

Selja Tanskanen

Player immersion in video games
Designing an immersive game project

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<p>Opinnäytetyön aiheena on pelaajien kokemana immersio videopeleissä. Aikaisempien tutkimuksien laajuus koskien pelaajien immersiota johti aiheen tarkkaan rajaukseen. Immersiivisen pelikokemuksen luominen hyödyntäen pelisuunnittelua, psykologiaa ja tarinankerrontaa oli opinnäytetyön pää tutkimuskohteena. Opinnäytetyö koostuu kolmesta osasta: teoriaosuudesta, kyselystä ja tuotanto-osuudesta.</p> <p>Teoriaosuudessa sana immersio määriteltiin ensin lukijalle. Käsitteen avaamisen jälkeen, opinnäytetyössä paljon vaikuttanut teoria esiteltiin immersioista videopeleissä. Teoriaosuus pyrki selvittämään kuinka suuri vaikutus pelisuunnittelulla, psykologialla ja tarinankerronnalla voi olla immersion synnyssä peleissä.</p> <p>Teoriaosuuden jälkeen kysely, joka oli osa opinnäytetyötä, esiteltiin ja analysoitiin. Kyselyllä ja sen tuloksilla pyrittiin saamaan käytännönläheisempää näkökulmaa immersioista. Kyselystä saatuja tuloksia hyödynnettiin myös immersiviivisen peliprojektin pohjana.</p> <p>Viimeinen osuus esitteli opinnäytteen tuotteen, peliprojektin. Teoriaosuudesta ja kyselystä kerätty tieto hyödynnettiin peliprojektin tuotannossa. Peliprojekti pyrki luomaan hyvän pohjan pelille joka voisi hyödyntää pelisuunnittelua, psykologiaa ja tarinankerrontaa immersiviivisen kokemuksen luonnissa pelaajalle. Rajallinen aika esti täysimittaisen pelin tuottamisen, peliprojektin tarkoitus olikin tarjota konsepti jota olisi mahdollista hyödyntää tulevaisuudessa.</p> <p>Peliprojektin potentiaalista immersiviivisyyttä ei pystytty mittaamaan aikarajoitteista johtuen. Peliprojekti kuitenkin arvioidaan ja testataan tulevaisuudessa. Tutkimustyö ja opinnäytetyön tuote onnistuivat tarjoamaan arvokasta tietoa immersiviivisten pelien kehittämisestä.</p>		
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<p data-bbox="147 753 1461 793">Abstract</p> <p data-bbox="147 831 1461 1010">This thesis researched player immersion in video games. Due to the vastness of the previous research of player immersion, the topic of the thesis was narrowed to consider a more specific aspects of player immersion. Creating immersion using game design, psychology and storytelling was the main focus of this thesis. The thesis constructs of three major parts: the theory, the survey and the production.</p> <p data-bbox="147 1050 1461 1228">Within the theory section the definition for the word immersion was first introduced to the reader. After understanding immersion, a main theory about player immersion in video games affecting the research of this thesis was explained. The theory section aimed to discuss how exactly game design, psychology and storytelling could be used to create immersion in games.</p> <p data-bbox="147 1268 1461 1413">After the theory section a survey that was implemented as part of this thesis was introduced and analyzed. The results of the survey were aimed to give a more practical approach on the subject of immersion. The information from the survey was also used as a basis for creating the immersive game project.</p> <p data-bbox="147 1453 1461 1669">The last section of the thesis introduces the game project that was produced. The acquired knowledge from the academic research and the survey were utilized in production phase of the game project. The game project aimed to provide a good start for a game that could create immersion in the player using game design, psychology and storytelling as tools. It was not possible to create a full game within the timeframe, and the intension of the game project was to provide a concept that could be developed further in the future.</p> <p data-bbox="147 1709 1461 1850">The potential immersiveness of the game project was not tested within the timeframe of the thesis. However, the game project is planned to be tested and evaluated in the future. The final research and game project managed to provide valuable information on constructing immersive video games.</p>		
Keywords Immersion, game design, psychology, storytelling		

CONTENTS

0	GLOSSARY	6
1	INTRODUCTION	7
2	THEORY.....	8
2.1	Research scope.....	9
2.2	Definition of immersion	10
2.3	Player involvement model.....	12
3	IMMERSION IN VIDEO GAMES	13
3.1	Interactivity	14
4	IMMERSION THROUGH STORYTELLING.....	14
4.1	Scripted story.....	15
4.1.1	World narrative	16
4.1.2	Emergent story	19
4.2	Characters	21
5	IMMERSION THROUGH PSYCHOLOGY.....	22
5.1	Motivation	23
5.2	Emotion	25
5.2.1	Decisions	26
5.3	Social play	27
6	PLAYER IMMERSION THROUGH GAME DESIGN.....	29
6.1	Flow	29
6.2	Goals and rewards.....	32
6.3	Integration.....	33
6.4	Visuals & Sound	33
7	ANALYSIS OF THE SURVEY	34
7.1	Overview.....	36

7.2	Player involvement model.....	36
7.3	Psychology, game design and storytelling.....	37
7.3.1	Game design	39
7.3.2	Storytelling.....	40
7.3.3	Psychology	40
7.3.4	Other.....	41
7.4	Summary	41
8	PRODUCTION OF THE GAME PROJECT	44
8.1	Overview of the game project.....	44
8.2	Game Design.....	45
8.2.1	Game Mechanics and controls	46
8.3	Storytelling.....	47
8.4	Environment design.....	48
8.4.1	Map of Valurath	49
8.4.2	The broken bridge of Valurin.....	50
8.5	Game characters	51
8.6	Summary	52
9	CONCLUSION.....	53
	REFERENCES	56
	LIST OF FIGURES	
	APPENDICES	

0 GLOSSARY

Bug – An error in the game

Debuff – A negative status effect on a game character

Raid – A multiplayer cooperation mission fighting against a large game character

Intrinsic motivation – A desire to act driven by interest on the task itself

Grinding – Re-playing the same section over and over in order to gain in-game rewards

Ludology - The study of games

E- sports - Competitive video games typically with prize money

1 INTRODUCTION

Immersion is one of many desired qualities in a video game. Creating a video game that is immersive requires conscious efforts from the game developers. Immersion engages the player, keeping them dedicated to the game, and later motivates them to return. There is no simple trick to design and produce an immersive video game. Although multiple theories exist, even the definition of immersion in video games is not widely agreed upon. This thesis aims to study how immersion affects the gameplay experience, and how it can be achieved. Ideally these studies will provide useful information for those interested in player immersion in video games.

The interest of this thesis lies in examining video games as immersive experiences, and their capability of eliciting emotions in the player. Studying player immersion forms the foundation for the research implemented. Immersive experiences are approached by studying those elements that engage the player and keep them invested in the game. Theories regarding various aspects of player immersion that elicit engagement and emotion are studied, followed by a look at practical examples with the aid of a survey. The knowledge gathered is used as a guide in creating an immersive and emotionally engaging game design.

This thesis strives to find methods that can be used in video games to create immersive experiences for players, using psychology, storytelling and game design as tools. The research hypothesis for this study is: Game design, psychology and storytelling can be used to create an immersive experience to the player. The main research question is, how psychology, game design and storytelling can be utilized to create an immersive game? Secondary question is, Why immersion in video games is important? The objective of the research is to acquire information that can be used to create a game project which is capable of engaging the player, and offering them an immersive and emotional experience.

Various research methods are utilized to gain valid and reliable data to meet the objectives of the study. This will provide an accurate basis for the production of

an emotionally engaging and immersive game design. Qualitative research methods support the hypothesis and assist in providing reliable information on the study topic. The survey is a primary research method, presenting both exploratory and specific information about the target group. Quantitative methods will be used in creating data depicting the results gained from primary research. Information gathered from the survey and interviews, can help in supporting the research hypothesis and show a possible relation between individual experiences and academic research explored in this thesis. The evaluative method is used to validate and support the research.

Due to the limitations of the thesis format and time available, it is not possible to discuss all of the theories throughout, even though it would be beneficial to the study. For instance, virtual reality, which is constantly developing, has a significant role in spatial immersion and deserves a larger scope than can be accommodated in this thesis. In theory, creating an emotionally engaging game design can be achieved by utilizing the knowledge gathered. The immersiveness of the game project produced for this thesis cannot be practically proven within the time limit. Unfortunately, aesthetics have a more minor role in this thesis, even though they also have a big part in creating immersive experiences. Nevertheless, the information gained from this thesis could be beneficial for those interested in creating emotional and immersive playing experiences.

2 THEORY

Immersion in video games is regularly discussed in ludology, the study of games. Various theories concerning player immersion have been presented, bringing different perspectives to the conversation. These theories aim to explain the key components used to construct an immersive experience. Whilst there are many differences between the theories, there are also numerous similarities. Even though the concept of immersion is generally understood, there is no commonly agreed academic definition. This makes it hard to discuss in an academic manner without potentially causing some confusion. Nevertheless, different approaches on the player immersion provide a large theoretical basis for the study within this

thesis. The research scope and conceptual approach used in this thesis is discussed in more detail to provide a clearer understanding of the theory applied.

2.1 Research scope

Research of immersion in video games extends significantly beyond what is presented in this thesis. Due to the vastness of the field regarding player immersion, it is necessary to carefully determine the area of study approached. Limiting the research scope, results in a narrower area of study that enables adequate discussion within the limits set by the thesis format. This limitation also allows for a more focused thesis product.

The below Venn diagram outlines the research scope, displaying the relations between topics approached in this thesis. Limiting these areas of study to focus more strictly on their relation to player immersion, results in three topics; emotion, integration and flow. Psychology, storytelling, game design, flow, emotion and integration create a theoretical structure for the studies of player immersion in video games. This theoretical framework is used due to the correlation with the area of studies implemented in this thesis. Likewise, the research hypothesis, and the goal of this thesis support the use of this specific model. Elements that are able to elicit emotion and engage the player are studied with the aid of the three key topics presented in the Venn diagram; psychology, storytelling and game design. Psychology was only used together with other study topics of this thesis. As seen in the below diagram, only areas of psychology that are relevant for the studies of immersion in video games are utilized. The main focus of studies is how these topics can be utilized to create an immersive experience for the player.

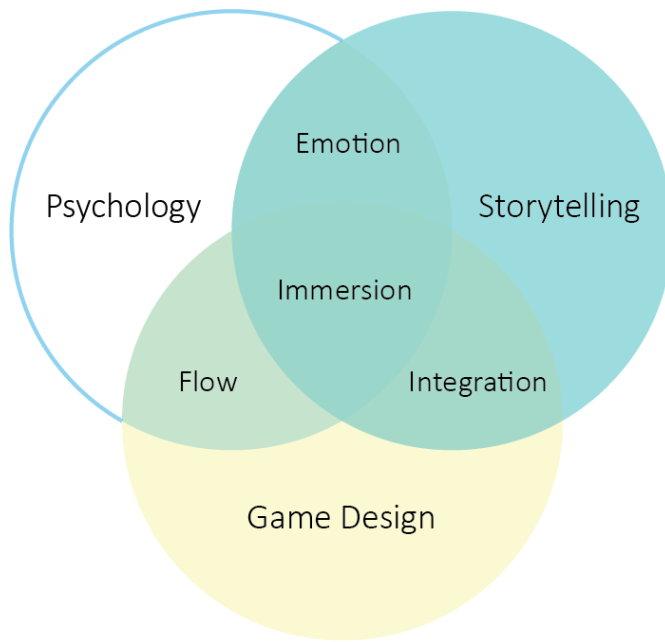


Figure 1. Venn diagram (Tanskanen 2018)

“Despite the difficulties in identifying the exact experience, several well-known concepts—namely flow, presence and immersion (amongst others)—have been identified by researchers as the engaging experiences of playing digital games” (Nordin 2014, 27). Like Nordin summarizes, the experience of engagement in video games is known by many names. However, in this thesis it is called *an immersion*.

2.2 Definition of immersion

To understand the fundamentals of immersion in video games it is essential to first learn the meaning of the word itself. Immersion is not a new area of research nor is it unique to video games. Immersion has been researched in other fields such as literature, cinematography and even journalism, before video games even existed. Despite that these medias share many aspects with video games, it is still necessary to study immersion in relation to games. This does not mean that theories about immersion concerning other medias would be futile in ludology.

The word immersion originates from late 15th century Latin, stemming from the word *immersio* and before that *immergere*, meaning to dip into (Oxford University

Press, 2018). Currently the word has expanded to have various meanings from describing a celestial event to expressing a method of learning a foreign language. In the context of this thesis the purpose of the word immersion is to depict involvement. The Oxford University Press (2018) dictionary defines immersion as a “deep mental involvement in something” whereas Cambridge University Press (2018) dictionary defines immersion as “becoming completely involved in something”. Although, dictionaries are capable of defining the word immersion in such detail, it is not as straightforward in ludology.

Ludologists have different definitions for immersion in video games, yet none are universally agreed upon. The meaning of immersion in video games, however, is generally understood by players and game developers, even though there is no academic definition. Some game forums host topics where players discuss what it was that they found immersive about particular video games. On the GameSpot forum one user describes the experience of immersion the following way: “Games that almost made me to forget that I’m playing a video game” – “ I become a part of another world which was hard to leave” (GameSpot Forums 2015). This description highlights the deep mental involvement the player experienced. Similar involvement in the game is only one of the many examples used to describe player immersion.

Some research includes the following interpretations: softening of mental division between player and avatar (Sylvester 2013, 40), feeling of participation (Bryant & Giglio 2015, 58), spatial presence (Madigan 2015, 128), deep engagement (Qin et al. 2009, 112) and a metaphor for player being ‘in’ the action (Atkins 2013, 158). These few examples demonstrate a variety of viewpoints concerning immersion in video games.

Some authors propose that immersion is constructed from multiple elements. Ryan introduces three kinds of narrative immersion, as well as epistemic immersion (2009, 55). Ermi & Mäyrä describe three kinds of immersion: sensory immersion, challenge-based immersion and imaginative immersion (2005, 101-

102). Calleja expands the topic even further and proposes six kinds: kinesthetic, spatial, shared, narrative, affective and ludic (2014, 39).

When defining immersion, it is essential to acknowledge that it is constructed from multiple aspects. Immersion is an experience, a combination of different elements, rather than a single event. The definition should not be left too narrow but it is essential to give it enough detail to avoid misunderstanding. The definition used in this thesis considers the multiple dimensions of immersion. In this thesis immersion is defined using Calleja's explanation, "intensification of internalized involvement that blends a number of dimensions" (Calleja 2014, 38).

2.3 Player involvement model

After understanding what immersion means, it is worth discussing a theory closely related to the studies of this thesis. There is other great research used to study immersion, however, the player involvement model is briefly explained to the reader, as it is used the most in this thesis. This introduction aims to explain some terminology and concepts behind the studies. The model (Figure 2) is used as a theoretical basis in defining the dimensions that construct immersion.

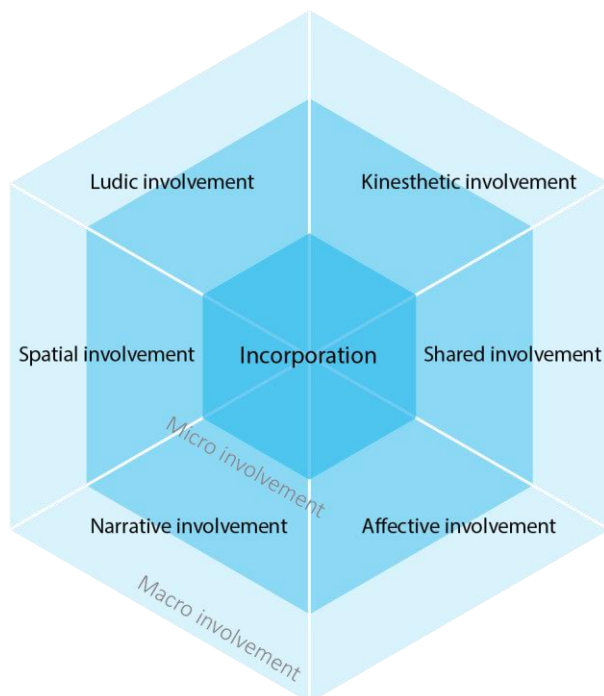


Figure 2. Player involvement model (Tanskanen 2018)

As seen in the figure above (Figure 2, p.12), Calleja presents a player involvement model to cover multiple dimensions of immersion in games. This model proposes a foundation on which immersion, or as he calls it incorporation, is built on. The player involvement model introduces six dimensions of involvement: kinesthetic, spatial, shared, narrative, affective and ludic. Kinesthetic involvement covers controlling the game character or piece. Spatial involvement relates to game spaces and environments and the navigation and exploration within. Shared involvement concerns interaction with and awareness of other agents in the game environment. Narrative involvement deals with story elements of the game, those that are scripted and those that emerge from the gameplay. Affective involvement covers various forms of emotional engagement. Ludic involvement discusses choices made in the game and their repercussions (Calleja 2014, 43-44.) Each of these six dimensions are “considered relative to two temporal phases: the macro and the micro” (Calleja, 2014. 38). Micro-involvement includes the aspects that involve the player in the moment of gameplay, when macro-involvement consists of the factors that motivate the player to return back to the game when they are not playing it.

3 IMMERSION IN VIDEO GAMES

A game designer has multiple options for providing a setting for players that allows for immersive playing experiences. By putting more emphasis on player immersion, players are able to engage more with the games. Immersive experiences can create extremely personal and emotional moments. The experience of immersion can be very therapeutic and help the players to deal with stress (Baek 2013, 8).

Immersion is created from interactions between the player and the game system. Players are actively taking part in construction of playing experiences, bringing their personal experiences, anticipations and desires with them (Ermi & Mäyrä 2005, 91). There are many aspects that can affect player immersion which cannot be controlled by the game designer. Surroundings, or the current life situation of the player can have a significant impact on the playing experience.

These external aspects can lessen immersion or intensify it to an extreme. Whatever the case, interactivity is a key component in facilitating the immersive experiences within video games.

3.1 Interactivity

Interactivity is the key element that sets video games apart from traditional media. Immersion can occur in books or movies without any interaction between the media and the consumer. Interactivity gives video games a unique opportunity to involve the player and offer them a basis for eliciting strong experiences and emotions. In his article Christou explains that immersion is an emergent attribute that is generated from the interaction between the player and the game (2013, 93). Interactivity can relate to player involvement in many ways. There are two kinds of interactivity in video games: interactions between the player and the game system, and interactions between players. Both are highly valuable methods in developing immersion. Interaction between players is not necessary in creating immersive experiences but can certainly advance it. Almost all of the examples presented in this thesis are generated from interaction, and the choices the players made.

4 IMMERSION THROUGH STORYTELLING

All video games tell stories. The ways games tell stories can be roughly divided into two major categories: scripted and emergent. Whatever the case, games can be used as a storytelling medium that can have a significant effect on player involvement, bringing depth to the experience. Storytelling is a powerful tool used to enhance the entire playing experience (Skolnick 2014, 127). It is worth noting that the word “storytelling” does not only refer to games with scripted stories. Storytelling can also mean the emergent story that is generated from gameplay. This form of story is also referred to as a player story. Every immersive game experience also includes elements from emergent storytelling. Scripted story does not occur in all games, but in story driven games it is a major influencer in the generation of player immersion.

According to Bryant & Giglio, game narratives cause players to develop a deep emotional attachment to the game world, that will keep them coming back to the game (2015, 59). Good storytelling can justify player's actions, make their goals clear and help the game to appear more arranged and systematic (Bryant & Giglio 2015, 58). There are numerous different narrative tools that can be used to create immersion in video games. According to Qin et al. game narratives consist of three characteristics that set them apart from more traditional storytelling medias. These aspects are: interactivity, nonlinear structure and interplay between gameplay and the story (2009, 107). Ryan introduced four kinds of narrative immersion: spatial, temporal, emotional and epistemic (2009, 55). While Calleja presents one element, narrative involvement (2014, 44).

Scripted stories are based on narrative involvement, whereas emergent stories spawn from spatial involvement. The combination of spatial and narrative involvement creates the world narrative. World narrative is found in games that allow the player to navigate in the virtual environment.

4.1 Scripted story

Scripted story is a predefined form of storytelling that directly communicates the game's story to the player. It is more commonly used in linear cinematic games. Scripted story can also be referred as explicit story, highlighting the overt nature of the narrative technique. The story displayed to the player is pre-recorded material such as dialogue, cutscenes or prescribed events. Despite certain games having an ability to alter the story, based on the player's choices and actions, a scripted story is presented without the player being able to influence in its outcome. The player might be able to choose which of the prescribed sequences they encounter or follow, but the original content remains unaltered.

Scripted story can be a powerful tool in creating immersive experiences in video games. A cutscene is a very direct and powerful way to tell a story that can be visually striking. Many theories from cinematography can be utilised in constructing cutscenes for games. A well placed cutscene can allow the player to have a break after an intense moment of gameplay (Sylvester 2013, 84).

Although cutscenes can potentially break the flow of the game and affect the experience of immersion. Because of this cutscenes should be used with care.

Soft scripted sequences are events that occur, during which players retain control over their character. Sylvester recommends using these events so that players maintain some level of interactivity during the scene (2013, 84). During soft scripted events players maintain control over their characters and therefore might miss important pieces of the story. To prevent the players from interrupting the events of a soft scripted sequence, some character controls might be disabled. An ability to shoot or jump might be deactivated during soft scripted sequence. These limitations can affect the feeling of consistency and believability of the game system.

Even though scripted narratives are a great way to display the game's story, there are also some disadvantages. Players who do not value narrative elements might find scripted storytelling jarring, having a negative effect on immersion. Leibovitz recognizes the possible effect of scripted storytelling interrupting the flow of the game (2014, 103).

4.1.1 World narrative

World narrative can create immersion through both spatial and narrative involvement. These elements of involvement can both be acquired through the virtual environment of the game. Worldbuilding can be used to encourage the player to deeply engage with the story and the environment at the same time.

Each game does not need to have a vast navigable environment, although even the slightest hint of the existing game world can deepen the involvement of the player. Hearthstone (Blizzard 2014) is a good example of a game that utilizes world narrative even when the game itself does not have a navigable space.

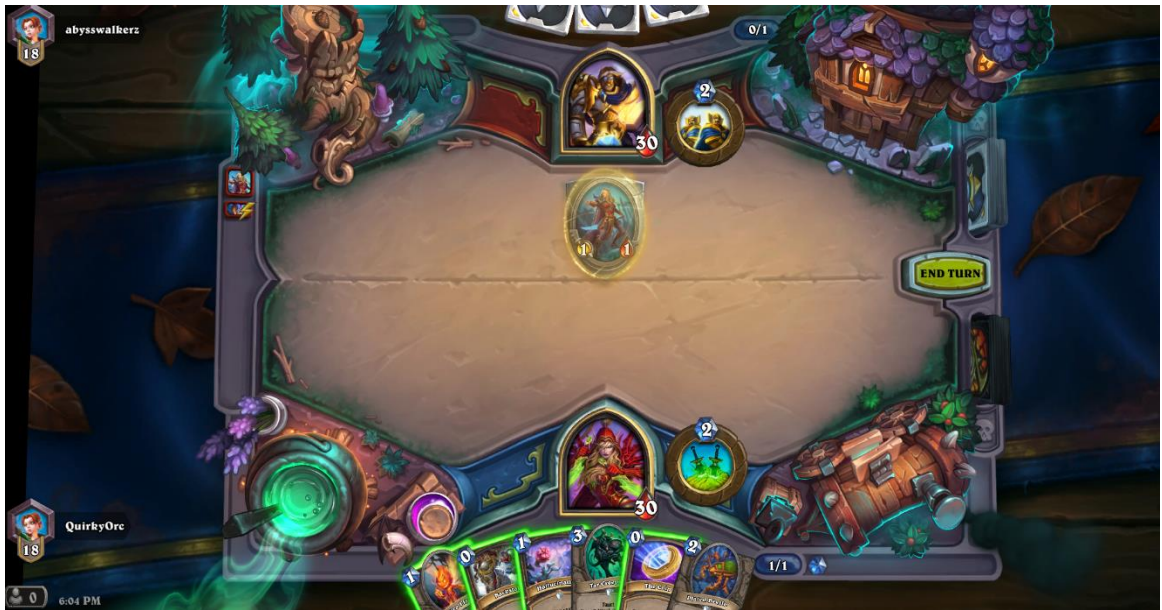


Figure 3. World narrative in Hearthstone (Blizzard 2014)

World narrative is composed of both visual and auditory narrative information from within the virtual game environment. World narrative can be found in architecture, letters, clothing and furniture as well as in many other places. Nearly any object, or the lack of it, in virtual environment can tell a story. Audio is also a great way to tell a story. BioShock (2K Games 2007) uses audio recordings placed in the environment to reveal the history of the city Rapture and its residents.

Spatial involvement considers the virtual space of the game; hence it is closely related to world narrative. Ryan describes spatial immersion to occur when the player is experiencing the virtual space through movement and forming an emotional attachment to a virtual location (2009, 55). She recognizes the phenomenon as not being strictly narrative but highlights the importance of location as a narrative component (2009, 55-56). When the player feels familiar with the virtual world they can direct their focus on other aspects of the game, resulting in a deeper immersion (Calleja 2014, 90).

An environment facilitating spatial involvement can be constructed with careful level and game design. A vibrant environment helps to draw the player into the experience and contribute to immersion (Skolnick 2014, 148). It is important to

construct the game world to have distinguish regions and areas that the player can identify with. This helps the player to build a spatial map of the area and feel more involved and connected to the game world (Calleja 2014, 87).

Sylvester suggests that best method of constructing world narrative is through the presence, or absence, of features in the game environment (2014, 86). Even subtle evidence can be enough to start telling a story. Dying houseplants, or unopened mail can indicate the long absence of a resident. Bloody tracks on the ground can be indicative of a wounded enemy nearby. In cinematography and theatre, arranging features in the scene to form a visual theme is called *mise-en-scène*. Key aspects of *mise-en-scène* include elements such as: lighting, space and composition. The practices used in building *mise-en-scène* can also contain applicable knowledge to worldbuilding in games. As an example, adjusting lighting can quickly change a mood perceived from a certain space.



Figure 4a. Environment during a day from Horizon Zero Dawn (Guerilla Games 2017)



Figure 4b. Environment during a night from Horizon Zero Dawn (Guerilla Games 2017)

Skolnick encourages the use of an environment description document, which includes detailed descriptions of the space, ensuring the cohesiveness of the game environment. Coherence in the world, and the expression of internal connections within, strengthens the effect of the world narrative (Sylvester 2013, 89). Incoherence in the world can prevent the player from forming of a deep engagement, and lead to lack of immersion.

4.1.2 Emergent story

Emergent story is also known as player story. It is unique to each player developing from the gameplay and the interactions within the game system. Sylvester introduces emergence in games as being the interaction of simple mechanics creating complex situations (2013, 50). “Interaction generates, rather than excludes, story” (Calleja 2015, 115). Game design can boost the emergence of player stories by providing game mechanics that allow, or encourage, emergent story to take place.

The emergent storytelling does not necessarily need to advance the game, or to help in achieving the game’s goal. In Lego games some vehicles are provided for the player to use. Driving these vehicles does not have any effect on the actual game progress, nor do they give any advantage to the player. They are however, a great way to facilitate the emergence of player stories. Many games with no

specific win condition use emergent storytelling to create stories. The Sims (Electronic Arts 2000) is an example of a game which has no scripted story but relies on emergent storytelling.

Emergent storytelling can also happen unintentionally. The Corrupted Blood incident in 2005, from World of Warcraft (Blizzard 2004), is a notable example of how an unexpected bug can create large scale player stories. The Corrupted Blood incident can be described as a virtual pandemic, caused by a bug in the game system. The incident was caused during a raid, where the end boss, Hakkar, affected players with the Corrupted Blood debuff. This caused the affected character to lose health. The intention was for the Corrupted Blood to only take effect in that area of the virtual environment. However, the bug caused non-player characters, such as pets or minions, to carry the disease outside of the area to which it was supposed to be restricted. After discovering this bug, some players deliberately released infected pets or minions into towns and cities to spread the Corrupted Blood to other players.

The outbreak of the disease resulted in many interesting events, which were studied by researchers, especially epidemiologists. Some events that occurred during the Corrupted Blood Incident were favourable to some players and disadvantageous to other. Although, this incident created many player stories, ultimately Blizzard chose to restore the game serves to a point before the incident occurred. A game system that does not maintain the same rules and possibilities for every player is not enjoyable, which can cause significant issues for immersion.

As seen from the Corrupted Blood Incident, gameplay mechanics have the potential to enhance the story and the narrative involvement experienced. Player stories can be very unique and personal, adding the element of affective involvement in the elements of emergent storytelling in creating immersion. Spatial and kinesthetic involvement come present when the player controls the game character and explores the environment. Ludic involvement spawns from the interactivity and decisions the player makes. Social involvement is not

necessarily part of emergent storytelling but can enhance the immersive experience of player stories even further. Emergent storytelling can involve the player on multiple layers of player involvement, offering a great base to construct immersion in video games.

4.2 Characters

Game characters can be a considerable influence on the game narrative. In games with a player-controlled character, the character's role in engaging the player can be extremely valuable. The more relatable the hero character is, the stronger the emotions that the story is able to elicit (Skolnick 2014, 38).



Figure 5. Avatar creation in The Elder Scrolls V: Skyrim (Bethesda Game Studios 2011)

Character customization can offer the player strong feelings of identification. In many modern role-playing video games, the player can customize a character to their liking. These kinds of characters are often referred to as avatars. Customization allows the player to identify more with the character, intensifying their motivation to play (Teng 2010, 1553). On the contrary, Bryant & Giglio argue that a player becomes more emotionally involved in the game when they play as a pre-created character (2015, 113). These differences could be explained by

different players' motivations. A player who prefers role-playing games might enjoy playing more as an avatar than a pre-created character. Whereas a player who enjoys the narrative elements of a game could experience a deeper emotional involvement when they are playing as a pre-created character.

Characters can have a surprisingly powerful effect on player immersion. Contradiction between the player's motivations and those of the game character can create issues in engaging the player. Isbister discusses the importance of cognitive immersion in building strong characters. Players must be able to synchronize their problem-solving capabilities with those of the game character (Isbister 2006, 205). Ludonarrative dissonance is "contradiction or disconnect between the player, the game design, and/or the narrative elements" (Skolnick 2014, 39). These situations should be avoided, as at worst, the player might find the dissonance overpowering, and completely stop caring of the character, the narrative or the gameplay, and stop playing. Hence, the player should care of the character they play as, and feel like they want to achieve the same goal with the avatar. When the gameplay and the motivations of the player and the character are synchronized, player might experience what is called a ludonarrative harmony.

5 IMMERSION THROUGH PSYCHOLOGY

Theories and methods that harness psychological approach in guiding or manipulating the behaviour of the player can be helpful in creating immersive games. Player manipulation can include guiding the player through the game environment, using a reinforcement schedule to reward the player, or creating a certain mood within a scene. Subtle player manipulation can facilitate a smooth playing experience that feels natural and consistent. Psychology can be used in game design to direct the player, and in storytelling to elicit emotions.

Using psychological methods can increase the effect that storytelling has on the player. Emotions, anticipation and stakes can be utilized to enhance the storytelling. Social play combines aspects of storytelling and game design, where elements of psychology have a major impact on the playing experience.

However, applying psychological aspects to improve game design can be challenging to implement.

The range of applicable psychological theories is vast and applying some of these methods to engage the player might appear controversial. Whilst many psychological methods can be used to enhance the immersion, in some situations it can cause player addiction. Compulsion loops that utilize habitual behaviour can make tedious game mechanics to appear more rewarding. The possible negative side effects of such systems should also be considered in the game design.

5.1 Motivation

Immersion cannot occur if the player loses their interest; hence a game should be able to motivate the player. The two theories of motivation are known as intrinsic motivation and extrinsic motivation. Psychologically, immersion can be explained as, “–a psychological state where the primary driver to engage is intrinsic motivation. This state is extended where the player's attention to stimuli is exclusive, and awareness of the other stimuli in the environment loses awareness.” (Burns & Fairclough 2015, 107.) Intrinsic motivation is the key element in engaging and involving the player in the game. To be able to offer the correct elements for creating intrinsic motivation, a game's design should consider its target audience.

Billieux et al. studied problematic involvement in online games and, based on their survey, they presented a chart depicting different psychological profiles of players and their motives to play. Players can be identify by more than just one psychological profile. By the same token, a game can attract players from multiple psychological profiles. Nonetheless a game design should acknowledge the motivations of the primary target audience. Different games appeal to different players according to their motivations.

Advancement	Desire to gain power and progress rapidly in the game	Teamwork	Deriving satisfaction from being part of a group effort
Mechanics	Interest in understanding the rules and the functioning of the game	Discovery	Desire to find out and know the various game elements and places
Competition	Desire to challenge and compete with other players	Role-play	Interest in developing the background and story of the avatar (i.e., playing its role)
Socializing	Interest in socializing with other players in the game (chatting, helping, etc.)	Customization	Interest in customizing the appearance of the avatar
Relationship	Desire to form long-term meaningful relationships with other players	Escapism	Desire to play to avoid thinking of real-life problem or to cope with negative affect

Figure 6. The psychological profiles of players (Tanskanen 2018)

The above table (Figure 6) by Billieux et al. (2015) illustrates different psychological profiles of online players. Even though this specific research aimed to map out problematic involvement in online games, it can also be used as a basis for offline games.

Beyond intrinsic and extrinsic motivation, Calleja proposes two temporal phases of motivation: micro and macro. These phases explain the two aspects of motivation that engage the player within the game. The motivation to continue playing is known as micro-involvement, and macro-involvement is the player's motivation to engage with the game when they are not playing it (Calleja 2014, 36-37). Then again, playing games is not always driven only by an intrinsic motivation.

Some games include tedious tasks which the player might not enjoy without the anticipation of an extrinsic reward. Compulsion loops and reinforcement schedules can be used to motivate the player to perform mundane and repetitive tasks within the game. Grinding becomes more desirable when the player receives a reward from their actions.

The extrinsic rewards can keep the player playing the game and strengthen the engagement of the gameplay. As much as this can motivate the player, the use of compulsion loops and reinforcement schedules have their own flaws. King &

Delfabbro suggest that clinical preoccupation is also related to perceptions of the gaming rewards (2014, 307). A game design should take into an account how to prevent the formation of potential addiction.

5.2 Emotion

“All emotion activates a level of motivation” (de Byl 2015). It can be hard to use emotions to motivate players due to the multidimensionality of emotions. In fact, the specific impact of a game design on a player’s emotions cannot be accurately predicted. Design choices can encourage a specific reaction or emotional response (Calleja 2014, 140). Using methods to affect the emotions of players can increase the immersiveness of a game.

During gameplay, the player can feel a wide range of emotions. These emotions are not restricted only to the moment of the play, but can also take place before and after the play. Emotions are responses to encountered events, people, things, and thoughts (Niedenthal & Ric, 2017, 3). Multiple elements of gameplay have the potential to elicit emotion, yet external factors can also effect the mental state of the player. Narratives, challenges, storytelling, player story, and social factors are among elements that can cause an emotional response. All of these experienced emotions might not be very strong and hard to detect, but they still have effect on the playing experience.

Even though eliciting positive emotion in the player might be the goal for many games, there is no reason why a game should only strive to elicit positive emotions. A negative emotion can leave an indelible memory that is cherished by the player. “Negative” emotions do not necessary mean a bad playing experience. Generally rewarding events in games result in positive emotions, however negative events do not elicit only negative, but also positive, feelings in the player (Madeira et al. 2010, 18). Games may elicit emotions in the player which, while generally perceived as negative, could be the desired emotion at the given time. Some of these situations could include sadness experienced through narratives, or horror caused by the atmosphere in the game.

There are many different dimensions in games that are capable of eliciting emotion in the player. Freeman introduced 32 categories of ‘emotioneering’ techniques. Emotioneering is a method of creating emotions and interactive events to immerse the player (Freeman 2004). While Calleja highlights the effect of aesthetics in eliciting emotions in the player, game environments should inspire positive emotions (2014, 143). This method could be combined with spatial involvement and world narrative to expand the emotion to cover multiple elements of player involvement. Many aspects of game design can affect to the emotion of the player, just to name few: narratives, visuals, mechanics, sounds and other players.

5.2.1 Decisions

Anticipation, decisions and stakes can be used in games to intensify the emotions experienced. Decision making is a necessary component of any interactive game, although games are typically trying to control the player and push their decisions in a certain direction. As a matter of fact, the decisions the player is even able to consider making, are obviously generated from the game mechanics and rules. Even if the game design might control and guide the player’s decisions, it is important to create an illusion where the player feels that their actions have effect on the outcome of the situation. If players realize that they have no control over the outcome of the game, they would rapidly stop playing.

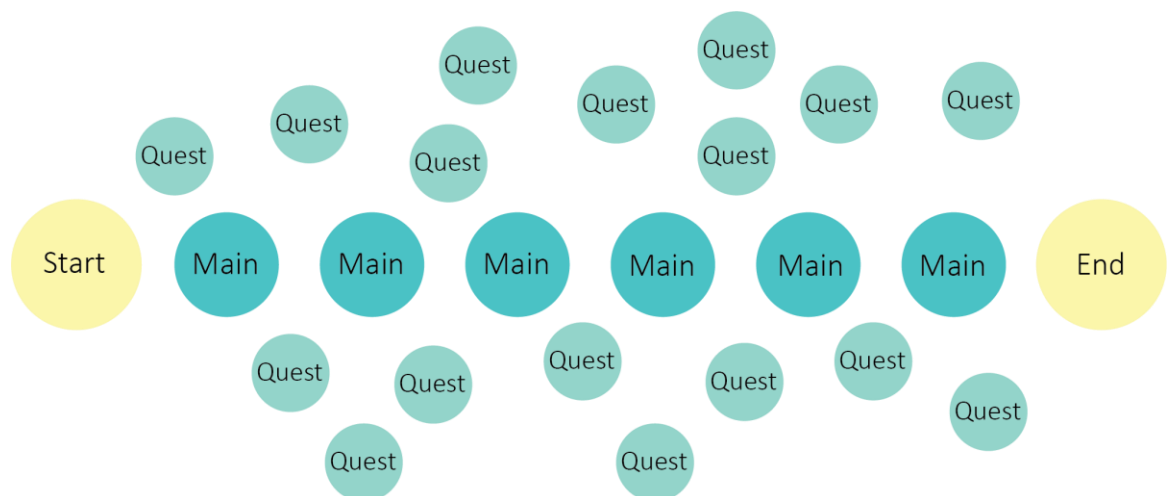


Figure 7. Branching narrative pattern (Tanskanen 2018)

While the game mechanics facilitate opportunities for decision making, the narrative can add more depth. Branching narratives (Figure 7) are an example of how decision making can be integrated into the storytelling of the game. This form of storytelling offers the player a more participative role in advancing the game's scripted narrative. "[A] good branching narrative uses player choices to shape their experience in a meaningful way", and to evoke an emotional response in the player (Bryant & Giglio 2015, 104).

Some decisions in games can be easy to make, such as looting a dead enemy in hopes of valuable items, as these are beneficial for the player and are unlikely to have any downside. Stakes can be utilized to increase the complexity of the decision making. This forces players to calculate the possible risks and benefits of their potential actions. These situations can, in turn, provoke emotions in the player. A player might encounter a thrilling situation were the stakes were high. A success would lead to valuable benefits, while a failure might cause a major hinderance to the player. The anticipation of possible outcomes of a situation can provoke emotion, therefore the more a game provides decision making situations with high stakes, the more they can elicit emotion in the player.

5.3 Social play

Games that include multiplayer can elicit strong responses in players, involving them more deeply in the game. Enabling multiplayer allows for countless opportunities for the creation of player stories. Malaby states that one of the key components of games is the unpredictability and uncertainty about another player's point of view and resources (Malaby 2007, 16). These emotions can be directed, not strictly into the game itself, but at other people playing it.

Game design has many ways to implement social involvement in the gameplay. One example is VRChat (VRChat Inc. 2017) whose focus is to provide a platform for social play online. According to Calleja there are three dimensions which are part of shared involvement: cohabitation, cooperation and competition (2014, 92).

Many popular multiplayer games facilitate both cooperation and competition in their gameplay, such as League of Legends (Riot Games 2009) and Counter-Strike (Valve Corporation 2000). Opposing teams compete against each other while players cooperate in teams to win. According to Calleja's research the greater the number of players who participate in cooperative play, the stronger the engagement is (2014, 107).

Shared involvement generates engagement from interaction with other characters in the game, regardless of whether these agents are controlled by a human or a computer (Calleja 2014, 112). Even if game design did not enable multiplayer, simply inhabiting the game environment with non-playable characters adds to the immersion. Spectating is another element that is able to increase the immersiveness of a game. Spectating can bring a competitive feeling into a game, especially in e-sports. Local spectating can occur for any game, and it can greatly add to the experience. Players might be inspired to play better if they have an audience (Elias et al. 2012, 221).



Figure 8. Multiplayer on Overwatch. (Blizzard Entertainment 2016)

Games that include multiplayer also have disadvantages in creating immersion. Even though multiplayer may offer a vast array of different possibilities to

intensify the playing experience, it might also have a great negative impact on some players. When a player interacts with others in a game, the interaction may be favourable for one player, but ruin the whole gameplay experience for another. These negative social playing experiences can occur in both cooperative and competitive situations. Bullying is one possible negative social experience found in multiplayer games. This can have a major effect on players' immersion as they may not wish to return to the game. Elias et al. also state that in multiplayer games the most common reason to quit playing is when the player's friends also quit playing the game (2012, 240). This highlights the importance of social aspect of multiplayer games.

6 PLAYER IMMERSION THROUGH GAME DESIGN

A game design determines the game's concepts, rules and mechanics. A cleverly composed game design is a great way of producing a firm base from which to start constructing an immersive game experience. Ideally the rules and mechanics of a game are integrated in the player's mind and they can enjoy the moment of the gameplay without needing to share their focus. "Rather, the rule system manifests itself experientially in the form of decision making and the pursuit of personal and game-defined goals" (Calleja 2014, 150). Goals are a major part of ludic involvement, as they motivate the player to engage with the game, though they are not required in creating an immersive playing experience. More important is creating a good flow that engages the player in the moment of play.

6.1 Flow

The theory of flow originated in 1990, and it was introduced by psychologist Csíkszentmihályi. He describes flow as the optimal experience, a state of mind when involvement in an activity is so deep that nothing else seems to matter (1990, 4). Csíkszentmihályi described various characteristics of the state of flow; concentration, attention, goals, feedback and sense of control. These original elements are still visible in current models of flow in games. The theory is closely related with the intrinsic motivation. The initial idea was to explain the state

where an individual is participating in an activity without being motivated by rewards or punishments. Sylvester states that flow is the foundation for nearly every good game experience (2013, 40). A flow in games ensures that the player remains focused on the game at hand. Flow can be seen as a road to immersion, as without flow the player might find achieving immersion impossible.

The experience of flow is more likely to occur when the skills of the player and the challenge of the game are equally matched (Madigan 2015,129), (Madeira et al. 2013, 19). To maintain the flow, the game's challenges should correspond to the player's skill level. "The most successful games support feelings of 'active failure' among players, who make ongoing adjustments to match challenge and skill levels so as to achieve the greatest sense of enjoyment" (Chen & Sun 2015, 350.) Games can offer an option of choosing a difficulty level that better matches the player's skills. In multiplayer games, players are often matched with others whose skill levels are close to, or equal to, their own. These methods can ensure that the player is more likely to experience the state of flow.

Some authors have described flow very similarly to immersion. Even though flow and immersion do not refer to the same experience, they obviously have much in common. Choi and Baek describe flow as engrossment in the virtual world (2013, 83). Sweetser and Wyeth argue that player enjoyment is the most important goal for computer games (2005, 1). They introduce a GameFlow model that illustrates eight elements of enjoyment in games, structured by flow. This specific model views immersion in games from a different perspective and Sweetser and Wyeth argue that immersion is a result of flow.

Element	Criteria
Concentration	-games should provide a lot of stimuli from different sources
Challenges	-challenges in games must match the player's skill level
Player skills	-learning the game should not be boring, it should be part of the fun
Control	-players should feel a sense of control over their character or units and movements and interactions
Clear goals	-overriding goals should be clear and presented early
Feedback	-players should receive feedback on their progress to their goals
Immersion	-players should feel emotionally involved in the game
Social interaction	-games should support competition

Figure 9. Generalized picture of the GameFlow model (Tanskanen 2018)

The GameFlow model (Figure 9) includes the core elements: “concentration, challenge, skills, control, clear goals, feedback, immersion and social” (Sweetser & Wyeth, 2005, 3). Their model is based on the theory of the characteristics of flow, introduced by Csíkszentmihályi in 1990. The GameFlow model aims to explain the different elements that construct player enjoyment in video games. This model has many similarities with Calleja’s player involvement model, even though the GameFlow model aims to explain player enjoyment instead. However, Sweetser and Wyeth’s eight core elements are closely related with the aspects of game design. Breaks in flow can be a major distraction for immersion, and so a game should aim to maintain a good flow throughout. “To achieve such states [of flow], activities must have precise goals and explicit feedback mechanisms. Difficulty levels should be higher than current skill levels so that individuals perceive a challenge but avoid feeling overmatched – a balance that is thought to consistently produce positive feelings” (Chen & Sun 2015, 342.)

A core loop is a good point to start constructing base for a flow in video games. Core loop of a game is used to maintain the player in the game. "One of the engaging aspects of digital games is the iterative process of planning, execution, feedback, and replanning" (Calleja 2014, 156). In practice the core loop encourages the player to perform certain actions repeatedly. A player performs an action, which is rewarded, then starts to anticipate another reward, and performs the action repeatedly. Core loop of a game is used to maintain the player in the game. The core loop is associated with the flow of the game (Kim, 2014).

6.2 Goals and rewards

Rewards are intrinsically linked to completing the game's goals. This creates an extrinsic motivator for the player to achieve the game's goals. The game can reward the player in several ways, such as offering story content, records of achievement or attributes to level up the player's character (Sylvester 2013, 206). Rewards that correspond to the motivations of the player can feel more valuable. A player who appreciates a story-oriented role-playing experience might prefer story content over receiving a score based reward. An achievement-oriented player however, may well prefer receiving a high-ranking amongst other players.

Not every game will have a clear goal. These games are often creative, with no set win condition. Players might set their own personal goals which can help the player feel a sense of freedom over their own experience within the game (Calleja 2014, 153). In games where there are no set goals, the game's community will often set their own goals for players to try and achieve. Because of this there are no rewards for achieving these goals built into the game. The rewards, therefore, are all about personal satisfaction. "Goals can thus be determined by the game system, set by the individual player, or negotiated by a community of players" (Calleja 2014, 151).

Even if the rewards or goals are not be strictly related to player immersion, they can still have a major role in engaging the player. Goals and rewards can provide

motivation to engage with the game, which can, in turn, deepen the ludic involvement of a player (Calleja 2014, 165).

6.3 Integration

Game mechanics are essential in making a functional game, but they cannot create an immersive experience alone. The actions that the player performs can appear more meaningful and logical if they are combined with elements of storytelling. Though a game's story and mechanics may be two separate entities, by working together they can enable a more immersive game.

Integrating game's mechanics with its story is crucial in delivering believability to the player. The game's narrative will have an effect on its design, mechanics and features (Skolnick 2014,110). Careful integration between the mechanics and story facilitates consistency and believability in the story. This can also allow game mechanics to advance the story. However, a failure to do so can cause problems with the overall game experience.

The actions that the player can perform should somehow be rationalized within the story as well. Failure to do so has the potential to create disbelief and distrust of the game world and system. The relationship of game mechanics and story should also be coherent. If the player suddenly loses an ability that they had previously in the game, without any explanation, it can create a disjointed experience. This can cause the player to lose their faith in the game's rules and logic.

6.4 Visuals & Sound

Visuals, sounds and music can be a major influence on player immersion in video games. Both visuals and sounds can add to the experience, enhance the emotions elicited from the play, support the theme of the game and create impressive cinematic moments. They can also have a more practical purpose, playing an important role in informing the player of different game mechanics.

Using sounds and visuals in unison can strengthen the impact they have on the player.

Visuals can offer the player a striking aesthetic experience that can add to the immersion. Game visuals have a more practical use than just offering an aesthetic experience to the player. Visual hierarchy is used to ensure that important pieces of information within the game are made more visible to the player (Sylvester 2014, 228). This practice is important, as the player can focus on the most important visual clues and not feel over-stimulated. The play feels smoother when the visual hierarchy of a game is well constructed. Therefore the game visuals should not only consider being aesthetically pleasing but also aim to be practical and support the game's mechanics.

Sounds and music can be a direct and influential way of informing the player about their surroundings. Sounds, and especially dialogue, can give hints and set new goals for the player (Collins 2008, 131). Certain sounds might indicate to the player that their weapon has run out of ammunition or that their character has taken damage. Game sounds increase immersion of the player and help them to identify with the main character better (Collins 2014, 58).

7 ANALYSIS OF THE SURVEY

A survey (Appendix 1) was implemented as part of the thesis process to obtain additional information on player involvement. The goal of the survey was to collect empirical data demonstrating player involvement in practice. The survey functioned as a tool in mapping the individual's memorable playing experiences and the related dimensions of player involvement. The survey answers provided data depicting different areas of player involvement that respondents found meaningful in creating their personal experiences. The acquired survey results were utilized in the production part of this thesis.

The survey consisted of 33 questions which aimed to map out different immersive and engaging experience. Respondents were asked to describe one of their memorable sessions or moments from a video game, and analyse it further with

the aid of additional questions. The survey consisted of open-ended and closed-ended questions.

The dimensions of the player involvement model represented by Gordon Calleja (2014) was used as a theoretical basis for the survey. The dimensions introduced in his research helped in determining the scope of the survey, and in setting some of the survey questions. Although most of the survey questions are based on the Calleja's player involvement model, they were generalized to fit the purpose of the survey.

Player involvement in video games

This survey investigates player involvement (immersion/engagement) and emotion in video games. All the answers are anonymous and the data gathered will be used for a bachelor's thesis. There are 33 short questions in total.

Halutessasi voit vastata avoimiin kysymyksiin myös suomeksi.

NEXT

Page 1 of 2

Figure 10. Player involvement in video games survey (Tanskanen 2018)

Measuring the experience of playing is difficult (Nordin 2014, 27). The survey was implemented acknowledgement of the limitations arising from the thesis format and available resources. The survey setting likewise transpired to be challenging in delivering faultless responses from the participants. Enquiring retrospective questions and self-evaluation of emotions have risks in providing inaccurate survey results. One of the major flaws considering the reliability of the answers was the length of the survey. The quality of acquired data tends to weaken, the longer the list of questions (Iarossi 2006, 44). Even though, Calleja's player involvement model was generalized to fit the survey purposes, it was necessary to include a great deal of questions to cover all the dimensions crucial for the research.

7.1 Overview

The focus group of the survey was relatively broad, covering players of different ages, genders and backgrounds. No specific game genre, platform, or previous playing experience was required, aiming to generate diverse results. The survey resulted in 138 responses in total, from which two responses were invalid.

However, due to the channels on which the survey was posted, it may have resulted in rather specific group of respondents. The survey was shared through different social medias, including Facebook (Facebook 2018) and Discord (Discord 2018), automatically limiting the focus group. The ages of the respondents varied from 13 to 40 years of age, with the average age being 24 and the most common being split between 22 and 23. Most of the described moments were played on PC.

7.2 Player involvement model

The player involvement model introduced by Calleja provided a handy base for the question setting regarding player involvement. Question number 7 (Appendix 1/2) was based directly on the player involvement model (Figure 2, p.12). This question aimed to study which elements the players found to be most meaningful in making their playing experience memorable. Each main element of player involvement presented by Calleja was represented in the question: kinesthetic, spatial, shared, narrative, affective and ludic. However, setting of the question was simplified to cover both micro- and macro- aspects of player involvement, rather than creating separate questions. Respondents were able to choose multiple options. The strength of the impact of the aspects in creating the memorable moment was not evaluated. Besides the pre-described aspects of player involvement, the respondents were also able to choose to answer 'other' and describe freely any aspect that they believed to be meaningful.

ASPECTS OF INVOLVEMENT

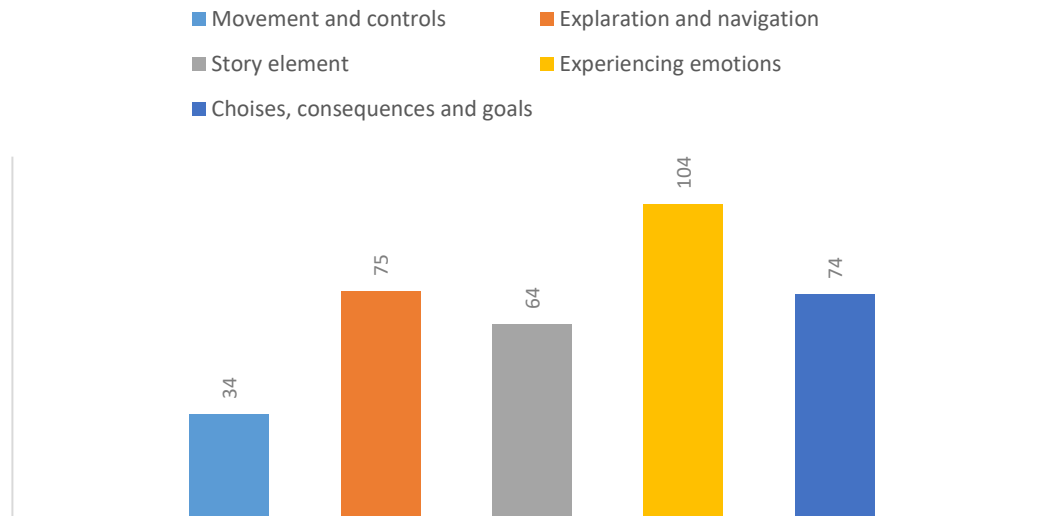


Figure 11. Aspects of involvement (Tanskanen 2018)

From the 138 respondents, 19 chose to select the 'other' option. From these 19 answers, 13 could be easily adjusted, being placed into one of the other options presented. Two of these could be interpreted as belonging in two separate categories. Three respondents mentioned game sound, voice acting or music and only one respondent mentioned visuals. One respondent mentioned 'the game not feeling fictional' being the most crucial factor in making their experience so memorable. The last 'other' answer stated all of the options being relatively important in making their experience memorable. A misunderstanding could explain these responses.

7.3 Psychology, game design and storytelling

All of the survey answers were divided in three different main categories depending on their content (Figure 11, p.38). The main research topics of this thesis (Figure 1, p.10), psychology, storytelling and game design were roughly translated into elements of player involvement. Game design represented ludic involvement while storytelling represented narrative involvement. These categories were easy to combine with one of the elements of involvement, as the

connection between the main research topic and the element of involvement were easily distinguishable. Combining one element of involvement with psychology was more challenging, as there was no direct element corresponding to psychological aspects of creating immersion. It was not beneficial to allocate answers describing an emotional moment into the psychology category. The majority of the answers did not describe an emotion in their memorable moment, but reported the emotions they had felt in other questions. With this in mind, the psychology category was allocated for the responses including elements of shared involvement. The answers which did not clearly represent any of these three main categories were sorted into one of the four alternative categories, which were combinations of two or every main element.

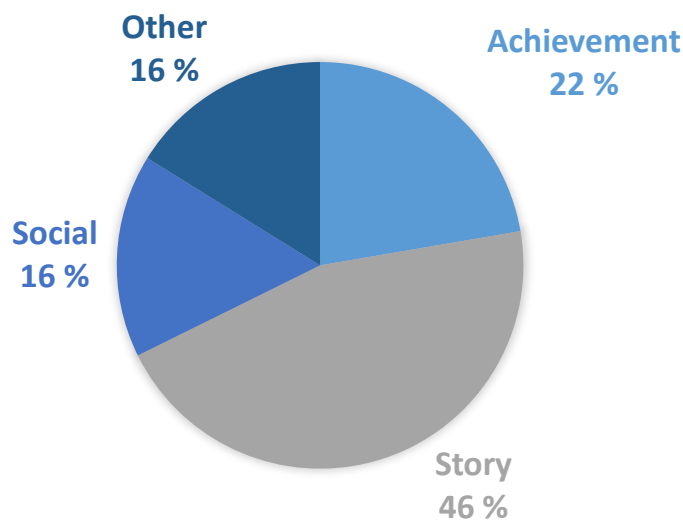


Figure 12. Survey answers categorized (Tanskanen 2018)

Dividing answers into different categories gave more perspective for examining the results of the survey. This method was efficient in providing more clarity, and in aiding the handling of the answers and their utilization for the research. Each answer was carefully inspected and sorted into the category which best represented the contents of the individual survey response. The key element responsible for the generation of the playing experience was estimated based on the open-ended description. Some of the close-ended questions were also

utilized to aid in the process of dividing each survey answer into the right category.

7.3.1 Game design

Responses fit for the game design category possessed a strong connection to ludic elements of gameplay. In total, the game design category received 34 answers, 25% of the total amount. Achievement was most commonly described as the major influencer on the whole experience. Over half of the gameplay moments belonging to the game design category were described as being very, or extremely challenging.

Achievement oriented gameplay experiences also included the most answers, indicating more narrow level of micro involvement, than the rest of the groups. From the 34 answers, 6 had reported only one aspect of engagement in the game outside of the actual gameplay moment. This means that 17% of the responses belonging to the game design category had experienced micro involvement in only one way. Only 5% of respondents in the storytelling category shared this feature. However, the number of different micro involvement aspects does not indicate the individuals' total time or the effort spent on the activity.

In total, 11% of the game design category respondents reported feeling extremely immersed during the gameplay. It needs to be taken into an account that a few of the responses falling in the game design category described a moment where the player was not actively participating in the gameplay, such as opening a loot box. 23% percent of the respondents had reported feeling extremely emotional during the described moment.

The majority respondents who reported not enjoying the game any longer belonged in the game design category. In total, 12 had described not enjoying the game anymore, of which 7 were in game design category. However, these kinds of games tend to receive many updates and have the potential to repel some players with undesired updates. One respondent reported not liking the game where they had gained this moment because it was too addicting and they felt

depressed after playing the game. As discussed earlier, this kind of result should never be the objective of a game design.

7.3.2 Storytelling

The storytelling category included majority of the survey answers, 43% of the total. The answers allocated to the storytelling category were selected based on the narrative elements present in the creation of the experience. The selected answers typically described an emotional storytelling moment, scripted or emergent, experienced in the gameplay moment. These answers generally included strong presence of emotions. From 59 answers, 30 described the moment being extremely emotional. Almost half of the respondents, 49%, had felt extremely immersed during the gameplay moment. As expected, 89% of this category enjoyed the game's story a great deal. The 11% is explained with the emergent storytelling experiences, where the game did not necessarily have scripted story. Twenty respondents out of 59 had reported the game being not very challenging, or not challenging at all during which their described moment. Only one respondent reported not enjoying the specific game they had played any more.

7.3.3 Psychology

From the main three categories the psychology category received least answers, 21 in total, which was 15% of the total share. Answers which highlighted the importance of the shared involvement were divided into the psychology category. Unfortunately, the majority, three quarters, of the negative answers belonged into this category. Even though the survey resulted into only four negative memories it can still be considered as a major influencer in generating negative memories. This indicated that a negative shared involvement can break immersion very easily. Almost half of the answers, 42%, in the psychology category had described the moment being very meaningful for them. This percentage can highlight the importance of social involvement of gameplay in creating meaningful playing moments.

Dividing answers into the psychology category was slightly controversial as psychology is not alone considered being part of constructing a game experience. Often psychology is seen as a part of the experience being constructed by other elements, such as game design and storytelling.

7.3.4 Other

All of the answers did not clearly belong to any of the three main categories. Hence, it was necessary to create four sub-categories, which were a combination of two main categories, or all of them. The experiences in main categories were always a combination of multiple elements, and not merely a product of a single element of player involvement. In majority of the survey responses a dominant element could be easily detected. This dominant element defined in which category the answer was divided into. However, in some of the survey responses a dominant element was clearly a combination of two different categories. These kinds of responses described a situation in which two different elements had an equal role in forming the experience. These categories were: storytelling & game design, game design & psychology, storytelling & psychology, and combination of storytelling, psychology and game design. These categories received 21 responses in total, which were unable to divide within the three major categories. Most responses within these sub-categories received game design & psychology category. These 10 answers generally described a moment where an achievement was clearly linked with social elements.

7.4 Summary

Most of the playing experiences had taken place while playing World of Warcraft (Blizzard 2001) with over ten individual responses. However, numerous different game titles were mentioned, only one VR game and no mobile games at all. Most of the games were played on PC, but there were experiences on PlayStation, Xbox and Nintendo also. A same scene was described as the most memorable aspect three times from the Last of Us (Naughty Dog 2013). A same scene from Mass Effect 2 (Bioware 2010) was described twice. Even though same scenes were described, each answer was unique and had affected the player differently.

This indicates that a well constructed cut scenes can have a really powerful and emotional effect on the player, creating memorable moments.

Based on the survey results, the storytelling in video games was a major aspect to create immersion. This argument is based on the highest number of storytelling-based answers received, and highest percentage of feeling extremely immersed. Experiencing emotions was selected by 104 respondents to be important in making their experience so memorable. This option was selected the most, and 75% of the respondents had chosen it. However, affective involvement is a cause of other elements of involvement. An emotion needs a triggerer and it is impossible to construct a game purely of emotion.

8. How immersed did you feel?

138 responses

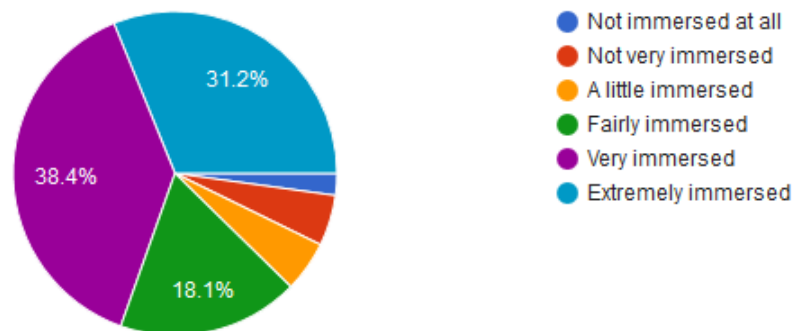


Figure 13. Survey results on immersion (Tanskanen 2018)

These survey results also generated new questions about player immersion in video games. The meaningfulness and the memorability of a moment does not mean that the particular moment would have been immersive. However, the majority, 69% of the respondents reported their memorable moment being extremely or, very immersive. Connection of emotion and immersion also seems to have some evidence, as 65% of the respondents reported the playing moment being extremely, or very emotional.

Most of the respondents had chosen a memory from a game that they enjoyed. These survey results indicated that a game that was generally liked by the player facilitated a creation of memorable and immersive moments. However, this specific argument is rather obvious as a player rarely plays a game they dislike. The majority of the respondents had experienced also micro involvement, which could indicate that the player had other motivations to involve in the game, other than playing. The majority had selected multiple different aspects of micro-involvement.

From the motivation perspective it seemed like rewards that the game was able to offer were not in such a vital role in creating these moments. A couple of situations were described, where the player had received a rare loot or drop, and that was the most important moment of their gameplay. These moments were not described as immersive. More often intrinsic rewards were mentioned, such as gaining friends, or achieving a feeling of belonging. Finishing the game felt also like an achievement.

Only few considered their playing moment to be truly unique. Many recognised the moment that they had experienced being part of the initial game design or story, that was consciously designed to create the experience. These similar ideas were even described for moments which had unique setting or life situation, such as, death of a relative. Even if the playing moment was considered very individual and personal, most of the respondents believed that other players had felt the same regardless.

There were some aspects in the survey that could have been improved. Some wording used for the questions were not as good as possible. These factors did not affect to the understandability of the survey but appeared rather unprofessional. Some open-ended questions should have been close-ended, to save time. Even if all of these described moments were not experienced as immersive, they still give valuable information about player immersion. The answers describing a negative playing experience could be used to identify aspects that possibly prevented the formation of immersion. The negative

memories provide useful knowledge in developing immersive games. However, answers involving emotions that are considered negative, such as sadness, did not mean that the game experience itself was negative.

8 PRODUCTION OF THE GAME PROJECT

The goal of the production part of the thesis was to utilize the acquired knowledge to start designing an immersive game project. The game project was not intending to provide a finished and playable product within the time frame of the thesis. The purpose of the game project was to apply the acquired knowledge from the academic research and survey into designing an immersive game. The game project included some game design, world building and character design, which all aimed to provide possibilities to immerse the player in the game.

The vastness of the previous research on the immersiveness of video games turned out to be very valuable. Many sources aimed to research immersion in video games but these results were hard to utilize in practice. On the other hand, most of the knowledge in this thesis was gathered from research papers which did not aim to offer practical improvements. The results from the survey provided meaningful information as well. Especially the described playing moments and their evaluated immersiveness gave valuable information for the game project.

8.1 Overview of the game project

The game project is a 3D story-oriented fantasy role-playing game about a hero who aims to evoke the ancient powers of a dragon UI-Tahruin to defend their rights against the persecution of their own kind. (Appendix 2) The academic research, and the survey results encouraged to direct more focus on the narrative element of involvement, hence the story of the game was in focus. Game design and mechanics were aimed to construct to encourage the player to maintain in the play, and offer a basis for strong ludic involvement. Knowledge from psychology was utilized to enhance the potential immersiveness of both storytelling and game design.

The vast world is scattered with secrets and stories, which a story-oriented player will find highly interesting and engaging. The game story does not only take place through world narratives but offers intense storytelling moments through dialogue (Appendix 3/1, 3/2), soft-scripted sequences and gameplay. Vivid environment is also offering spatial experience, the vastness and imaginability of it have a realistic feeling to it. The game mechanics are rewarding and fluent, giving players ludic and kinesthetic satisfaction of mastering the controls of the game. Multiplayer enables the shared involvement and offers something for those keen for cooperation and competition. All these elements combined aim to offer highly immersive and emotional playing experience for the player.

8.2 Game Design

The overall game design was constructed from the game's story, creating a natural balance, where the game design and story supported each other. In the game, the player would control a customized avatar in an open-world environment. The player would be able to participate on quests, engage in combats, solve puzzles, harvest plants, mine ore, hunt, and explore the environment within the game. The game would be targeted for players who value role-playing experiences.

The flow of the game is based on the core loop: quest – collect – level up. This simple core loop would repeat in the game, creating a clear pattern of actions for the player to follow. The player would attend on a quest and after a successful completion of the quest the player would receive in-game reward. This reward could be used to level-up the character, and later to unlock new quests to attend to. This core loop would construct a basis to create a good game flow, that engaged the player in the game and facilitated the creation of immersion. To avoid the game from feeling repetitive or mundane the game design aimed to offer some freedom for the player in constructing their own and personal playing experience.

8.2.1 Game Mechanics and controls

As the game progressed the avatar would learn new skills. Learning these skills would give the player more freedom and creativity to custom their avatar's attributes to their liking. The player would learn new skills from animals through kinner trials, training at university or as an apprentice, or unlocking them as the avatar levelled-up. All of these different methods of strengthening the game avatar can motivate the player to engage with the game further, and make them to create a stronger bond with the avatar. The player has a change to involve more deeply to the ludic aspects of the game when they learn to master the controls of the game.

Exploring the game environment is an important part of the game project's design. The player could utilize the vast game environment and explore it by foot, on a mount, by swimming, diving and climbing and even by air. Making the navigation and exploration of the game environment as pleasing as possible would ensure deeper involvement with kinesthetic and spatial elements of the game. Limiting the player from entering certain areas would be aimed to make as subtle and logical as possible to avoid the player from noticing when the game is trying to limit their access.

Kinner trials (Appendix 4) were designed as one way for the player to develop the skills of their player avatar. Most of the game design was based on the existing story but in this case, the game mechanics affected the storytelling. The way of harvesting the animal powers was approached by thinking of how the game mechanics behind it could be constructed fun for the player. In this part of the project the ludic involvement of the player was in focus. Different animals found within the game environment would be able to pass an ability to the player when harvested. These kinner trials would offer the player a break from the ordinary gameplay, giving them a change to participate a small game or a puzzle. A succesfull player would be rewarded with a new skill. This type of integration of the story and mechanics is a good way to avoid possible disharmony within the game logics that could affect on immersion.

8.3 Storytelling

The narrative elements were clearly visible in many different parts of the game project. The project itself started from the story, and started slowly to evolve into a greater whole that was firmly based on the storytelling. The game project aimed to create a coherent story and game world that would enhance the possibility of immersion. The storytelling of the game project was intended to feel natural and being closely integrated with the game mechanics. Different quests designed for the game project are a good example of integrating the game's story and its mechanics. The current sub-goal of the player is given in form of a quest that is constructed as a short story, or as a part of a story, that the player completes. The actions of the player gain more meaning, and achieving the goal can feel more meaningful when the actions of the player become part of the game world. This gives the player a change of feeling more involved with the game world and its characters.

The main story line of the game project was designed to be linear, but the core gameplay would follow a non-linear narrative structure. The player would have a freedom to advance the main story on their own pace. Between the main story the player could participate on quests, or explore the environment, which would also reveal new information on the game world. The survey results gave some indication on how important cut-scenes can be in creating emotional moments, but telling the main story was intended to be told through soft scripted sequences. This would ensure that the player would maintain the control over their avatar through the whole game. The main story beats intended to be designed to match the level of the player, and possibly the difficulty level could adjust slightly according to the level of the player avatar. These could ensure that the game would offer a challenge that was not beyond the skills of the player or their avatar, enhancing the formation of flow.

The development of the game's story spawned from the player avatar, their abilities and relationship with the companion character, and the surrounding game world. First ideas of the game were revolving around playing as a dragon, and the possible mechanics of controlling the character (Appendix 5). From this

very simple concept of playing as a dragon the game world, design and characters started to advance and develop further. The story of the game has a rather traditional fantasy adventure setting, where the hero character fights against the greater evil forces. As the story advances it becomes clear to the player that the setting of good and evil is not as apparent as the story has indicated. This slow but inevitable change in the game's story aims to elicit strong emotions in the player, offering them intense experience of affective and ludic involvement. As the survey results indicated, experiencing emotions seemed to be important for the immersion, and the game project's story aims to elicit strong emotions in the player.

8.4 Environment design

The game environment was constructed by considering on how to enhance kinesthetic and spatial involvement through environment design. The environment design of the game project consisted of the map of the region, interior environment design document and a brief description of the game environment's atmosphere in the city of Var-Korek. Each different region of the game aimed to have very unique features to set different locations apart from each other's. The difference between the regions would help the player to recognize and locate different areas better within the environment and to involve them more deeply on the spatial aspects of the game.

The interior environment design document intended to depict the atmosphere of a tavern that would be an important location for the game's story. The description of the Hog's Bristle tavern is not only providing visual cues of the environment, but also describing an event where the player meets their companion character, Rava, the first time. This location aims to give the player a feeling of a safe place that had a friendly atmosphere. This tavern is one of those few places in the game environment where the residents do not act hostile towards the player avatar. The player could freely return to this location and possibly become attached to it developing the narrative, affective and kinesthetic involvement in the player.

The description of the atmosphere in mountain city of Var-Korek aimed to depict the vastness of the game environment and the details within. Each region would have distinctive features such as flora, fauna and architecture, so that the player could effortlessly recognise a region based on the visuals. The city of Var-Korek is distinctive from the rest of the region by its geography and cold climate.

8.4.1 Map of Valurath

When designing the game environment the distinctiveness of different areas were taken into consideration. Major differences between areas were created with changes in the geology, climate, flora and fauna. The geological accuracy of the game world received moderately little attention, as according to Calleja, the aesthetics and imageability have more importance in creating spatial involvement (2014, 89).

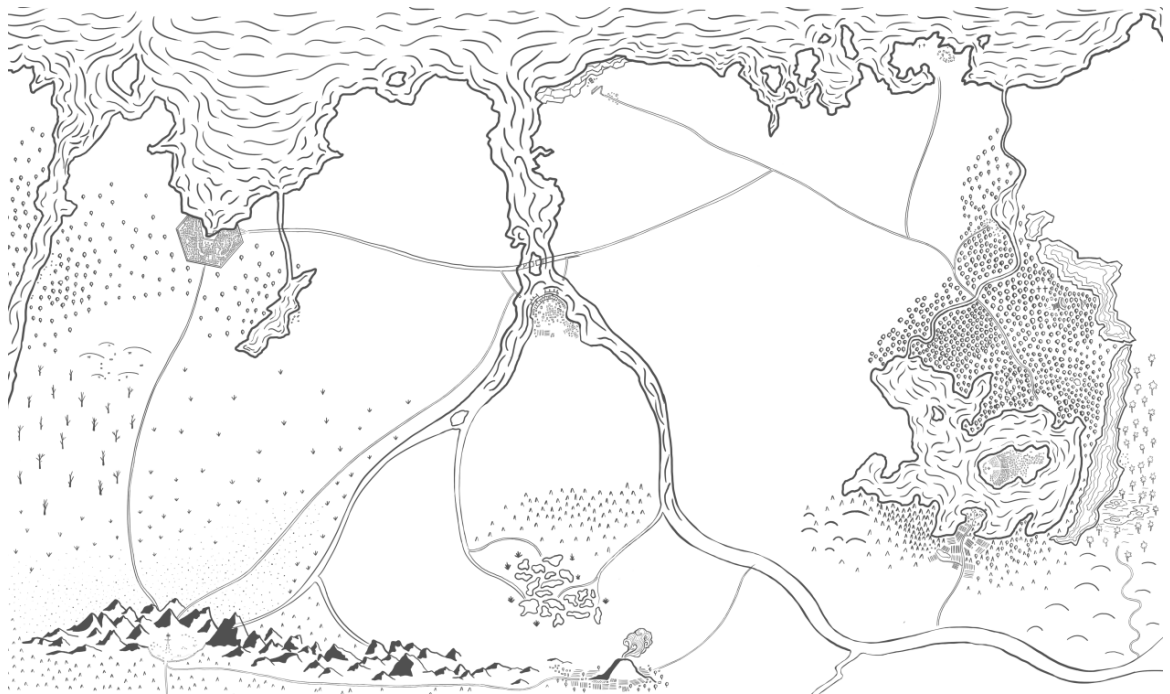


Figure 14. Map of Valurath (Tanskanen 2018)

The region of Valurath (Figure 14) started to develop based on its history. The development of the story and the history of the region started before designing any visuals for the area. The very base structure of the map and the broken

bridge of Valurin is strongly inspired by the history of former leaders and their relationships within the story world. These pieces of history within the present story world would offer the player an opportunity to create a more expanded knowledge of the game world, making it to feel more realistic. Revealing the history of the region to the player would also explain some current events within the game world, giving them more logic and adding to the story and its characters. The additional information can also increase the coherence of the game world.

8.4.2 The broken bridge of Valurin

Some of the locations of the game world intended to include multiple elements of involvement. The broken bridge of Valurin was aspired to elicit emotion in the player, and to stand out as a remarkable landmark that the player could easily recognize from a distance. Valurin's significant size and architecture distinct it from the surrounding regions. The history of Valurin's breakage (Appendix 6), which is told to the player as they first approach it, aims to make the player to feel as the bridge was almost like a character. This very similar personification can be seen in *Lord of the Rings* (Tolkien 1954) as the inanimate artefact the One Ring is presented with human characteristics. The story of the broken bridge would also be utilizing personification in describing the history of it. Valurin is described as a great serpent, holding the two lands together, and forming a bridge over the vast river of Othne. The story inspired to add some reptilian visuals on the bridge itself building up the characteristic of the broken bridge. The unusual looks would also make the bridge easily distinguishable from the other bridges in the game environment.

The player would need to pass over the bridge several times during the game, enhancing its importance, as there would be no other safe way to cross the vast river between districts of the game world. Passing the bridge would require some spatial efforts from the player, jumping over holes, balancing on the rails and swinging on the rotten wood structures. The concept of the bridge of Valurin strongly exploits kinesthetic involvement in attempting to form immersion. Elements of storytelling, psychology and game design are also strived to take into

consideration in the overall effect on the possible immersion. The story of the bridge is told to the player to enhance its distinctiveness, and to offer a base for eliciting emotion. The bridge acts as a link between the kinesthetic and narrative involvement. By being a significant landmark with a vivid history, the bridge could appear as a meaningful location that the player would recognize easily. The bridge of Valurin also offers more practical effect on the player involvement. Navigating through the fractured bridge offers the player a break from the intensive gameplay, and gives them a change to engage in a small puzzle as they try to find a reliable route across to the other side.

8.5 Game characters

The game project focused to design and develop two of the most central characters. These characters were the player avatar and the companion NPC Rava. Designing the player avatar was challenging due to the the lack of pre-determined personality in the game character. The relationship between these two characters, the player avatar and the companion Rava, was also in focus as it would greatly change as the game's story advanced.

As a design choice, the main character that the player would control, was left without pre-determined personality. Having a main character with very little personality could be risky as the player might not have enough to relate to, leaving the player feel disconnected from the character. However, precautions were made to ensure that the player would form a deep bond with the avatar they played as. Actually Skolnick encourages to leave some specifics of the character blank, as to give space for the player to embed their own interpretations in the character (2014, 44). As it is typical for a role-playing game, the player could create an avatar of their liking. Even though, the main character's personality was supposedly left blank, the game design aimed to provide some basis for the player to care for their character. Besides being able to build a character that the player could find aesthetically pleasing, other features from game design, psychology and storytelling were utilized to make the character to make appeal more to the player. As the player levelled up their character, the attributes they chose to develop further would evoke different reactions in the NPC habiting the

environment. The companion character Rava would also have interactive dialogue with the player avatar, reacting to their actions and speech. This could give the player a change to feel like their avatar was a part of the environment and that they were more than just a blank avatar.

The main NPC, a bearkeeper Rava, was aimed to be designed as a character that would eventually feel like a real friend to the player. This character would accompany the player avatar through most of the story, hence it was important to create them to feel as a real person. The companion character would level up, like the player avatar. The player would be able to choose what skills they wanted to develop both in their own, and their companion character. This would ensure that the fighting style of Rava and the player avatar would work in balance, enhancing the ludic involvement.

Rava appeared as a rather simple character but as the story advances she would gain more depth and meaning. Her appearance would be essential for the story so the permanent death of this character would not be possible before the certain story beat, where she would have a major influence on the game's story. A character who has multiple roles create engagement and immersion for the player (Ibister 2006, 250). The major role of Rava would be a friend and companion of the player avatar, but she would later develop other roles as the story advanced.

8.6 Summary

The game project consisted mostly of world building, storytelling and game design. Each of these elements of the project aimed to utilize the academic discussion on constructing immersive experiences in video games. Applying theoretical knowledge of immersion in the game project appeared to be rather challenging. Some of the academic research on player immersion had to be adapted to be suitable to use in practice.

In addition, the scale of the project generated challenges in the production state. Most of the methods of creating immersion within the game project was limited to

world building. There was much of the academic research that was not utilized in the game project, including emergent storytelling. The further development could focus more on how to enable emergent storytelling. The designed game mechanics would have potential in enabling the creation of player stories, but it was not discussed in the project. However, as stated earlier the purpose of the production part of this thesis was not to develop a ready game, and the project has a great potential to be developed even further in the future.

Even though the game project aimed to design an immersive game, the successfulness of it was not tested. A game concept can be difficult to test in practice, as the best feedback of the immersiveness would be provided by playing the actual game. As a functioning game was not produced, the immersiveness of the game project was impossible to prove. However, the possible immersiveness of the game project is to be evaluated later on the production state, which is not recorded in this current thesis.

Alltogether, producing a game project that aimed to utilize academic research on creating an immersive design appeared to be challenging. Former studies and the survey results gave valuable knowledge of constructing immersion within games. The game project provided a great opportunity to study and examine immersion more in practice. This game project has potential to continue in the future, and the former project can be seen as a basis for a larger production, that can study the creation of immersion within video games even further.

9 CONCLUSION

The research of the thesis, the survey and the game project were successful overall, managing to provide important information on immersion in video games and how it can be constructed. The timeframe for the production was challenging and given the limits, it was not possible to develop a full game. The game project has the potential to expand and further utilize the theory acquired within this thesis. Additionally, there is still a lot of potential in the area of study that could be taken even further. Emergent storytelling and the experienced uniqueness of the

playing experience and their effect on player immersion could be studied in more depth.

The importance of emergent storytelling and uniqueness of the playing experience could be studied further.

This thesis managed to, in part, prove the research hypothesis correct. Game design, psychology and storytelling can be used to create an immersive experience for the player, however, there are many more elements used to construct immersion in video games. If only these three topics, psychology, game design and storytelling are examined, psychology can be seen rather disjointed when comparing with the other two. Game design and storytelling can affect the immersiveness of a game alone, but it can be complicated to use psychology on its own. Psychology is used to enhance the potential of other elements of player involvement. Nevertheless, game design, psychology and storytelling can all be used to construct immersion in video games. Combining all of these elements can create especially good flow, emotion and integration within the game, greatly affecting the immersiveness of the game. During the research phase, it also came apparent that avoiding the breakage of immersion is equally as important than constructing and enhancing it.

The thesis managed to answer both of the research questions. The main research question was: How psychology, game design and storytelling can be utilized to create an immersive game? The research implemented in this thesis managed to find several examples from academic sources that illustrated how immersion could be constructed with the aid of game design, psychology and storytelling. Each topic was carefully examined to find multiple ways of using psychology, game design and storytelling to create immersion in video games. Secondary question was: Why immersion in video games is important? Based on the research acquired within the thesis project, the importance of immersion in video games can be defended.

The objective of the thesis was partly acquired. The academic research and survey resulted in valuable information about immersion in video games. However, any of the qualities of the game project were not able to be proven in this thesis. The game project aimed to utilize the knowledge on creating

immersive games but the effectiveness of it could not be proved. The game project is to be tested and evaluated in the future, to see the potential qualities it has on player immersion and eliciting emotion in the player.

This thesis aimed to provide more knowledge about player immersion and its importance in creating meaningful playing experiences. Research of player immersion would earn more attention than it has received so far. Even though the studies are rather vast, there are still many unanswered questions. No game designer should be satisfied with a game that does not aim to offer a fully immersive and memorable playing experience to the player. This thesis and its content hopefully should evoke some thoughts about player immersion in video games and its importance.

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LIST OF FIGURES

Figure 1. Venn diagram. Tanskanen, S. 2018.

Figure 2. Player involvement model. Tanskanen, S. 2018. Player involvement model copyright Calleja, G. 2014. In-Game : From Immersion to Incorporation. Ebook. London: The MIT Press. Available at: <https://ebookcentral.proquest.com> [Accessed 7 March 2018].

Figure 3. World narrative in Hearthstone. Hearthstone copyright Blizzard Entertainment, 2014.

Figure 4a. Environment during a day from Horizon Zero Dawn. Horizon Zero Dawn copyright Guerilla Games, 2017.

Figure 4b. Environment during a night from Horizon Zero Dawn. Horizon Zero Dawn copyright Guerilla Games, 2017.

Figure 5. Avatar creation in The Elder Scrolls V: Skyrim. The Elder Scrolls V: Skyrim copyright Bethesda Game Studios, 2011.

Figure 6. The psychological profiles of players. Tanskanen, S. 2018. Questionnaire variables used in the online survey copyright Billieux, J. & Thorens, G. & Khazaal, Y. Zullino, D. Achab, S. Van der Linden, M. 2015. Problematic involvement in online games: A cluster analytic approach. Ebook. Elsevier Ltd: Amsterdam. Available at: <https://www.sciencedirect.com> [Accessed 9 March 2018].

Figure 9. Branching narrative pattern. Tanskanen, S. 2018.

Figure 8. Multiplayer on Overwatch. Overwatch copyright Blizzard Entertainment, 2016.

Figure 9. Generalized picture of the GameFlow model. Tanskanen, S. 2018. The GameFlow model copyright Sweetser, P. Wyeth, P. 2005.. *ACM Computers in Entertainment* 3, 3A.

Figure 10. Player involvement in video games survey. Tanskanen, S. 2018.

Figure 11. Aspects of involvement. Tanskanen, S. 2018.

Figure 12. Survey answers categorized. Tanskanen, S. 2018.

Figure 13. Survey results on immersion. Tanskanen, S. 2018.

Figure 14. Map of Valurath. Tanskanen, S. 2018.

PLAYER INVOLVEMENT IN VIDEO GAMES

This survey investigates player involvement (immersion/engagement) and emotion in video games. All the answers are anonymous and the data gathered will be used for a bachelor's thesis. There are 33 short questions in total.

Halutessasi voit vastata avoimiin kysymyksiin myös suomeksi.

1. How old are you?

2. What gender are you?

Female

Male

Other

3. Take some time to think of a specific session or a moment from a video game that you have experienced. This moment should somehow be meaningful and memorable, positive or negative, and you should be able to remember it fairly well. It can be single- or multiplayer game on any platform. Please describe this moment, what happened and why it was memorable.

4. What game was it?

5. On which platform did you play?

6. How meaningful was the moment to you?

- Not at all
- Not much
- A little
- To some degree
- Quite a lot
- A great deal

7. Which of the following were important in making the moment so memorable? You may choose more than one.

- Movement (of the character) and control of the game
- Exploration and navigation of the game environment
- Interaction with other characters/players
- Story elements
- Experiencing emotions
- Choices, consequences and goals

Other: _____

8. How immersed did you feel?.

- Not immersed at all
- Not very immersed
- A little immersed
- Fairly immersed
- Very immersed
- Extremely immersed

9. How challenging was the game in that moment?

- Not challenging at all
- Not very challenging
- Little challenging
- Fairly challenging
- Very challenging
- Extremely challenging

10. How long ago was this moment?

- Less than 3 months ago
- 3 to 11 months ago
- 1 to 5 years ago
- More than 5 years ago

11. Have you returned to play the same game?

- Yes
- No

12. Approximately how many hours have you spent playing the game in total?

13. Do you like the game? Why or why not?

14. Do you have other memorable moments from the same game?

- Yes
- No

15. Do you believe that someone else has experienced the same, or very similar moment as you, or was your experience unique? Why?

16. Which of the following best describes your character?

- Character that you were able to design (Dragon Age, Skyrim, World of Warcraft)
- Pre-created character (Assassin's Creed , Super Mario Bros., Uncharted)
- Pre-created character with alternative skins/clothes/cosmetics (Counter-Strike, Overwatch, League of Legends)
- Vehicle or object (Rocket league, Golf with your friends, Need for Speed)

I did not control a specific character (Total War, Candy Crush Saga, Civilization)

Other: _____

17. How much did you like the character you controlled?

- I did not play a character
- Not at all
- Not much
- A little
- A fair bit
- Quite a lot
- A great deal

18. How much did you enjoy controlling the game (character)?

- I was not in control of anything
- Not at all
- Not much
- A little
- A fair bit
- Quite a lot
- A great deal

19. How much did you like the game's story?

- There was no story
- Didn't pay attention, or I didn't play enough to be familiar with the story
- Not at all
- Not much
- A little
- A fair bit
- Quite a lot
- A great deal

20. How engaging was the virtual game environment?

- There was no virtual environment or space
- Not at all
- Not much
- A little
- A fair bit
- Quite a lot
- A great deal

21. How emotional was the playing moment?

- Not at all
- Not very
- A little
- Fairly
- Very
- Extremely

22. What emotions did you feel during, or right after the moment, if any? You can describe further in the next section..

- Joy
- Sadness
- Pride
- Frustration
- Satisfaction
- Excitement
- Thrill
- Surprise

Other:

23. (Optional) Please describe any other emotions that you felt during, or right after the moment.

24. Did you play with other people?

Yes

No

25. Did your actions affect other players or game characters?

Yes

No

26. How much did you interact with other players or game elements?

- Not at all
- Not much
- A little
- A fair bit
- Quite a lot
- A great deal

27. Did someone spectate (watch) you playing the game?

Yes

No

28. Were your actions in game praised (admired) by other players or spectators?

Yes

No

29. Was winning or losing meaningful for the moment?

Yes

No

30. Was it a competition?

Yes

No

31. How much did your choices, decisions and actions affect the outcome of the moment?

- I did not make any choices/decisions/actions
- Not at all
- Not much
- A little
- A fair bit
- Quite a lot
- A great deal

32. Were you rewarded somehow in the moment, or briefly after it?

- No
- I received points/ranking/experience/in-game currency (money)
- I levelled up
- I unlocked achievements
- I unlocked upgrades
- I unlocked extra content (story-lines, secrets, game modes)

Other:

33. Have you been engaged with the game even when you were not playing it?

No

I have talked about it to other people

I have designed strategies

I have watched videos of the game

I have read articles of the game

I have fantasized alternative game stories, characters or endings

I have studied the game lore

I have created fan art or other fanfiction of the game

I have written reviews or articles of the game

Other:

Other comments

Story brief

The land of Valurath feels no sympathy for kinnners, harvesters of animal vigour. Kinnners are sinful, impious, blasphemous and false-hearted and must be captured and branded with a hot iron upon sight. The Temple of Lanve leads the persecution of kinnners, aiming to properly brand each of them, and to oppress them in a state when they are no longer a threat to other people. Kinnners are contemptible, more worthless than a slave or a criminal. They are feared by the common people, hence avoided and usually left alone. The fear easily turns into hatred and the kinnners suffer greatly from the undeserved persecution, as it roots from far back from the history of Valurath. Unfortunately, there seems to be no change until the very last kinner stops breathing.

There seems to be a new and foolish hope for the kinnners as an all-kinner is rumoured to travel across the land of Valurath, who aims to lead the kinnners to rebel against the authorities and claim back their rights. The all-kinner is telling a long forgotten story of a legendary dragon UI-Tahruin. There is no animal more powerful than UI-Tahruin once was.. With the powers of slumbering UI-Tahruin the kinnners could stand a change against the persecution of their kind. This desperate act of rebellion seems to be the only spark of hope for the kinnners.

Friendly merchant dialogue on encounter

Warrior

"I have a great collection of fine weapons and armor, can I interest you with any of it?"

"You look like someone in need of a new armor, come see what I got"

"Ah, you seem like you could sell me couple of those pelts, right?"

"I don't think you understand how any of this works, this is for mages really"

"Please be careful, these items can be rather unpredictable in um- untrained hands"

"You really seem like you would just kick the door open, what do you need a lock pick for?"

Mage

"Come closer, have you seen these herbs I just acquired from Tinhve?"

"Mmm-hmm just the finest gems, polished and with good resonance, want to try some?"

"I pay a good price for those Valley Sprouts"

"Oh darling, these weapons are a match for a strong build, or are you looking for a friend?"

"Careful! That blade is sharp enough to cut your tears in half"

"These garments could be quite handy for you too, I suppose..."

Rouge

"Hmm traveler, I think I have something you might need..."

"Please, come see what I have for my special customers"

"Do you have any use for that Asran necklace? I know someone who might like it"

"These weapons really just want to be seen, you know?"

"Are you wanting to change your profession? In that case these gems could do good for you"

"None of these herbs are going to increase your stealth"

Rava tells the story of the shattering of Valurin

Sings extravagantly: "Valurin, al-reth taran sar! Beyond my gaze lies your head on the west, by the stones of al-Verin. Tail strokes the banks of Ta-nuin, rests on the grass. Carry the rightful, ferry them across. Devour the murderous, pass them in the rapids. Shall the great serpent of Othne never slumber!"

A small break

Clears throat and starts to talk with a dreamy tone, as in almost feeling a little sad about the Valurin's destiny: "There were three siblings, sons of the benevolent ruler Athe, who loved her sons greatly. Ereth and Uleth were twins, both kinners, and they had a younger brother, Arath, who had not inherited those powers. As it was time for Athe to pass on her throne she could not bare with the thought of passing the throne to only one of her sons, as she saw them as equals. Athe divided the country into three pryncedoms for his children to rule, Val-Ereth, Val-Uleth and Val-Arath. After Athe's death the three brothers ruled in harmony, each taking care of their own region. As time went on the youngest brother Arath started to struggle to rule the land he was given, while the lands of Ereth and Uleth seemed to prosper. Arath grew sullen, suspecting that Ereth and Uleth were the reason for his misfortunes. He eventually believed that Ereth and Uleth were trying to take him over in unison. Arath slowly poisoned his brother's minds, turning them against each other's. Infested with lies the twins Ereth and Uleth met on the bridge of Valurin to fight. Possessing the strength of kinners the twins clashed with great force. Valurin could not whitstand their power, tearing from the middle it sent Ereth and Uleth to drown in the rapids of Othne. Now Arath claimed the whole land for himself to rule over. Stemming from the jealousy towards his brothers, Arath declared all the kinners to be drowned in Othne. Arath later died with a knife in his heart, for he could not live with what he had done"

Kinner trials

Kinner trials are a way of harvesting the animal powers. Each animal appearing in the game environment has certain abilities that can be passed on to the player character. The animals in the game environment could be harvested or hunted. When the animal is hunted it will not pass any abilities to the player avatar. When the animal is harvested, the player will go through a kinner trial, if they succeed the animal will pass the ability on to the player avatar. An animal is harvested by stalking it without any weapon in use. If the player succeeds to approach the animal, they will encounter a kinner trial which is different each time depending of the animal and the ability it is offering to pass the player avatar.

Animal	Trial	Ability
Rabbit	Running over a river within a time limit without touching the water, jumping on stones and driftwood	High jump (the character is able to jump higher than earlier)
Rabbit	Locating approaching animals based on hearing with lost sight	More sensitive hearing (approaching enemies and prey make louder sound)
Viper	Collecting ingredients and brewing a potion within a time limit	Poison weapons (poisoned weapon inflicts poison damage on enemies)
Deer	Run through the forest within a time limit and avoid predators	Dash (able to run faster for a certain period of time)



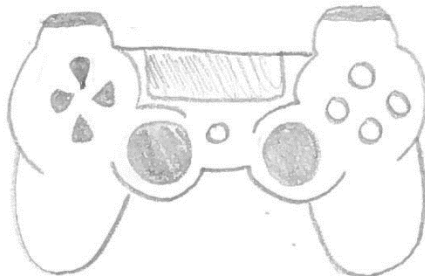
rotation? angle of the wings

~~L+R = angle of the wings~~

L1+R1 = beat the wings

L2+R2 = fold the wings

↑ angle?



camera rotation?

← combat

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