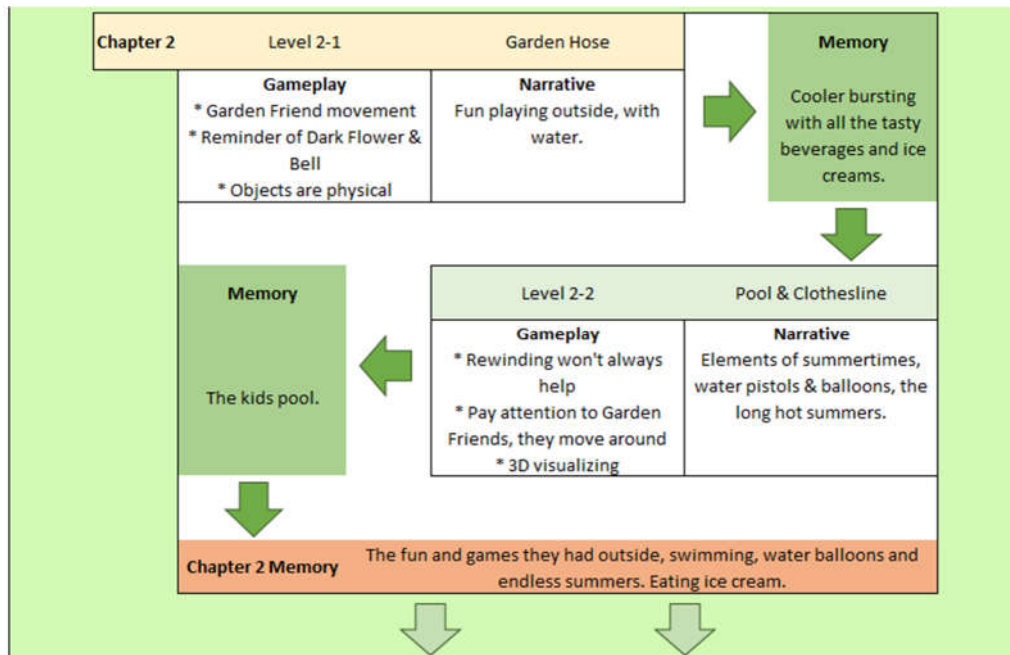
Figure 20, The Gardens Between Act II plot structure, part 2.

Figure 21, The Gardens Between Act III plot structure, part 1.

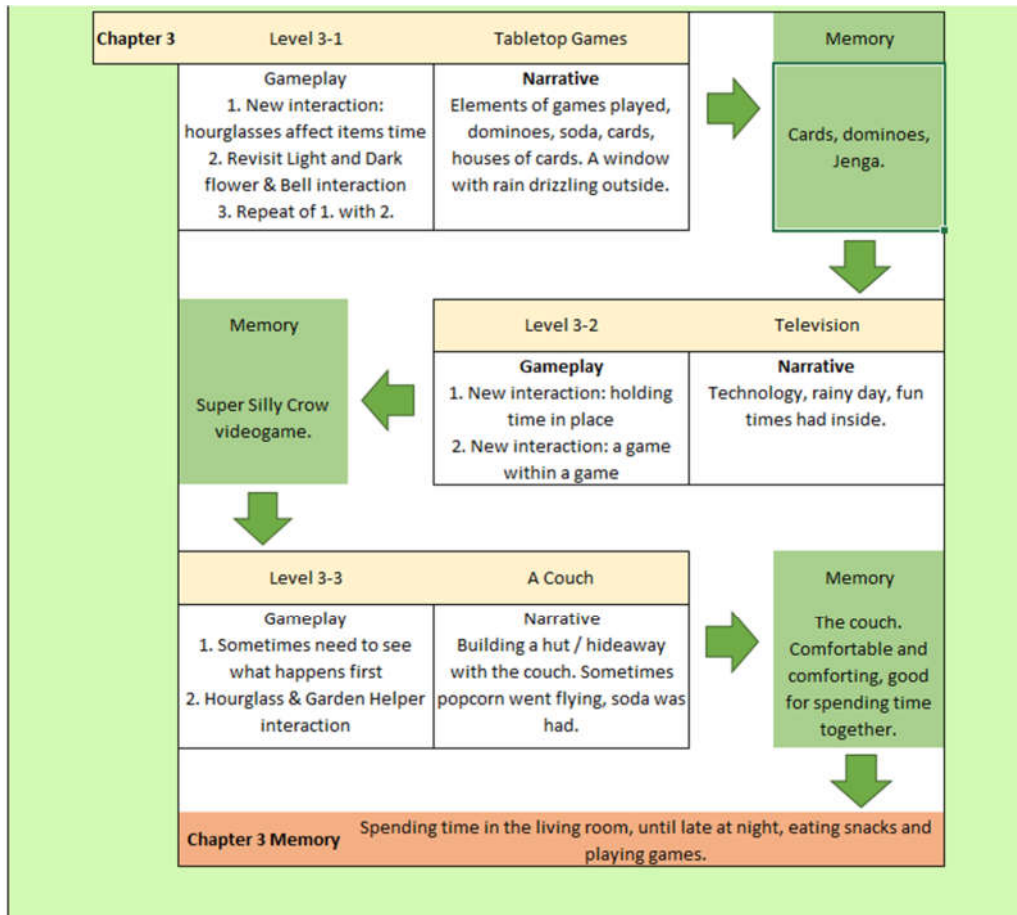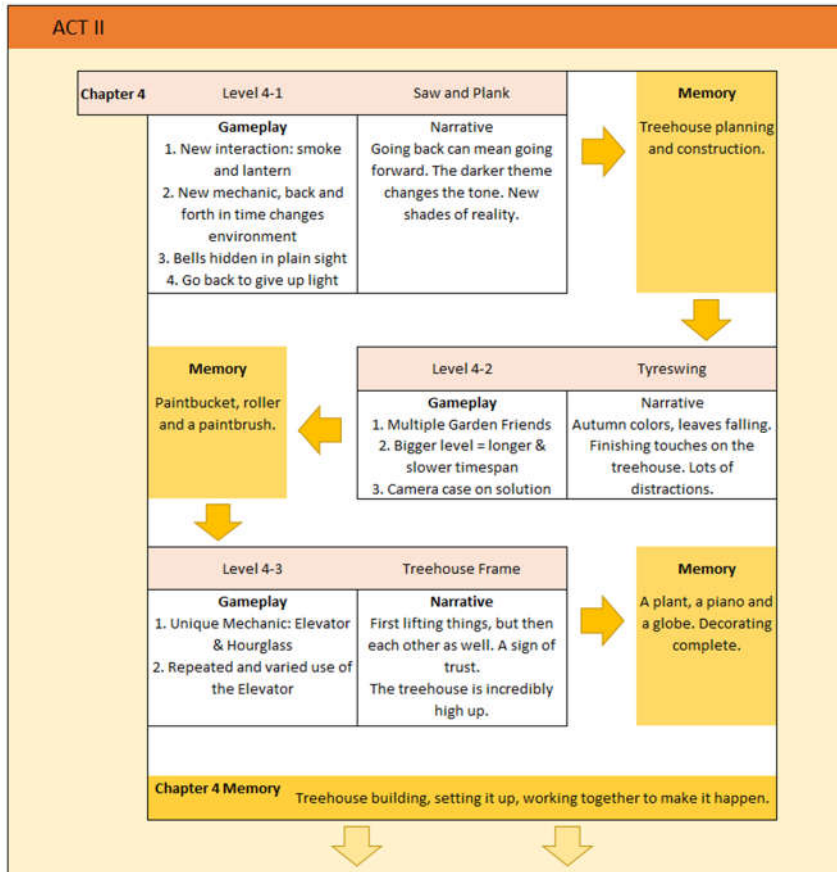| Chapter 7	Level 7-1	Slide and Spring Rider	Memory
Gameplay 1. New gameplay: animating paintings which affect the game world, and vice versa. 2. Several different variations on 1. 3. Minor Smoke and Light Flowers	**Narrative** Vertically embedded narrative, animated paintings which tell a story of a Garden Friend. The characters telling stories to each other. Night, crickets.		Playing at the park.

Memory	Level 7-2	Headphones & casette player
The music they've experienced.	**Gameplay** 1. Unique Mechanic: changing music to activate different Garden Friends. 2. Smoke 3. Bell	**Narrative** The many tracks they've heard, and liked, together. The ability of music to move, and to add or substract from mood.

Level 7-3	Telescope & Picnic Basket	Memory
Gameplay 1. Bell & Flowers & Smoke 2. Unique mechanic: using an hourglass to change the sky to move a dark flower. Iteration, creating a bell. Iteration, creating a light flower from a celestial object.	**Narrative** Climbing to a good vantage point to see the stars. A recall back to science fair. Staying late, the cicadas keeping them company.	Stargazing

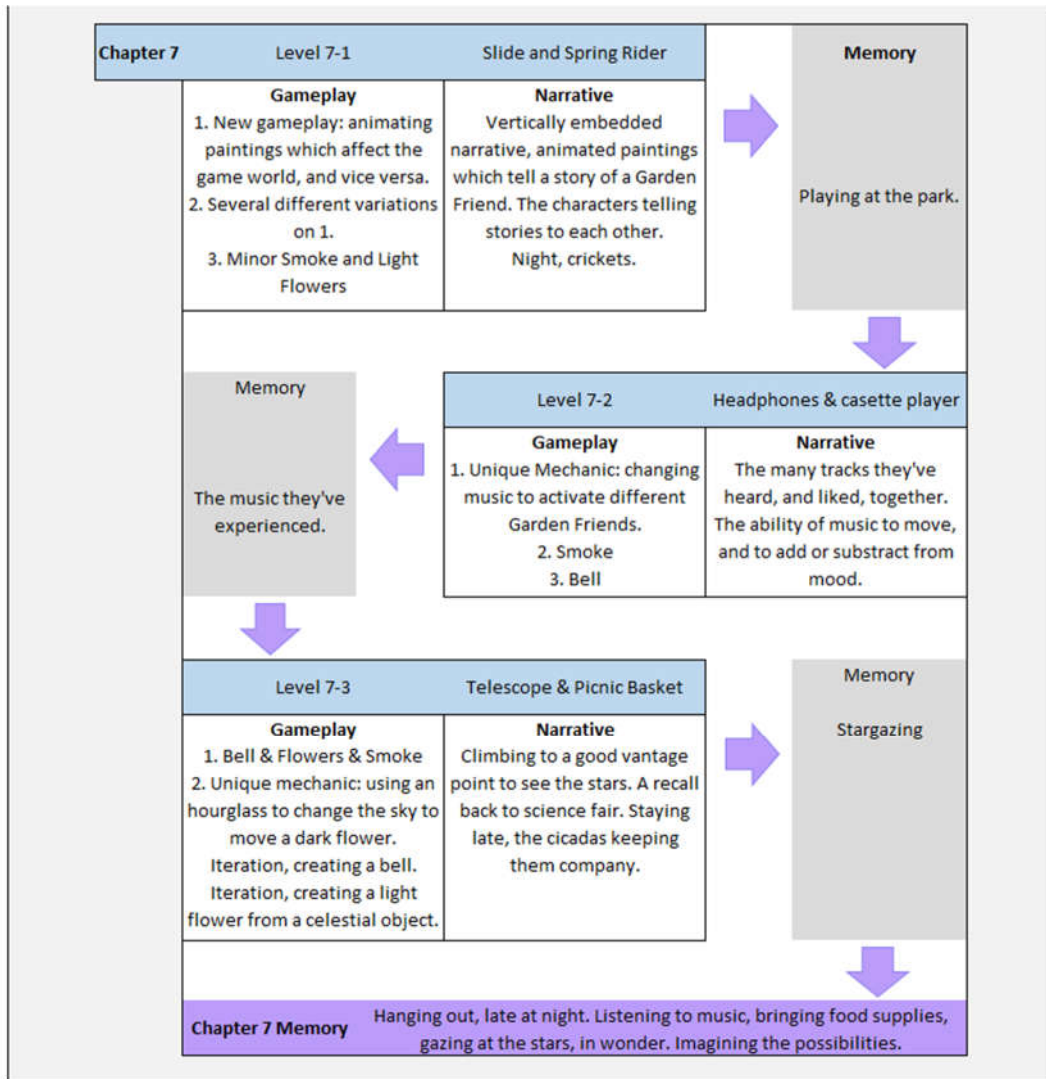| **Chapter 7 Memory**	Hanging out, late at night. Listening to music, bringing food supplies, gazing at the stars, in wonder. Imagining the possibilities.

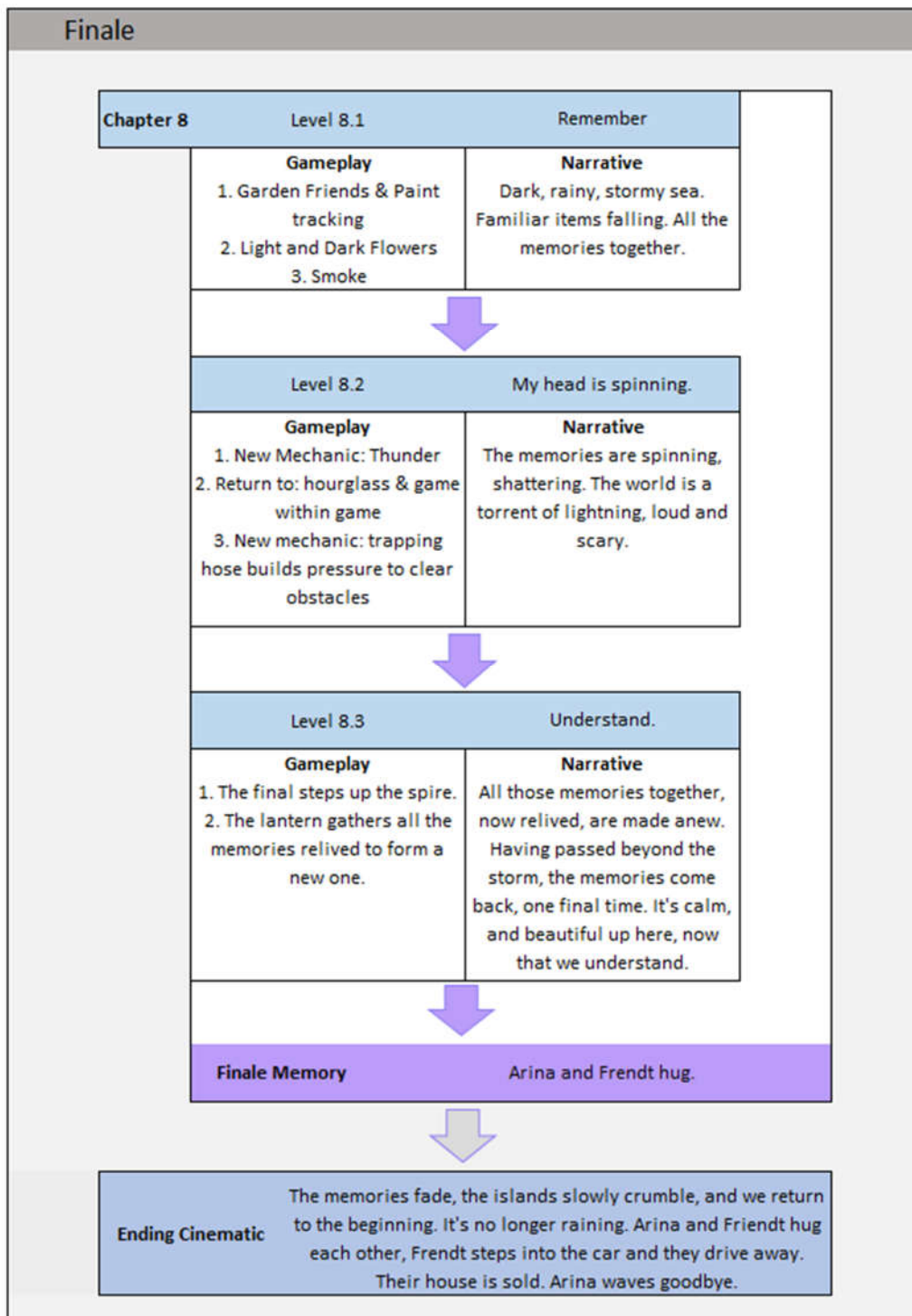Figure 22, The Gardens Between Act III plot structure, part 2.

Figure 23, The Gardens Between Finale plot structure.

Temporal Analysis

The Gardens Between is a game with a story told through flashbacks, which unfolds to reveals the

significance of the whole as the player progresses. The bookends of the story, the beginning cut

scene and the ending cut scene are the only segments of the story which are temporally on the main timeline (the embedding narrative). The remainder of the game is spent in an abstraction of the world, a sea of memories if one were poetically inclined, which is, according to Wei, unusual in games. (Wei 2011, 42.)

As for order (ibid., 41–43), the game can be interpreted in a multitude of ways, but the foremost intent of the developers has likely been to present a fully ordered, yet entirely polychronic game. The nature of its representation and significance of time and space for gameplay, and the inferred nature of narrative of The Gardens Between, makes for a story ripe for interpretation. For the purposes of simplicity, this analysis will consider the game as fully ordered and not attempt to infer anything beyond that.

The game length is roughly six hours, with highly likely a wide margin of variance depending on the player's experience in games, physics and puzzles. As for the rest of what Wei has titled speed in her framework, the gameplay sections (levels) are largely a summary since the levels are abstract reconstructions of events in the characters' past (see Chapter 6.1.2). One point of consideration is that based on Wei's work (ibid., 45), the spaces between game levels could also be considered ellipsis' as the events skip from one to another with no clear transition in between, but in reality the intent of the game design is that though it is not always shown, the characters traverse the hub-world between each level. Another interesting aspect is that because the original events on the main narrative level are condensed to the point of being represented as artefacts and as metatext (the symbolic nature of the memories), the games' levels speed can also be considered ellipsis'. The beginning and ending cinematics can be and are likely intended to be thought of as scenes (when the story time and operational time are equal). As mentioned earlier in this analysis, the game does have a pause function, which is one classification of the analysis of speed. When in the pause menu, the game time is on hold, but interesting to note is that the physics of the game are still running in the background. (ibid., 44–46.)

As for the rest of the definitions for speed, frequency and variation, neitherare present in the game. Everything happens once, or alternatively in infinite repetition until the player decides otherwise, and thus, according to Wei (2011, 46.) no frequency is exhibited.

Like frequency and variation, there is no narrative variation in The Gardens Between. The story and plot are unchanged by anything the player does. The player is merely an observer of the unfolding narrative even while the player is the driving force for that unfolding.

Topographical Structure

The space, or topography of The Gardens Between is a nearly-typical videogame hub-and-spoke layout (Wei 2011, 58 & 119): the twist is comes from how typically these layouts have the player start from the centre and progress towards the outer edges (the spokes), but The Gardens Between topographical structure can be thought of as a horse-shoe, where the player progresses along the outer edge from end to end, and only gains access to the centre for the Finale. Figure 24 below is a graphical representation of the game's topographical layout.
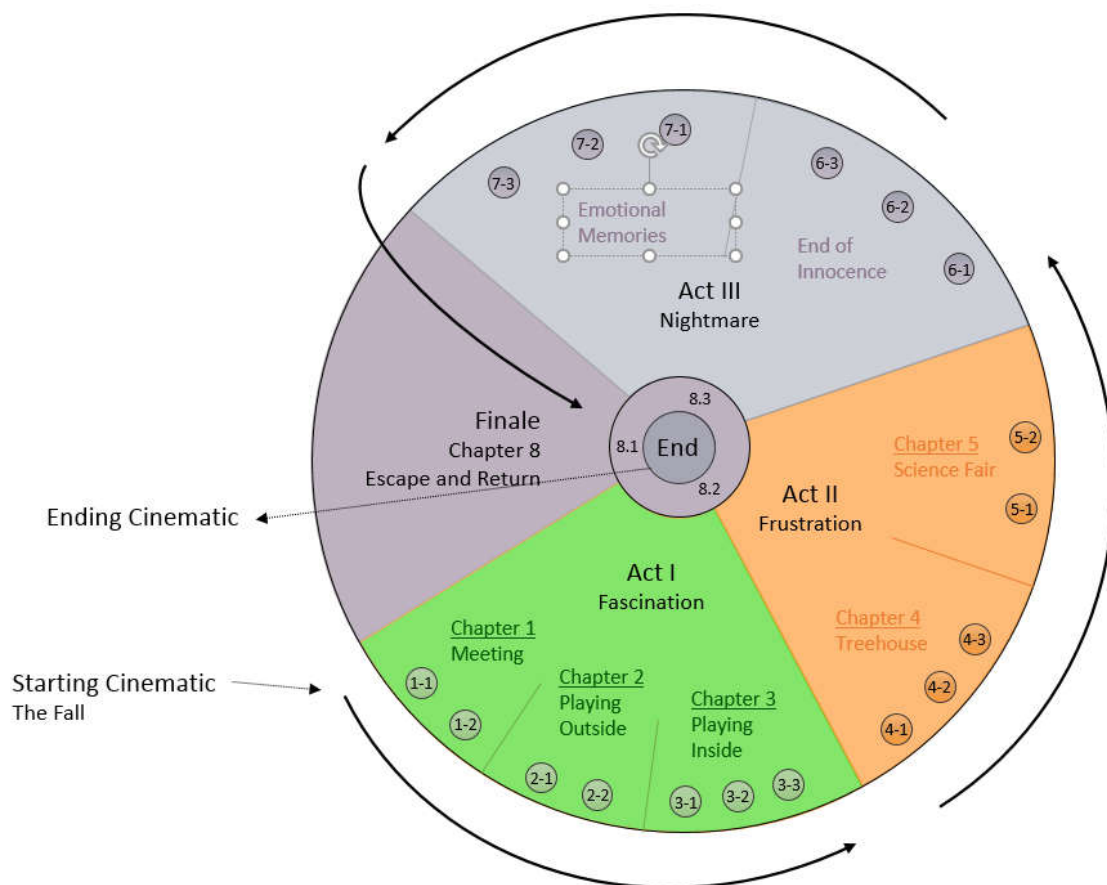

Figure 24, The Gardens Between Topograpical layout.

Operational Structure

If games are about space and time, as Wei suggests, then The Gardens Between is the ideal candidate for examining this concept. And subconsciously it may also be why this particular game was chosen for analysis in this work.

Similar to how movement and time works in Braid (Number None 2008), and to an extent how the time rewind works in Prince of Persia: The Sands of Time (Ubisoft Montréal 2003), The Gardens Between takes the concept of linking space and time to its extreme by making the gameplay about spacetime and then giving the player the control over time, and thus space as well.

As examined previously, the topographical layout of the game is quite simple. There is only ever one direction to go, i.e. paths and axes (Wei 2011, 61), unless the player exits the game or level and is then presented with the hubworld layout. Which allows for traversing back and forth as previously mentioned. There is one exception to the level structure, which is that the three layers of the Final can only be accessed by playing them in sequence. From the operational view The Gardens Between couldn't be much clearer and only contains one path and axis. (ibid., 59–60.)

Presentational Structure

In the presentational view (Wei 2011, 64), The Gardens Between utilizes an unusual modifier to the very common focalizer type (ibid., 93) used in platforming and adventure games of the side-scrolling sub-genre. This is because while the player is in effect the narrator, they have no control over either of the characters directly. However, it is not unreasonable to presume from the way the characters behave and move within the game that Arina is the protagonist.

The presentational quirks continue in the way the narrative is presented; The narrative is both omnipresent and at the same time entirely separate from the moment to moment gameplay. The gameplay can be thought of as the echo of the plot, a facsimile of the events that once took place. With time and imperfect memory what the characters once experienced has been altered and now represented in this shared-dream of Arina and Frendt as a sequence of abstract islands and puzzles.

The audiovisual style supports the dreamlike experience goal stated at the beginning of this Chapter. The music is low key and is only ever noticeable in moments of reward as brief jingles when solving a puzzle, or when being shown another chapter memory. The amount of sound effects

used is minimal, and all of the sounds are designed to be easily distinguishable from each other, which is important since most of the puzzles rely on understanding what effects the characters behavior has on the world. An excellent small detail on the presentational level is how the characters notice each other and fascinating or familiar things about the world they have been pulled into.

Each of the acts has a unique soundscape and accompanying music track. Aside from the somewhat surprising musical atmosphere choice in the Finale's higher stress situation the music doesn't stand out. Which is good, since the role of music in The Gardens Between is to support mood. Which is why the music does not react to player actions either. The title screen, hubworld and Act III share the same music, which is thematically appropriate as the closer the player gets to the end of the game the closer to reality and the main narrative level they get. The few noticeable exceptions in music are in level 6-3 (The Jacket) in which the music is rather melancholy and mournful, and in level 7-3 with a greater sense of urgency and stress fitting the last level prior to the Finale.

The world, as should be apparent from the topographical analysis, is quite segmented and the only connecting tissue between islands is the hubworld, and how the characters are related to the memories on which the islands are based on.

Conclusion

In conclusion, for such a seemingly small-scale game The Gardens Between offers a lot of depth, both for players and for academics alike. This analysis is by no means comprehensive, and much of the developmental strategies and choices the designers have made weren't discussed.

The Gardens Between is a pioneering and daring take on a puzzle game with narrative, and it is the authors' wish to see it succeed and for players to find it, for it opens up many doors for what is can be done in the space of videogame narrative.

While the game's Finale suffers from a mild case "figure out what the designer wants you to do", a common feature of puzzle game design, as a whole the game is a well-crafted experience. The issues of the finale aren't that the leaps in reasoning are too big, or beyond the players' grasp, but more a case of lack of communication. Granted the ending is difficult on purpose and reflects the characters' emotional turmoil in their new situation (of needing to say goodbye) quite well, but the way the difficulty has been achieved might not be in the best interest of the game and the experience. The Gardens Between is a one of a kind game which oozes love of the craft an unusual amount of attention to detail.

To craft such an appealing and nuanced narrative around the themes of friendship, memory and change, which is more than many large game brands can claim to deal in, is quite an achievement. The power of these themes is that we can all relate to them, and yet rarely have we seen these approached in games, let alone puzzle games. It would seem this begs the question, why?

8 Conclusion

8.1 Results

The goals of this thesis were to: 1) provide a source of material for JAMK/Tiko students 2) to expand the author's understanding of videogame narrative 3) to bring something new, or at the very least awaken the conversation of videogame narratives through looking at videogame narrative structure, and finally, though not explicitly stated previously 4) to write a thesis.

Based on the results of the analysis, the breadth of contents of this work and amount of topics covered, the author judges the first and fourth goals to have been succeeded and perhaps even surpassed. As for the second goal, the author has learned a great deal about videogame narratives in the process of researching and writing this thesis. In addition, on a personal level many a lesson was taken by the author for project management, motivation and perseverance in the face of adversity. The third goal is the most difficult to evaluate from the author's limited perspective, especially due to the lack of first-hand experience in developing videogames with narrative. What is clear though is that during both of the interviews conducted, the subjects both expressed to having been pleased by the opportunity to discuss game narrative from a new angle. From this, the author concludes that anything which contributes to the discussion of game narrative, be it an article, a thesis or a review, is generally a benefit, and in the author's opinion the usage of Wei's analysis framework may indeed be a positive contribution to the discussion of narrative design, and for narrative designers and other industry professionals who are interested in learning more about videogame narrative.

The original question of "Can videogame narrative be better understood by analysis?", and whether tools exist for that purpose is considered by the author to be well covered and the answer to be a resounding yes on both accounts.

8.2   Discussion

As always with a qualitative work, and especially in comparative studies the authors perspective, experience and knowledge of the subject matter will show in the results. Which was one reason the method of data triangulation was thought to be of benefit, but with the limited usefulness of the interviews, as mentioned, the interviews did not contribute to the whole in the amount that was previously thought. The extent of this impact on reliability is beyond the author's ability to evaluate, but it is doubtlessly a factor. However, the theoretical sources and material was chosen with as much consideration as possible, and the reliability of both the theoretical and the academic material were judged to be high. Special care was taken in cross checking the authored material, within the author's capabilities. The varied use of terminology within the game development world, due to a lack of consensus, which plagues game development was a major obstacle in the information gathering and processing stages, as may also be evident from the results, but it is the author's opinion that with the time allotted for this work much more thoroughness wouldn't have been possible.

It would be highly likely that the game development industry would benefit from finding a common vocabulary, for it would improve communication and clarity by ensuring that people are more often talking about the same phenomena. Granted this would take considerable effort and coordination, and time. It may be that the lack of settled terminology is a sign of the relative newness of the industry, and that the terminology question will get settled on its own, but perhaps a more thoughtful and purposeful approach would hasten the process.

Traditional media discussion, analysis, and creation has greatly benefited from academic analysis and tools developed to aid in understanding their contents and their respective audiences' experiences. Currently videogames are largely lacking this benefit, or rather, to a large degree the games academia and the games development industry do not communicate. And to a degree, there are those in the industry who would rather see it remain that way. It is possible this is one of the factors holding the game development industry back, or at the very least it seems likely the scene would benefit from both supporting and welcoming the academic work. This has been shown to be true with User Experience (UX) research and design (UED); Ten years ago, barely anyone understood what it meant, yet at the time of writing this work most large game studios are actively

seeking to fill UX researcher and design positions with increasing frequency. While narrative design is quite different to UED, it is not unreasonable to think that allowing for further narrative design research would also benefit the entire scene, possibly in unforeseeable ways. Videogame development is different to any other media due its interactive nature, and it may be there is no simple solutions to be found, no elegant theory and framework, or it may simply be that game development as an industry of entertainment has yet to reach the level of maturity required to benefit from the academic analysis and dissection of the media. It is still the author's opinion that it is always beneficial to further one's understanding.

During the writing process, and studying Huaxin Wei's theory, it has become apparent, as was also mentioned by one interview subject, that there would likely be value in making academic research more readily accessible and available for the game development industry at large. It would serve a double purpose in bringing the academia closer to the practical aspects of game development and bringing the down-in-the-trenches professionals closer to academic work.

A word about conflict as the source of all storytelling: this idea seems highly questionable to the author, and even possibly harmful for the development of storytelling and understanding of narrative. Though a doubt only, and thus difficult to prove, it seems that the infatuation with conflict is one of the most problematic aspects of the (western) craft of storytelling. It is such a deep-rooted and ubiquitous belief, it is nigh impossible to study the craft of writing without learning about it, and due to how much power stories have over our lives, the impact of this benign seeming "truth" is likely so vast we do not comprehend its significance. The outcome of this on a large scale cannot possibly be positive. That is not to say that conflict is inherently bad or should not be a part of narratives, merely that taking it for granted might not be all that beneficial. The only argument which shows that not all stories are conflict lies in the eastern storytelling traditions, in anime and in manga. While there is often, but not always, an element of conflict in eastern narratives as well, it seems that the focus of these stories can be something much simpler and less confronting, such as food, or even companionship. There is no doubt much to be discovered and learned in the craft of writing and storytelling. This is just one possible direction.

Whether the methods common to traditional media on what is possible on a character development level, mentioned in Chapter 4.5, are a feature videogame narratives require is a worthwhile question. Though it may be the wrong question to ask. It is likely games would at least benefit from systems which allow for more depth and reactivity to change in their characters, and just as

likely that significant breakthroughs could be made in this area. But, such systems are complex and take time to develop. Prior to that, however, there must be a need for it. And that is in the hands of the players. Until such a need surfaces, and a system which supports complex character change and reacting to plot changes on a deeper level is developed, videogame narratives will continue rely more on interactive plot and world than on the nuances of character.

While both films and games are an audiovisual medium and have some of the basic features of both media in common, that where the similarities end. Many games have been made with an emphasis on cinematic storytelling, and that is how they feel, movies with moments of gameplay in between. The narrative techniques used for games are different to those of film, and theories such as Syd Field's Paradigm are not directly applicable to game design beyond the creation of a high-concept narrative design. It is worth pointing out here that Syd Field's Paradigm or The Hero's Journey, or any other similar frameworks are not directly applicable to creating any form of media, because they are not best utilized in the creation, but rather in the analysis and problem solving of those media. This applies just as much to Wei's game narrative analysis framework; Its purpose is not to act as a guide or a blueprint to designing videogame narrative, but rather as a tool for analysis and for furthering the understanding of how videogame narratives are built, what is the underlying structure and interplay of all the basic elements of which videogame narratives are made from.

Further, all of the models and structures, and to an extent the academic theory presented in this work are simplifications for the sake of discussion. As Wei states (2011, 85), "there are no clear-cut boundaries between the four structures", by which she means linear, branching, foldback and emergent narrative structures. It is difficult indeed to find a narrative structure which neatly fits any single model or framework, of those presented or otherwise, and therefore it is good practice to examine games on a case-by-case basis and to be thorough, to include sufficient detail, by taking to account the whole design and goals, rather than to generalize, or oversimplify or focus too much on just a single feature, or design or structure. Our brains are lazy, and long for simple explanations more than for the absolute truth, and in learning and researching it is important to keep that in mind. If anything, the game analysis has shown the author how much more depth to analysis there is than what could be contained within the pages of this work.

Finally, at the time of writing this work, the JAMK/Tiko staff can only offer limited support to its students interested in writing and narrative design, and to the best of the author's understanding

it remains unclear whether any further support in this area of specialization will be available in the future. It is thus the recommendation of the author that until such a time when more resources and support can be provided, under the current conditions, it is not advisable to support this line of inquiry for students without extreme consideration and staff peer-evaluation the student's self-reliance, resourcefulness, and persistence.

On a lighter note, the author of this work admits that would the opportunity present itself, he would approach this thesis quite differently the next time around.

8.3   Weaknesses

Due to time limitations and some external factors beyond the control of the author, the amount of interview content included in the work ended up being much less than anticipated. It would have likely also been more beneficial for the reliability of the work to have conducted the interviews at a later stage in the process, as the research and acquisition of material would've likely helped direct the interview questions more towards the topic of the thesis. Addition reliability might've also been gained by having a mentor from the industry, or someone to fact check and help in guiding the research better.

Similarly, the structure and contents of this work might have been improved by working together with another student, preferably with a similar area interest, as peer support would've contributed to less stress. Unforeseeable events in the authors personal life made the process of writing this work much more challenging than it might've otherwise been, which was made worse by the lack of reliable and persistent support. It is immensely challenging and taxing to author a work of this size without proper support under any conditions, let alone the major upheavals in the author's life during this time.

One clear weakness of this work was brought on by the amount of time allocated for JAMK/Tiko thesis, which invariably shows in limiting their scope. Though it is not reasonable to tackle large subjects for a bachelor's thesis, the fact that most practical considerations had to be left outside this work will inevitably decrease its validity. But, as most often is the situation, project management is about making compromises.

The lack of firsthand practical knowledge and experience is also likely to have a negative effect on the overall understandability and approachability of this work. Finding, processing and writing out

information, of which much is totally new to you, in a coherent and easily understandable way was perhaps beyond the ability of the author, though that is better judged by others, and with time.

It would have benefited the reliability of this work to provide more examples, especially a second game analysis would have added much needed variance and depth. Similarly, the originally planned third interview might've proven fruitful, especially with the aforementioned point of having had more time to prepare for the interviews to direct the questions better towards the topics discussed in this work.

Qualitative research is not free of values, because it is a subjective field of research (Kananen 2008, 28.) The work is inevitably a reflection of the author; the author is the primary instrument of analysis through which the world and research subject is filtered (ibid., 25). This puts the onus of reliability on the author, for without their objectivity the value, and significance, of their work will inevitably be lessened.

Data Triangulation as a method is prone to becoming a method for its own sake and may result in the author being overwhelmed by their material acquisitions, which can result in losing focus on the research problem and eventually a shallow study. Additionally, choosing a research method is always risky because different methods inevitably lead to different results. (Kananen 2008, 41.)

The data triangulation method is beneficial in providing a wider and deeper view of the subject, but it cannot be used to interpret the findings and thus discern any absolutes or truths (ibid.).

Another limitation for this work was the assessment criteria imposed on this work, which in their current form do not lend themselves well to critical and analytical work. It is likely it would benefit JAMK to revise these requirements, and the chosen mode of thesis writing in current use. As the requirements are set currently, the demands on the students writing a thesis leads them, and the tutors to recommend, to look at the evaluation criteria, and backwards engineer their work from those criteria—which inevitably leads to works of lesser value and significance for the creators themselves, and as a result for JAMK as a whole.

One possible weakness of this work is the author's foreknowledge of the subject prior to beginning the information gathering process. In general, it is considered beneficial to be aware of the subject at hand, but in qualitative research this is at odds with methodology in that too much awareness of a subject will guide the author, often to what they know instead of what they should know. (Kananen 2008, 46–47) This is also known as the Curse of Knowledge. However, one alleviating factor

to the possible impact of foreknowledge on the reliability of this work is that the process of gathering material was also a learning process for the author, and most of the author's knowledge of the topics in this work was acquired during the research and information gathering process. In other words, the author learned as the information was gathered and the work progressed, which to the best of the author's understanding, in addition to learning the academic framework and its application, is the goal of a thesis.

8.4   Future considerations

From the results and discussion, it is reasonable to conclude that further work which would combine the academic underpinnings of this thesis with the approach of how to apply the theory in practice might provide an interesting avenue of research.

Similarly, several subjects this thesis briefly addresses could benefit from being looked at in finer detail, and perhaps tested through practical examples. These include but are not limited to character design, narrative structure design, further analysis of games using Wei's framework, comparing traditional media and game narratives, and examining interactivity through the lens of narrative design. Player agency alone is a subject which would lend itself to multiple angles of approach and inquiry, such as Space & Player Agency (or Space Agency for short), the role of player agency on impact of videogame narratives.

Finally, it is highly advisable to not take the results of this work and consider them as a platform to crafting narrative. It cannot be emphasized enough that it will not be beneficial to use Wei's analysis framework in the creation of videogame narratives. That is not its intended purpose and function, and trying to apply the framework to that end would be seen as irresponsible and ethically questionable by the author of this work. It is a useful tool, when used correctly and in the right context.

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Appendices

Appendix 1.   Interview questions

Question theme 1: Academic & theoretical

1. How do you feel about games research?
2. Do you follow or pay attention to games research?
3. Are you familiar with Huaxin Wei's work on videogame narrative structure analysis?
   a. What do you think about it?
4. In general, what sort of expectations do you have for videogame narratives in the future?
5. Current state of videogame narrative structure, are there any analytical tools in use?
6. Do you think games development would benefit from research on narrative structure, and narrative design?
7. Is there anything about games or narrative you'd like to study if you had the opportunity and time to do so?
   a. If yes, what and why do you think that is important?

Question theme 2: Narrative structure

1. What does narrative structure mean, how would you define it, and its purpose?
2. What types of narrative structures have you worked on?
3. What elements are involved in structuring a game narrative from a narrative design perspective?
4. How do you approach designing narrative structure?
5. Do you have a set approach to narrative design?
6. In your experience, how important is defined narrative structure for creating videogame narratives?
1. Do you approach linear narratives differently than non-linear narratives, and how are they different?
2. Effects of initial structure choice on the development process?
1. What is narrative structure for, what is its purpose?
2. Do you use any narrative structure tools or techniques?
   a. If so, which kind?
   b. If not, do you think it would be useful to have some?
3. Is there anything you've learned about narrative design, specifically with regards to structure, that you think would be important for everyone to know, especially for students or beginners?

Question set 3: General narrative design & closing questions

4. Theme
5. Do you think about player agency?
6. Is there anything I haven't thought to ask that I should've?

Appendix 2.   Chapter 7.1 Time: Huaxin Wei, questions

1. Is the linearity in operational time consistent with that in story time all the time?

2. If not, is any there deviation from the chronological sequential ordering in the game

plot and operation?

(a) If so, how is it done, through flashback, flashforward, or multiple orderings?

(b) What narrative effect do those devices produce? What gameplay function do

those devices perform?

3. How to describe the rhythm of the game?

(a) Is there a perceivable pattern in the changing of narrative speed? (e.g., think

about how regular or frequent the graphic novel panels appear in Max Payne's

narration to advance the plot with a tempo of summary.) What does this pattern

affect players' experience and gameplay?

(b) Is there noticeable use of the four narrative tempi other than scene? What functions do they

perform in narrative or gameplay?

4. Are events presented singularly, repetitively, or iteratively?

(a) How many types of repetition exist in the game? Do they have an impact in

narrative or gameplay?

5. What are the ways to break the linearity of the game narrative through polychony, in

order to create narrative variations?

(a) Can the player change the order, speed and frequency of events in the plot? How

many multiple orderings are possible in the game?

(b) Does that freedom create narrative impact?

6. Is there any temporal device also a game mechanic?

Appendix 3.   Chapter 7.2 Space: Huaxin Wei, questions

1. What is the topographical structure of the game space?

(a) What topographical layout does the game use?

(b) Is there any spatial opposition in the game space? If yes, what is the implication

for narrative and/or gameplay?

2. Are there any axes in the game space?

(a) How do the paths and/or axes affect the pattern of navigation and the order of

events players go through?

3. Are there any mobile and immobile characters and objects? If yes, how do they influence the

narrative and gameplay?

4. Is the topographical space of the gameworld continuous? If not, how is the player

transported from one location to another?

5. If the topographical space is continuous, is it (re)presented as a continuous space?

(a) If yes, what are the options of camera control for players?

(b) If not, how is the player's view limited? Are there any edited sequences?

6. How does the sound work in and with the space?

(a) Does it intensify the narrative experience?

(b) Does it perform guidance or other functions in gameplay?

7. What roles does the virtual camera perform? Is there any stylistic use?

8. How is the interface information laid out on the screen? Is there any special use of

the screen?

Appendix 4.   Chapter 7.3 Composing Game Text: Huaxin Wei, questions

1. What forms of narrative content does the game use?

(a) Is the game menu part of the narrative?

2. Who is the narrator in the main narrative?

3. Are there any embedded narratives? If so, in what forms and which way (horizontal,

vertical, or modal) are they embedded?

(a) Who is the narrator in each of those embedded narratives?

(b) Is there any special effect on narrative or gameplay made by the embedded narratives?

4. Does the narrator transgress its boundary sometimes? If so, what effect does it produce?

5. What is the structure of the narrative interaction in the game?

6. What technique does the game use to create narrative variation?

7. If a computational technique is used to make narrative "emerge," what logical model

is it based upon, and what sequencing algorithm does it use?

(a) What characteristics or patterns can describe how the game text produces "emergent narra-
tive"?

Appendix 5.   Chapter 7.4 Organizing the Game Plot: Huaxin Wei, questions

1. How are the characters constructed in the game plot?

(a) Do they have any personalities and traits that make them credible?

2. Is the focalization internal or external in the game?

(a) In each situation, who is the focalizer and what is focalized?

(b) Is the "vision" subjective?

(c) For mixed situations, is there a pattern of changing the focalizer?

3. What type does the game plot belong to?

(a) If it is an epic type of plot, what are the distinct stages of the plot? Are there any

archetypical characters performing certain roles?

(b) If it is a dramatic plot, does it follow a three-act structure?

(c) If it is an mystery plot, are there multiple plot lines?

4. Does the plot follow a dramatic tension arc or other type of tension arc?

(a) How does the game computationally control the arc?

Appendix 6.   Christy Marx: Interview transcript.

Christy Marx – INTERVIEW PART TWO

What does narrative structure mean, how would you define it and its purpose?

0:23 "When I think about narrative structure, what I'm thinking of… what do I have to work with in the platform to deliver story.
0:34 "I'm going to be looking at what the platform it is, what the genre is,.. what means do I have to deliver story within the limitations theparameters and whatever, opportunities of that platform and that genre."
1:00 "I'm going to be building a narrative structure that works within those limitations."

Like scope of the project?

1:14 "how you deliver a story in a triple-a console game is vastly different than how you deliver a story in a free-to-play mobile game."
1:26 "They're vastly different for a whole number of reasons. One is the platform itself. I mean, the sheer size of a screen on a console game versus a little tiny phone for a mobile game you know. The fact that people are going to be paying a lot of money for a console game and therefore there's a lot of money that goes into the graphics and the development, and what you can do with it. The power and speed, you know everything it can deliver. Versus the limits of what you can put into a mobile game in terms of budget and scheduling."
1:59 "Those things are all going to dictate the kind of story you tell and how you tell the story, and the narrative structure will be dictated by all of those factors, because then you have to sit down and figure out "ok, am I… am I actually going to be telling a more or less linear story", which actually often happens, but if it's not going to be mostly linear, how non-linear is it going to be, what is the budget and the schedule going to allow, what will the art assets allow… I mean all of these different factors go into figuring out what the narrative structure is going to be. And the narrative structure is going to be what ever you can deliver."

How important is a defined narrative structure for creating videogame narratives?

10:53 You have to know what your structure is first, before creating anything else
11:10 You have to know what you're going to deliver and how you deliver it before you create it.
11:10 When I think of structure, I'm thinking of all the parameters we've been talking about. What are the technical, art, time and budget parameters.
11:28 How much can be done?
12:27 What is the world, the setting, how many levels are there?
11:35-11:43 Leads to what kind of structure I can build within all that.
13:37 I tend to think in terms of structure, as a writer. Learning to write scripts is a particular structure. Scripts for TV is one type of a structure. A screenplay is another type of structure. Animation is a particular structure. A comic book is yet another type. When I got into doing games, I had to figure out what is this structure.
14:10-14:17 Discovered there isn't just A structure, there's a whole "shit ton of structures"

Christy Marx – INTERVIEW PART THREE

On Branching

5:28 Do you have the time and the budget to create all the tech, extra assets, voices etc., to pro-vide all the alternative. That's a limitation to narrative structure right there.

5:55-6:12 [The cost of branching quickly gets out of hand the moment you start] which is why the most important thing to understand about branching narrative is knowing how to prune, because if you don't know that, you're screwed.

6:35 That's one of the big struggles with branching dialogue structures, which many games have used and most likely still use, certainly in story-based games use.

6:54-7:08 How do you make them real choices and keep them in control. Finding a balance be-tween these two at conflict interests is important.

Christy Marx – INTERVIEW PART FIVE

On Player Agency

5:05 If you give player agency, and give them choices, they have to have meaning, and for the choice to have meaning it has to have impact on the game, and then decide how.

Christy Marx – INTERVIEW PART SIX

What's the importance of theme to videogames? We haven't seen themes that much, but it's slowly becoming more important. Having a theme for a narrative game. Do you think it's valua-ble?

0:38 Theme is extremely important for telling a story.

0:49 If you wanna do a good job telling as story, which has more depth, and is going to be a better example of storytelling, it should have some kind of a theme.

1:10 The theme is: what does the story have to say. It's not what the story is about, because what a story is about can be seen to be one thing, but every good story should have something to say underneath what it's about. That is more or less what theme is.

1:35 It can be simple and lighthearted, or deep and complex, like redemption. If it doesn't have that, it's going to be shallow and trivial.

1:53 A great deal of games writing is shallow and trivial unfortunately

2:00 But the people who know what they're doing, and are committed to good storytelling, they're going to have a theme, even if it isn't articulated, it's still there.

2:14 A lot of games seem to have redemption as a theme. It works well with games, and it's per-fectly good theme to have.

2:25 One of the things I liked to do, even on simple basic games with characters etc, is that I would ask myself "What are the thematic words for this game?" Come up with a list of 3-6 words that embodied the thematic feel of the game.

3:05 It's a good exercize for everyone on the team, so everyone is on the same page about the tone and thematic feel of the game.

3:15 If you don't have that worked out, and the team bying into it. You don't have a unified crea-tive vision what the game is. That's another difficult part of narrative design.

3:31 Working with another team of people, programmers, artists and so forth who are not always on the same page. About the tone, feel of the game.

3:49 That MMO I was working in had some major thematical issues. Part of it was because it was going to be designed for 8–12-year-olds. And Christy didn't agree with what works for that age group. The art team tried to make it too young. "Young it down." Was a big battle.

4:45 One of the more practical sides of writing is making sure everyone is on the same page with what the thematics are.

5:54 Artists especially have to know the theme. They are providing the visual tone, it all has to be in tune.

Appendix 7.   Gregory Louden: Interview transcript.

What does narrative structure mean, how would you define narrative structure, and describe its purpose?

20:25 Narrative structure for me is the beginning middle and end of the story
20:33 How you define the positions, the twists, that's what I think
20:40 In games, it would mean more theoretically how story is told
20:47 If you had a screenplay, how is it told: through cinematics, scripted animations, told whilst the player is moving …
21:00 That's another term of narrative structures
21:03 When I first hear it, I think of 3 acts, or 5 acts, or tv-show structure, episodic structure.

Do you have a set approach to narrative design?

24:23 Yes and no. It varies. Design is different for every game. The core is the same mostly.
24:33 Just voice-over, with subtitles, with moment is the most basic, seeing it in all in walking simulators - don't like the term myself - you can have that and then evolve other things on top.
24:49 It all depends on the scope. With QB we could do all these crazy things, but in smaller projects not so much.
25:03 Another interesting point of narrative structure is a chart, how to tell a story, it's a big technique, that I've been using.
25:18 All projects have scope, how do you combine these elements, and shift them, to create an interesting story. That's another big component.
25:27 That's the more set element: I take the story, I look at it, I convert it into this chart, when it's there, I convert it into the environments. If I see an environment is overused, or there's a plot twist missing, or something. Theoretically I can see it won't be as good as if those elements were there. I can then re-pace, rearrange and rewrite.
25:57 The layers on top of technique come with time and scope.
26:05 Every game is different. For my game it doesn't make sense to have certain techniques that might for others.

It's a box of tools, you start with a certain set, and then add? (The approach)

26:22 Yes. You get inspired all the time, add more layers.
26:25 I always start with story, what is it. Once you have that, you can start developing, always keeping in mind this "play don't show".
26:37 The question of where can the audience manipulate the story, in terms of non-linear narrative, where can I put that in the structure.

Do you think about player agency? At which time does it come in?

30:37 Yes. As said, "play don't show". I Always think of that. Usually a compromise, a cinematic, is for a good reason: showing different cameras, different situations, showing things that can't be done through gameplay. Definitely "Play don't show" is always a very big thing.
31:04 If I can tell the story with you being immersed, and not just sitting there watching, as an interactive story it is stronger.

31:18 Player agency in terms of story impact. Yes. With adaptive storytelling, those are the two mindsets I like to think of.

31:28 Without agency it would be easier to make a movie to be honestly. 31:40

32:50 Playing is more expensive than a cinematic [depending on how, why and how much]

Do you think [Theme] would be worth bringing more to games?

55:15 Yes. Definitely, but a lot of game stories are a little immature in a sense. 55:23

55:29 Last of Us, Druckman is the only I've seen publicly talk about Theme publicly. Maybe Levine too. Definitely Druckman. The Last of Us 2 is about violence and revenge. It's interesting. Does seem to correlate. 55:50

56:32 Yep. Very true. Definitely valuable.

56:36 We traditionally use themes in game design, and maybe animation. In story it's something I haven't discussed that much, but it would be more valuable. 56:47

You mentioned Hero's Journey already, and 3-act, 5-act structure. You're most likely familiar with MICE quotient, and Aristotle's principles. There's some criticism about Campbell, and later Vogler's interpretation, it's usage in game. Do you think there's a risk in using these forms in creating narratives, and how do you think of that when you're designing something, how do you keep yourself free?

50:54 There's always a risk, creatively, when telling a story, if you're telling a story that has been told thousands and thousands of times.

51:05 It's the starting point, but if the only point, the risk is that the story will be cliche and the audience won't enjoy it as much as if you challenge them. That's the bigger risk

51:17 Taking any lessons from anything is OK.

51:23 Sometimes movies are too predictable. That's the risk of using these structures. I don't see it as a big challenge.

51:30 I don't see big challenges with it, it can act as a starting point, even as a reference.

51:40 We used references in Horus station and evolved them, like 2001 Space Odyssey was a big reference, I took it and twisted it, to make it contemporary to have Horus station have its own personality and goal. Its own twists and turns. 51:55