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Narrative and Serious Games: Playing the message

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Dedicatória

Dedico esta dissertação aos meus pais. Sem o esforço deles nunca teria chegado tão longe.

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Resumo

É de uma grande relevância estudar jogos enquanto meios de comunicação de mensagens específicas aos jogadores. Enquanto jogos digitais, estes assentam em características que podem servir como ferramenta de elaboração de mundos virtuais baseados no real em que servem um propósito maior do que um simples jogo. Neste sentido, existem áreas que podem ser conjugadas de forma a reforçar determinadas características que são intrínsecas a este meio. A extrapolação de áreas como o Design de jogos, a Narrativa Interativa para fins sérios pode ser um excelente ponto de partida e em específico algumas subcategorias destas mesmas pode levar à criação de um fio condutor que pode ser relevante para uma proposta que assenta nesses mesmos conceitos. Relativamente aos jogos sérios estudados durante esta dissertação foram relevantes para o conhecimento tanto como finalidade de uma proposta bem como perceber como eles se enquadram no tratamento teórico. Claro que os aspetos de maior relevância para esta proposta são inevitavelmente importantes para uma simbiose que pode criar emoção e uma experiência única ao jogador.

No que toca às narrativas em jogos digitais e apesar de haver uma discussão aberta entre esta e o cinema, nós só pretendemos perceber de que forma é que ela pode ser ligada aos jogos não entrando pelo caminho de “se é narrativa ou não”. Também não pretendemos discutir e sim afastarmo-nos, neste campo, da ludologia. Iremos abordar então a narrativa enquanto suporte ao videojogo, seja ela em formato de texto bem como a criação de mundos narrativos, que em certa parte pode ser relevante para a criação de uma maior experiência jogável e maior retenção de mensagem para o jogador.

Claro que para haver uma maior conexão entre o jogador e estes mundos virtuais a uma criação de uma ponte que transporta o real para o digital temos de pensar inevitavelmente no centro do que é e o objetivo do processo de Design em jogos: O jogador. Neste sentido teremos de entender o significado de certos conceitos existentes nesta área, como é o caso de game flow, imersão e feedback. Para assim entender como podemos criar um elo de ligação e experiência ao jogador.

Palavras-chave

Design de Jogos, Narratologia, Narrativas, Narrativa Interativa and Jogos Sérios.

Abstract

In this dissertation we will study the form of developing a videogame aiming to transmit serious messages to the player and how serious games can accomplish this objective. The different narratives that can be used in videogames will also be explored, analyzing which of them are better in transmitting messages. We believe that narratives linked to game design may be very effective to deliver serious messages.

The narrative accompanied our evolution in every sense, all our cultural information was transmitted by writing and storytelling. This is how we kept evolving as Humans. With the passing of time the technology evolved too, and new mediums were born, videogames were created, and with them a new group of people appeared, the targets. In this sense the videogames are a good way to communicate serious messages to this specific target.

The main goal of this dissertation is the study of different types of narrative and how they can be structured to communicate messages more efficiently. So, by exploring the different types of narratives and the different types of serious games we will then create a proposal for a serious game.

Keywords

Game Design, Narratology, Storytelling, Interactive Storytelling and Serious Games.

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List of Acronyms

CITC	Cook Inlet Tribal Council
DLC	Downloadable Content
FPS	First Person Shooter
MMORPG	Massive Online Role Play Game
NPC	Non Playable Character
RPG	Role Play Game
RTS	Real Time Strategy

Introduction

The theory behind the dissertation

The objective of this dissertation, both in a scientific and in a personal perspective, is to demonstrate how the purpose of games can go beyond mere entertainment, communicating in unique and personal ways. It is our opinion that, like books and movies, videogames are an incredibly versatile medium that can convey serious messages, hence bringing new possibilities and advancements to the game industry as a whole. David Michael and Sande Chen in *Serious Games: Games that educate, train and inform* (2007) explain that because of the low investment needed to produce this kind of games and the fact that they are being made especially in-between other projects, the companies see serious games as an opportunity to experiment new gameplay ideas, using software or hardware that already exists. As such, we aim to understand how serious games are produced and how they are being perceived by the academic community. From our point of view, we believe that games, in all its forms, are a medium of communication that can convey different messages and spread them worldwide, not only because this medium is constantly evolving but also due to the daily growth of the community of players and developers. We will also approach the narrative side of games to understand how a game can be constructed around a serious message. The aim of this dissertation is to associate storytelling with serious games in order to understand which type of narrative can be used more effectively, better perceived by its audience, promote awareness and trigger the intended actions.

Narrative plays a key role in organizing, depicting and communicating the human experience. It has accompanied us through time, since our first drawings in the walls of caves, roughly around 40.000 years ago, until the creation of the first book, up to the theater, the movies, and, more recently, videogames. Even if we put serious games aside, we still must ask ourselves how important can a narrative be in a videogame. We will try to answer this question and address the issue of storytelling in videogames, a subject that goes far beyond serious games and has been the cause of intense debates among scholars. Another important and necessary topic that we will approach in a following chapter is Game Design. We will try to create a bridge between game design, serious games and the industry. As mentioned earlier, companies experiment new ideas and software in-between large scale projects, creating games that are a little bit different or unconventional. Serious games are a type of games that companies usually do due to the low investment costs they require, at least in some of the cases. This is where Game Design plays a very specific role: innovation. Our research is based on three different fields: game Design, storytelling and serious games. Our objective is to understand how they can work together and be more effective within the videogame medium, especially while addressing serious issues.

So, what is narrative in a videogame? How can we create a hero to fit in a realistic world, or in a mythical world, and how can this hero reflect the player? In order to understand what storytelling in a game can be, we need to understand what makes a story. How can we create a story world that can be played or convey messages that have real impact in the world of the player? To understand how narrative can be used in a game, we will need to understand story arcs, the hero's journey plots, and a variety of processes and techniques that narratology is studying since Aristotle. However, there are specific aspects in the way a videogame tells stories, one of the most important being its interactivity. As such, we will discuss how traditional storytelling techniques and structures can be used in an interactive storytelling environment, as well as the different narrative structures a game can bear, like linear, branching and open-ended narratives.

There are many ways to create a story. Recently, there has been an enormous focus on the task of building story worlds, and in the way they can be used to tell multiple stories. We can take, for instance, Bob Bates, who defends that storytelling in videogames was, once, exclusively limited to adventure games. Then, role-playing games showed up and all the industry changed. Interactive storytelling has also changed the way we look at narratives in games and, if we analyze "*The Witcher 3: Wild hunt*" (2016), for instance, which is widely considered a masterpiece of interactive storytelling, we can easily conclude that it is all about a rich story world and how details can be introduced in a wide environment. These details are important to create realism and to immerse the player. In addition, the story world makes use of highly detailed characters with rich backgrounds that enhance the experience by adding more realism and singularity. Games that rely on great story worlds, such as *The Witcher* and *The Elder Scrolls V* (2012), tend to claim the centrality of narrative. Our concern is less with the way most games are telling stories, a subject that has been thoroughly studied in recent years, than with the way a story and a story world can be design to carry a serious message. Balancing fun with a more serious approach seems to be the answer and, above all, serious games need to reflect an idea or theme, and be designed with a specific purpose or message in mind. *America's army*, for example, is a game built with the aim of recruiting people for the army, showing them why they should join the army and how to make a difference.

Games are a medium that can inform, persuade and train a target audience. They have the ability to communicate ideas and ideals. Unlike some other media products, games can use interactivity to enhance the immersion and experience of players in a ludic way. This means that we can conduct this medium to touch sensitive matters. In this sense games can convey information and can be more than just pure entertainment, and as many authors claim, can be used for a purpose greater than itself. The problems the world is facing deserve to be reminded and awareness should be spread across the globe through any appropriate communication tool. Videogames are a way to communicate, as we argued before, and they harbor a worldwide community that plays games seriously and listens to what developers have

to say. Regardless of being relatively young, the videogame industry is still expanding, allowing developers to take advantage of a media in permanent evolution and leading to an increase in videogames earmarked for serious purposes.

Objectives and Methodology

This dissertation aims to study how games can be designed with the intent of transmitting serious messages to the players. We believe that storytelling has a big part in sending powerful messages. So, we aim to study how narratology can be built alongside Game Design to educate people with a different method: playing serious games. That is why this thesis will focus on the study of both Game Design and Narratology, as well as in the way both can be applied in a Serious Games. We will begin by introducing game design as a starting point, due to its importance in this medium, and cross it with different storytelling techniques to see how these two approaches can complement each other. As such, we will need to understand what makes a serious game, and if designing a serious game requires a specific type of narrative, and, on the other hand, how a narrative can fit in the world of serious games. We will also study several types of narratives in videogames and analyze how they can be applied to different games.

The main purpose of this thesis is the development of a serious game that would reflect our studies and conclusions on this subject. The problem we choose to tackle is child exploitation. We are aware that this problem is the culmination of a series of “bigger” issues in a worldwide scale. We want to discuss this matter because there are children that do not have the adequate responses to basic needs and rights, and we believe the videogame industry can play an important part. There is a huge gaming community out there that could get involved, that absorbs games developers’ messages, and for whom playing is a serious activity. Games are tools that can be used to promote awareness, and we will study the case of *This War of Mine*, a game with an approach that is particularly unusual in the gaming industry. This game’s developers designed a donation system that takes the audience directly to the *war child* website, a strategy that had a positive impact on the players turned out to be a huge success. This approach gives, in our opinion, more credibility and appraise to this game’s goals, leaving behind a body of work that can influence people in a meaningful way.

Furthermore, we have interviewed *11 bits’ studios* and *E-line media* to better understand their point of view regarding games that try to be more than mere entertainment. We asked them a few questions that allowed us to understand more deeply how this industry works and how we can make it work. These two companies developed, respectively, *This War of Mine* and *Never Alone*, which will be analyzed more thoroughly in the sixth chapter of this dissertation. These interviews helped us understand how players perceive the game. We wanted to know if the players had more interest in the entertainment part of the game or if

they played to understand the messages it was trying to transmit. These two games are very different examples that have distinct purposes. *Never Alone* wants to share the life, myths and legends of native culture from Alaska with the rest of the world, while *This War of Mine* is totally different and explores the situation of war victims.

Structure of the dissertation

This dissertation is divided in seven chapters. In the first chapter, we will clarify the concept of Play, studying what is “play” in the perspective of Johan Huizinga and of several other authors. We will also address the issue of game classification, the way games can be categorized and divided in different genres, evoking, for that effect, the grid proposed by Roger Caillois.

The second chapter will be devoted to game design, that is of key importance in every game and serious games are not an exception. We will argue that many development companies should develop serious games to insure staff in-between big scale projects, like David Michael and Sande Chen (2006) discuss in their book. In fact, many indie companies in this situation tend to close due to what these authors call the employee “burn rate”, when the company doesn’t have any major project in hand and, without any other project to transit, the employees leave the company. On the other hand, even big companies are finding it increasingly necessary to integrate serious messages in their games. *The Witcher* (2016) is an example of this concern. During gameplay, the main character, a mutant, is constantly being called a “*freak*” and other insulting names, raising racism issues and awareness among players.

The third chapter is all about the ability of games to tell stories. We believe that interactive storytelling has its own ways of building stories and transmitting messages. This chapter illustrates the union between two concepts, story and game, and that’s where we believe this medium strength resides. This chapter refers both to ludology and to narratology, and we will try to understand how games can be used to transmit messages to the player, studying the various story types that can be used.

The fourth chapter is aimed at a specific game genre: Serious Games. As mentioned before, serious games are the major focus of this dissertation. We will define this class of games and identify its specific properties, as well as the different technologies that can be used to develop serious games.

In the fifth chapter we will focus on two games that we believe are the pillars of our proposal. Two great games with the professed objective of sensitizing their audiences for bigger causes. As we said before, these two games are *Never Alone*, from E-Line Media, and *This war of mine*, from 11 bits’ studio. We want to understand how this market works and where did this two companies. In one hand, we have *Never Alone*, a game that let us explore

the life and culture of a tribe in the Alaskan wilderness, driven by the ancient stories of this tribe's elders. In the other hand, we have *This War of Mine*, inspired by the harsh reality of civilians in a war environment.

The final part of this subject is our proposal for a game that comprehends and applies all that we have studied and identified in previous chapters. This proposal is aimed at creating a game to transmit a serious message, and where we will apply the narrative structures that we analyzed in other chapters, and we will propose a multi linear story that evokes several worldwide stories of children suffering from any kind of exploitation. In this sense, based on *Never Alone*, we also want to blend documentary and gaming in a unique form.

Chapter I

1.1 The importance of play

When we think about play we often assume that it's something that distract kids from school, a form of entertainment. As Ian Bogost explains in his article *The Rhetoric of Video Games* (2008), "Play is often considered a children's activity, a trifle that occupies or distract kids and which they eventually grow out of, turning to more serious pursuits." (p 120). So the general idea of play is to entertain children in the hiatus of the learning process. He follows by saying that play allows kids or even adults to distract themselves from more serious activities, such as learning or working.

The concept of play is very old. We will study it throughout this dissertation due to its importance, and the fact that this term is present in almost every aspect of human life. We will use the opinion of Katie Salen and Eric Zimmerman (2013) as our starting point: "Play doesn't just come from the game itself, but from the way that players interact with the game in order to play it." (p, 3)

Salen and Zimmerman studied a variety of that were questions raised by Johan Huizinga in *Homo Ludens* (1951) and came out with a new definition of play, what they call meaningful play:

One way of framing what players do when they play a game is to say that they are making choices. They are deciding how to move their pieces, how to move their bodies, what cards to play, what options to select, what strategies to take, how to interact with other players. They even have to make the choice whether or not to play! (p, 3)

They argue that the procution of meaning is present in every game, and they give the example of pong, in which play mediates the meaning of the interaction between player and game, "from the play of pixels representing the ball, to the play of the mechanical knobs controlling the digital paddles, to the competitive social force of play between opponents." (p, 2).

One of the most prominent scholars to study play was is in fact Johan Huizinga. In his book *Homo Ludens* (1951), he claims that play is older than culture and can be associated with the growing process of all kind of animals, including us, human beings, for whom, in fact, play is crucial. Johan Huizinga begins *Homo Ludens* with an interesting definition of play:

Play is older than culture, for culture, however inadequately defined, always presupposes human society, and animals have not waited for man to teach

them their playing. We can safely assert, even, that human civilization has added no essential feature to the general idea of play. (p 1)

According to Johan Huizinga, Play goes beyond human nature. If we look at other animals, they play in order to grow up and to learn how to attack and defend themselves. So, play is something fun, that we do as a learning process. Huizinga claims that, when playing, animals also follow rules, arguing that dogs wouldn't bite to hurt, or use any kind of violence, but rather in a careful way. In some aspects, we can classify this as a rule. Rules determine what we can or cannot do in a game, just like in nature. Play is also fun in all its aspects and goes beyond the logical understanding of nature. Irrational animals do it to grow and learn, and so do humans. But this has nothing to do with the seriousness of play or lack thereof. There are games that in their nature are meant to be played seriously. Chess is a game that demands an extremely high concentration and focus from both opponents, in which the players rarely show any kind of emotion, and don't seem to be having much fun. However, Huizinga argues that someone's mood doesn't necessarily have to be transmitted by pleasant exterior expressions.

Johan Huizinga also defines "play" with six characteristics: voluntary, pretended, immersive, played within a limited time and place, based on rules, and social. First, the player must be willingly and voluntarily engaged with the game. This player will need to pretend, almost like an actor, separating play from real life. The game needs to be immersive, it needs to captivate the full attention of a player. The game must be based on a set of rules. And, finally, the game needs to be social, creating a social network between players, a group. Gonzalo Frasca reviewed in *Play the message* (2007) all the definitions made so far and originated a new one:

Play is to somebody an engaging activity in which the player believes to have active participation and interprets it as constraining her immediate future to a set of probable scenarios, all of which she is willing to tolerate. (p. 50)

1.2 What is a game?

A game follows a specific set of conditions; first of all, a game needs a player, rules and victory conditions. Scott Rogers mentions this in *Level Up* (2010): "What is a game? A game is an activity that: Requires at least one player, has rules, and has a victory conditions." (p, 3).

Brenda Brathwaite & Ian Schreiber give the following definition of game:

An activity with rules. It is a form of play often but not always involving conflict, either with other players, with the game system itself, or with randomness/fate/luck. Most games have goals, but not all (for example, *The Sims* and *SimCity*). Most games have defined start and end points, but not all (for example, *World of Warcraft* and *Dungeons & Dragons*). Most games involve decision making on the part of the players, but not all (for example, *Candy Land* and *Chutes and Ladders*).

Another interesting definition of game is the one proposed by Michael and Chen (2006):

...a voluntary activity, obviously separate from real life, creating an imaginary world that may or may not have any relation to real life and that absorbs the player's full attention. Games are played out within a specific time and place, are played according to established rules, and create social groups out of their players. (p.19)

We can then safely conclude that games are a unique activity that rely on rules, and that they can be played both individually or in a group (social), and, eventually, will have a winning condition. Videogames, on the other hand, differed from other classes of games in the way they are played, the medium they use. There is a variety of games according to Chris Crawford (2003) such as, *Board Games*, *Card Games*, *athletic Games*, *Children's Games* and *Computer Games* (p. 5). During this dissertation we will focusing our study in computer games. Videogames require a screen, and some form of digital or computational device. Video games, as Simon Engenfeldt (2008) mentions that they are computer based games, with the power of processing rules and consequently a dynamic presentation of sound and graphics. Ultimately Gonzalo Frasca in *Videogames of the Opressed: Videogames as a means for critical thinking and debate* (2001) refers that videogames are:

...computer-based entertainment software, either textual or image-based, using any electronic platform such as personal computers or consoles and involving one or multiple players in a physical or networked environment. (p. 14)

1.3 Classification of games

Classifying videogames is crucial for understanding the way in which games conveys meaning and the specificities of each genre. We will be basing our analysis on two very distinct authors, that have different backgrounds and offer very different ways of classifying games. Roger Caillois was sociologist who studied the essence of playing. Even though he wrote in a period when videogames were still in a very embryonic stage, his approach to the various types of play is still pertinent. On the other hand, Scott Rogers, an experienced game designer who is pretty much aware of both modern ways of playing and digital games, made an exhaustive and very complete genre classification of games.

Roger Caillois's *Man, Play and Game* (1958), offers a very interesting classification of games. As shown in figure 1, Caillois's categorization comprehends a wide variety of forms of play and, subsequently, of games.

REPARTITION DES JEUX

	AGON <i>(compétition)</i>	ALEA <i>(chance)</i>	MIMICRY <i>(simulacre)</i>	ILINX <i>(vertige)</i>
PAIDIA ↑ vacarme agitation fou-rire	courses } luttres } non réglées etc. } athlétisme	pile ou face comptines	imitations enfantines jeux d'illusion poupée, panoplies masque travesti	manège « tournis » enfantin balançoire valse
cerf-volant solitaire réussites mots croisés	boxe billard escrime dames football échecs	pari roulette		volador attractions foraines ski alpinisme voltige
↓ LUDUS	compétitions spor- tives en général	loteries simples composées ou à report	théâtre arts du spectacle en général	

N. B. — Dans chaque colonne verticale, les jeux sont classés très approximativement dans un ordre tel que l'élément *paidia* décroisse constamment, tandis que l'élément *ludus* croît constamment.

Figure 1 Classification of games by Roger Caillois (1958, p. 36)

First, we can divide playing according to two core properties: *Paidia* and *Ludus*. *Paidia* means playing without any pre built rules, pure improvisation, the type of play we used to do when we were younger. *Ludus* means playing with a pre-constructed set of rules, what we can call a controlled way of playing. Second, games can be split in four main categories: *Agon*, *Alea*, *Mimicry* and *Ilinx*. *Agon* is a game of competition, and it can be divide into *Paidia* and *Ludus*, the first one referring to games with little or no rule, like fights and athletics, and the second one referring to games like chess or football. *Alea* means chance, and it may refer to simple games of chance, like a coin toss with its binary possibilities, to chance games with complex rules, like roulette. *Mimicry* is the pure imitation of reality like for example children playing Pirates. Finally, *Ilinx* are the kind of games we do in our childhood, like swing or carousel, to which we can also add sports like skying or mountaineering.

Roger Caillois's classification of games precedes the videogame boom, and even the birth of this industry, let along the many games and genres that surfaced along the way. The authors that followed him sub-divided games in a variety of different genres.

Scott Rogers in *Level up* (2010) divided games in nine core genres, each one of them with a variety of specific sub-categories or sub-genres. The nine core genres are the following: Action, Shooter, Adventure, construction/Management, Music/Rhythm, Puzzle, Sports, Strategy and simulation.

Action games are meant to require hand/eye coordination. This category can unfold into a variety of subcategories. First, action-adventure games, that are a symbiosis between action and adventure. Those are games that require puzzles solving, item collection and long-term

story related goals. A great example of this sub-category is the *Tomb Raider series*. There are also Action-Arcade games, that are often presented with the style of the early arcade games, and have a short-time duration. These games also have some twists to their gameplay and scoring systems. Another type of games that fit this category are platformers which marked a generation, like the Mario series. The objective of this game is to jump from platform to platform, and sometimes shooting or fighting something. Stealth games are also included in the action genre, in which players are required to avoid enemies throughout the game or to be very discreet while engaging enemies, like the games in The *Metal Gear* series. Another class of Action games are Fighting Games, like *Tekken* or even *Mortal Kombat*, that involve fighting in an arena where a player fights an AI (artificial intelligence) opponent or two players face each other. Finally Beat 'em up or hack 'n' slash games are focused on battling waves of enemies, with the difficulty rising after each wave.

Shooter games are games that require the player to fire projectiles at the enemy. This category unfolds itself into 3 sub-categories that differ by the camera view. In First person shooter (FPS), for example, the view point is the perspective of the player. Examples of those games are *Doom*, *Counter-strike*; In Shoot 'em up games, like *Space Invaders*, the player must avoid hazards and shoot a large number of enemies. In these games the player usually controls a vehicle, instead of a character. In Third Person shooter games the camera is placed behind the character. A great example of a third person shooter is the *Gears of War* series.

Adventure games, are essentially known for solving puzzles, collecting items and inventory management, this category can unfold into four subcategories: Graphical and text based adventures, Role-playing Games, and Survival Horror. Early adventure games were text based and they differ from graphical adventures due to the visual interface. In Role-playing Games, or RPGs, the player incorporates a character and through exploring, combat or even treasure findings raises the attributes of his character. *The Elder Scrolls* series, and *Dungeons and Dragon* are examples of this class of games, that can also include Massive Multiplayer Online Role-playing Games (MMORPGs), an RPG that is played online and can house hundreds of players in a single map. *World of Warcraft* is one of the most notorious MMORPGs. Finally, Survival Horror games focus the entire gameplay on surviving or escaping a horror scenario with just a few limited resources, like *Resident Evil*, for example.

Construction/Management games are ones that allow the player to create, manage and expand a location with limited resources.

Life Simulation games involve relationships between artificial life forms, like *The Sims*. There are also Pet Simulation, that is based on *Tamagoshi* and the objective is to take care of pets.

Music and Rhythm games use musical notes to raise and beat scores. *Rock band* is a good example of that kind of games.

Puzzle Games are essentially based on logic. They can be slow, methodical, and somehow abstract. Tetris is probably the most notorious example of this class of games.

Sport games are based on sports, both extreme or traditional.

Strategy games are primarily focused on thinking and planning. *Starcraft*, *Civilization*, and *Age of Empires* are good examples of strategy games. This category can be divided into real time strategy (RTS) and turn-based strategy. The first involves speed, and, as Scott Rogers refers, are focused on the Four Xs (expansion, exploration, Exploitation and Extermination). He also says that RTSs are now the predominant sub-genre of Strategy games. Turn-based games are slower than RTS's and allows the player to think more carefully. Sid Meier's *Civilization* is a good example of this sub-genre. There is also another sub-genre of strategy games called tower defense, in which the player is asked to create towers in order to prevent the enemies from crossing to determined areas.

Simulation games were created to simulate real life experiences. They are used in driving cars or even planes. They can require specialized equipment to ensure realism during the experience.

Scott Rogers (2010) also concluded the following:

This list of genres and subgenres attempts to scratch the surface. Adult games, serious games, advert games, and vehicular combat are other classifications that fit within several of the genres above. As games combine several genres and subgenres, new ones are constantly being created. For example, the Grand Theft Auto series now combines action - adventure, third person shooter, driving, life simulation, and action - arcade genres into one game! (p.11)

Of course that, as Scott Rogers mentions, many game genres can be combined to create new sub genres. That is why games are always evolving, and can still be explored in new and creative ways, with new sub classifications and subgenres being developed almost every day.

The figure 2 made by Lindley (2005) exemplifies specifically how games, narrative and simulations approximate themselves. The important thing that we want to retain is that Role-Playing Games and Action Games strike a balance which suggests that they have both strong components of narrative and games. Nelson Zagalo (2009) suggests that the taxonomy created by Lindley require one more addition: Action Adventure Games, due to the aggregation of narrative that allows the progression of the action in a tridimensional world where the simulation takes place.

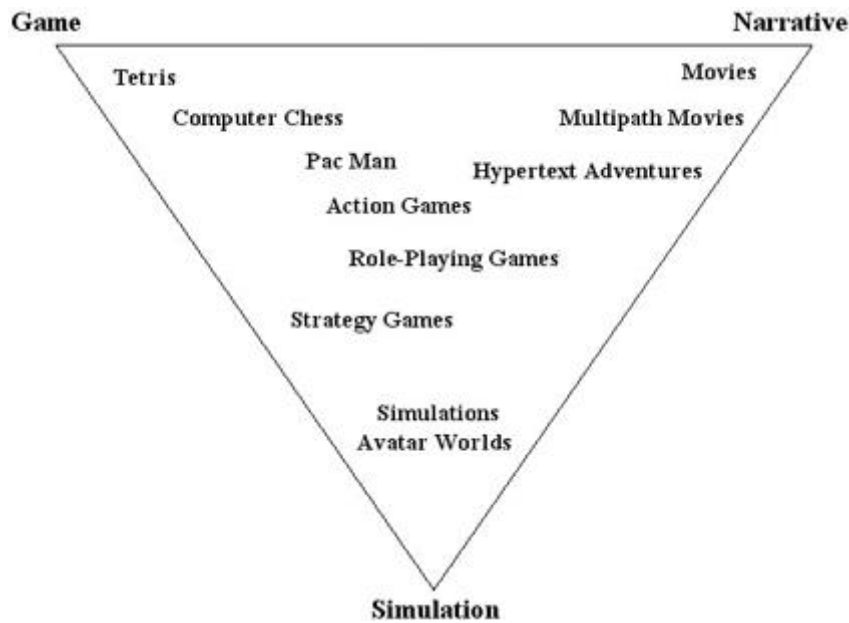


Figure 2 Classification of games based in time

We dare to suggest that any classification of games is incomplete without a reference to serious games, that is precisely the main subject of this theses. Hence we will look more closely to this class games in some of the following chapters, thus helping to define this specific genre.

1.4 Videogames, new media and transmedia

Throughout this thesis we will be considering videogames as an autonomous medium, thus following one of Ian Bogost's (2011) main arguments: "videogames are a medium that lets us play a role within the constraints of a model world" (p.4) In fact, the author claims that the roles we play, either by assuming the control over characters or projecting ourselves into the game world.

Many other authors tend to analyze new media has an all realizes, integrating videogames in the broader category of digital media. In *Inventing the medium* (2000) Janet Murray goes as far as to say that new media will eventually be classified as a medium:

But the term "new media" is a sign of our current confusion about where these efforts are leading and our breathlessness at the pace of change, particularly in the last two decades of the 20th century. How long will it take before we see the gift for what it is—a single new medium of representation, the digital medium, formed by the braided interplay of technical invention and cultural expression at the end of the 20th century? (p, 3)

In recent years, the discussion shifted to a more transmedia approach, that emphasizes the role of videogames in a complex media ecosystem. The term transmedia storytelling was carved by Henry Jenkins (2006) to define a recent tendency that he attributed to media

convergence, the cooperation and collaboration of all media formats in a world that is increasingly digital:

A transmedia story unfolds across multiple media platforms, with each new text making a distinctive and valuable contribution to the whole. In the ideal form of transmedia storytelling, each medium does what it does best... (p.95-96)

Jenkins talks specifically about videogames, showing how the videogame *Enter the Matrix* can enhance the experience of the audience for the *Matrix* franchise, allowing him to play with movie characters. In a sense, transmedia suggests the unification of various media types in order to generate a communication system that covers new and emergent ways of transmitting stories, story worlds or just messages. These emergent systems can vastly increase the immersion of a player, combining various types of media and ensuring a stronger experience.

In summation, new possibilities and tools can emerge to enhance a single medium or to transfer a narrative across the media ecology. This can be seen as an opportunity to develop new types of communication systems, as Francisco Merino (2015) claims, and demonstrates how “Transmedia storytelling prompted a deep reflection about the relationship between narrative and medium” (p, 7), exposing each one’s specificities within a system that can produce meaning.

Those transmedia systems can be built around interactive and story driven games world. *Quantum Break (2016)* is a perfect example of this transmedia approach, matching both gameplay and video. The game combines a unique *Third Person Shooter* with the ability to manipulate time with a live action show that is reproduced in parallel with the game. It also contains moments in which you can change the course of action.

This vast and complex narrative system, that can even cross different media and assume many different formats, gave birth to the term Narrative Design. This concept emerged due to the importance of storytelling in gameplay. The process of telling stories through games that, as well as the evolution of videogames and their complexity, made way for this new design field. Writing always adds its importance, but the narrative design works mainly with interactivity. So the focus of Narrative Design or Interactive Narrative Design is the somewhere in-between game design, ludology, narratology.

Chapter II

2.1 A Word about Game Design

First and foremost, game design is the process in which the game is created as a whole, based on rules as well as in content. In *Challenges for game designers* (2009), Brenda Brathwaite & Ian Schreiber point out that the main task of a game designer is to create the “goals that a player feels motivated to reach and rules that a player must follow as he makes meaningful decisions in pursuit of those goals.” (p.2). A designer also needs to understand what the player would like to find in the game. There are simple questions that designers ask themselves, like for example “What’s this game about?”, “How do I play?”, “How do I win?”, “How do I want to play?”, “What things do I need to do?” (p.2,). So it’s all about the player. designers must anticipate the needs and desires of the player in order to understand what and how they want to play.

Game design is also important to provide opportunities and meaningful choices for the player, such as decisions that will modify the outcome of the game and unfold a series of endings. A good example of this is *Heavy Rain*.

Game Design is not a standalone task by any stretch. In order to create a game, it works together with a variety of design branches and fields: Level Design, User Interface, World Design, System Design, Content Design and Narrative Design.

Level Design is focused in creating the levels, maps and for positioning objects within a game; User Interface manages how a player will interact with the game and how he will receive information and feedback; World Design focuses on creating the backstories, settings and the theme of the game; System Design refers to the creation of rules; Content Design is dedicated to characters, items, puzzles and mission of a game; and Narrative Design is focused on storytelling, a subject that we will study more thoroughly later on.

On the following pages, we will try to shed some light on what a game designer actually does. We will begin with a brief analysis and description of some of the key aspects that define this task and on what helps a game designer to turn an original idea into a game.

2.2 Ideas

Every game begins with an idea. This single idea can be built around a character, gameplay, philosophy or even a new technology. Bob Bates (2004) claims that ideas can come from all sorts of places:

The idea may come from a friend, coworker, or publisher, or from deep in your own subconscious. It might come while you're walking down the beach or driving to work. Perhaps it will come only after many days of anxious worrying that if you don't come up with an idea you'll be fired and your team will be out of work. (p. 3)

To reach an idea completely new and worth investing time on can be a tough job, and publishers may hold it for a big period of time or even push it back. Sometimes the "new" can be relative to something that already exists but with a different approach. Bob Bates also mentions how Will Wright took four years to successfully find a company to distribute the game *Sim City*. A discarded idea can evolve into something real and worth doing, leading to the first phase of the game: High Concept, the evolution of an idea and consequently the answer to the question "What is your game about?". Publishers believe that this question needs to be answered to obtain a successful game. Bob Bates' main goal is to show how game developers can reach the "yes" answer. When game developers sell a game to a publisher they need to captivate him in order to get the required funding in order to develop the game. The answer to the question "What is your game about?" will determine if the game will be funded.

On top of that, ideas can come from a variety of sources, as Brenda Brathwaite and Ian Schreiber (2009) mention, they can come from almost everywhere, but most importantly, they come from playing games (p. 9). Thus, playing a game can trigger the process of learning the mechanics and dynamics that the game designers will develop, and in some cases innovate or expand, and, in turn, influence other designers. Even ideas shared and inspired by other designers can be made into a different vision or enhanced. Scott Rogers (2010) also addresses innovation and originality in gaming "If you think something is innovative, it just means you haven't been paying attention."(p, 26).

2.3 Choices

Games are all about choices, and game designers need to create those choices and to be sure they make sense to the player. On that subject, Brenda Brathwaite & Ian Schreiber (2009) said the following:

Consider a game like a boxing match. So many decisions lead up to the ultimate victory. How long will I train? Will I block or will I swing? What is my opponent going to do? Where is his weakness? Jab left or right? Even those few, brief questions don't come close to the myriad decisions a fighter must make as he progresses through a match. (p, 2)

Each choice will affect the gameplay, as minimal as it may be, it may trigger something big, and can even have a negative outcome. A good game will try to give the player choices that will have impact in both story or even in skill. If those choices will lead to a positive outcome, the player should receive some feedback, usually in the form of a reward. So, choices can be just turning left or right, building a stronghold instead of a barracks, and, in a story, those

choices can be in whether you want a revolution or not. Then, the system will give the proper feedback to the choices that were made. In addition, the player can reach a certain state called “magic circle”, Brenda Brathwaite & Ian Schreiber explains that this state is similar to other media, it’s when someone lives the “moment”, it can be through a book or movie, but it can also happen into a game. Jasper Juul in *The Magic Circle and the Puzzle Piece* (2008) describes “The magic circle is a description of the salient differences between a game and its surrounding context.” (p. 60). The player will enter the game (in this case) and will captivate him, the game is a little bit different from a book or a movie as we said earlier due to the immersion of the player and specially the choices he can make during gameplay, this will enhance is experience throughout the game and involvement into the game world. Choices give in a certain way meaning to a game, but to make choices meaningful we need to know and understand something or someone far more important: The player.

2.4 Player Empathy

Player empathy goes beyond the designer itself- It’s the most important ability that a designer need to achieve in order to understand what is going on in the player’s mind when he is playing the game, Bob Bates (2004) explains the following:

This empathy for the player is crucial. You must develop the ability to put yourself in the player’s shoes and anticipate his reaction to each element of the game. You must be able to close your eyes and see the game unfolding like a movie in your head, all before a single line of code has been written. (p, 17)

Player empathy is reached by knowing the audience. Each person is different, therefore developers must understand how those players feel and think. During the phase of development, the team must be aware of all the mechanics, choices and goals and anticipate them. Maximizing the effectiveness of the game. As Bob Bates mentioned above, Developers must know the game perfectly without a doubt to reach a better experience for players.

Casper Haretveld in his book *Triadic Game Design* (2013) mentions something very relevant to our study. He claims that players can be seen as either an output or an input.

Players can either be an input to achieve an outcome, such as with games for theory testing or data collection, or can be the subject of an outcome, such as an increase in awareness or knowledge about a certain topic. (p. 81)

He fellows this up by mentioning that there are 3 types of players:

Reality- (The Player as Person) relates to the person that the player represents. Person from a culture, his/her personality or even to a social or working group.

Meaning- (The Player as Interpreter) relates to is about the player interpret what the game is about, every person is different so each one interpret games differently.

Play- (The player as Player) that behave as players due to their comprehension of their surroundings. Introducing the study of Janet Murray (1997), player that don't know a determine culture or country and if a game is based on those terms it will be more difficult for a him to understand what is it about.

2.5 Feedback

Feedback is the response the system gives to the user. A player always needs to feel a response by the game, positive or negative, and Bob Bates (2004) suggests that “nothing is more frustrating for a player than pressing a key, clicking the mouse, or pushing on the controller and having nothing happen.” (p.18). This feedback can adopt various forms, such as visual, sound or even tactile. The goal of the feedback of a game is that, for every input the player makes, the system responds accordingly. In this sense, if the player does something that he shouldn't be doing, you need to inform him that the input he entered is wrong and that he should do something else instead.

Brenda Brathwaite and Ian Schreiber (2009) also reinforce that feedback can be visual, audible or tactile, as Bob Bates does, but also that the visual feedback can be operated through the user visual interface (visual), highlighting the fact that developers don't just need to show but can also organize the visual representation, making it clearer for the player. They also emphasize that, if the player is in a rough situation, the system must respond with combinations of visual, audible and tactile feedback to give the player the information he needs to get out of the critical situation. This is part of the process of UI Design.

2.6 Goals

The player needs to be informed all the time and he needs to know what is going on around him. This is what leads to the objectives and missions that the player must complete in order to progress through the game. The designer's job is to guide the player along the game with some goals: a long-term goal, a medium-range goal and an immediate goal. These goals are deeply linked to each other. If we analyze an *RPG* for instance, the long-term goal requires the player to explore all the map, the medium-range goal is to push the player towards the long-term goal, and the immediate goal is the problem the player faces at a given time. The player must know and understand that the goal he is facing helps him reach the bigger goal.

2.7 Gameplay

The Gameplay is how the player will interact with the game, we can almost say that it's what makes a game. It's where the game designer needs to work to captivate the player's attention. It usually begins by introducing a specific game genre. That's the moment game designers often choose to develop new ideas to combine existing genres into something unique. According to Casper Hartevelde (2011) the gameplay is not an easy task to understand, He uses Andrew Rolling and Ernest Adams and claims that, for the players to conclude missions and goals, the game designers needs to create Gameplay, a task that can prove to be very difficult:

Despite the very concrete definition of “challenges plus actions,” gameplay seems to involve much more and remains a notion that is difficult to grasp. The only way to really describe it is by telling what exactly happens in the game. (p.184)

Jesper Juul, in his book *Half-Real: Video Games between Real Rules and Fictional Worlds* (2005) highlights that being to define the list of rules that make a game and draw the game is not the same as telling how the game is played. He follows mentioning that the rules by themselves, as well as other constituents of a game, don't create the gameplay. The gameplay is actually how players play the game (p. 83). And this, according to Casper Hartevelde (2011), adds another variable: “The player”. He claims that each player can interpret the game differently, in sum, that “players have their own methods for playing the game” (p.184). He also adds that gameplay cannot be comprehended only by ““defeating monster X” by “either shooting with a gun or kicking him hard.””. So, it will depend on all those variables. In sum, each player can sense the gameplay and the combining elements that compose the game in a totally different way. That's why it's very hard to answer what gameplay really is.

2.8 Game Flow

A psychological state that occurs when determined feelings are reached, this may occur during games as we will see later but also in every activity or challenge. Mihaly Csikszentmihalyi in *Flow: The Psychology of Optimal Experience* (1991) mention that the experience must be in balance between a determined challenge and the skill of the person, to be retained in a flow state the person must take new challenges and develop new skills. At the end flow encourages the persons to evolve by accepting new challenges therefore improving their abilities. (p. 30)

So, the flow is originated through an achievement of focus and pleasure, happiness. Game Designers search this state through their games. Katie Salen and Eric Zimmerman also mentions the work of Mihaly Csikszentmihalyi (p. 9, 2004) that comprehend a list of 8 constituents of flow and how they emerge in a person, his work is not only about games but

instead in how we can achieve the state of flow in general: First, when we face up to tasks that we have the possibility of completing. Second, we need to be able to concentrate in the task. The third and fourth, due to the clear goals and immediate feedback concentration is possible. Fifth, deviation from everyday life that removes frustrations and worries. Sixth, Sense of control over their actions. Seventh, concern of self, emerges stronger after the experience of flow is over. Eight, the duration of time, “hours pass by like minutes, and minutes can stretch out to seem like hours”.

Katie Salen and Eric Zimmerman use the language of Mihaly Csikszentmihalyi and emphasize the fact that this list can also be used in the game field. According to them, we can safely associate his (Mihaly Csikszentmihalyi) list into a new one that reflects games. A challenging Activity that Requires Skills, The Merging of Action and Awareness, Clear Goals and Feedback, Concentration on the Task at Hand, The Paradox of Control, The Loss of Self-Consciousness and The Transformation of Time. According to Casper Hartevelde (p. 208, 2013) the previous leads to another phenomenon: Immersion.

2.9 Immersion

Immersion is the outcome of a successful retention of the player while he is playing the game. Bob Bates (2004) refers immersion as an outcome of every moment of the experience.

At any instant he's playing the game, the player has the option to turn off and do something else. You can't let that happen. You have to hold his attention constantly and entertain him from moment to moment. (p.20)

To retain the player's full attention, the game designer has to be smart, inserting interesting objectives to do or even giving him meaningful choices. Casper Hartevelde mentions that Immersion is not yet fully comprehended and not fully developed yet. Janet Murray (1977) explains how the experience of immersion happens, according to her Immersion is an experience that transports to an in-depth simulated world that is enjoyable by itself, independently of the fantasy content. This experience is called immersion. This sensation can be accomplishing by being in another reality that differs from the one that we are used to. A virtual reality that takes our full attention and perception. Learning what is new world can offer and the things we can do within it. So the general idea is what we can do and learn in this new environment.

For the immersion to take place the player (in the case of games) needs to be engaged with the virtual world, this fictional world has to be as real as possible. Developers need to make players believe in this world and also create it. According to Casper Hartevelde (2011): “players fill in the gaps that the fictional world has and reinforce rather than question the reality of the experience. They actively pursue some belief of being somewhere else while they actually sit in front of a screen” (p.208).

So, immersion takes place when a player is retained in a fictional world where he believes that this world is real.

Casper Hartevelde (p.209, 2013) enhance the vision of Katie Salen and Eric Zimmerman regarding immersion also relating immersion or immersive fallacy. Immersion happens in two distinct ways; a player can immerse himself in both a game without any elaborate graphics as in a game with more visuals. And they also highlight Fine's idea of "double-consciousness", which means the constant switching between "player as player" and "player as person".

Chapter III

3.1 Linear narratives

Before starting to analyze narrative design in videogames, one must understand how a narrative works, and, as such, we must go back to the beginning of the wheel, the traditional narrative theories. Since Aristotle and Vladimir Propp, that can be considered the major precursors of Narratology, some aspects of narrative and storytelling have changed, while others have remained unaltered. One of the aspects that contributed to a shift in contemporary narrative theories seems to be the necessity to accommodate more than just linear texts. Narrative means an arrangement of events according to a specific order, marked by causality. Aristotle was the first to understand this and he classified plots in a tragedies and in epopees. He believed that it was in the plot, and not in the character or in the story, that laid the unity of action.

Vladimir Propp (2003), a Russian Formalist that was searching for patterns common to all narratives, regardless of the media, studied a set of Russian folk tales and found recurring plot types- He concluded that fictional works have the same structure underneath and that a story can begin with a sequence of abstract plot elements. In fact, Propp's most important contribution to subsequent narrative theories was the identification of two different levels. First, the story or fable, what we can call the story elements that provide the raw material for the narrative. Second, the organization of actions and events in a logical order that we can call a narrative. This binomial will play a crucial part in the emergent Narratology, even amongst authors that refuted or enhanced most of Propp's conclusions.

Following Propp's footsteps, a variety of authors tried to identify universal patterns that were common to all narrative forms. However, most of them ended up criticizing his conclusions and arguing that the types Propp discovered could only be found in Russian Folk Tales. So, they decided to look for patterns elsewhere: in language. Roland Barthes actually claimed that the study of narratives should modelled after linguistics, and that narratology should be regarded as continuation of linguistics.

The linking of both narrative and verbal language proved to be a source of continuous discussion amongst scholars, especially once film and even videogames started to demand an autonomous approach to their storytelling attributes. In film studies, David Bordwell (1992) argued that film produces meaning beyond verbal language and tells its stories in a very different way. Marie Laure-Ryan (2004, 2005) would say the same about videogames and other new media formats. On the other hand, authors like Espen Aarseth (1997) started to

criticize the close relations between some of this traditional narrative theories and linearity, claiming that videogames and new media just exposed a limitation that has always been present most of this theories. In *Emoções Interativas*, Nelson Zagalo (2009) distinguishes between narratology and storytelling, with the first representing the structural study of narratives and the second more focused on the process of actually telling stories (p.211).

Regardless of all the theoretical aspects that surround the term Narrative, storytelling has accompanied us for a long time. We as humans have begun to draw on walls to communicate something to others. We have the necessity to learn and to transmit something powerful to our future generations. We evolved. Writing was born and books replaced the walls. With the writing and books came structures with the need to create a hero and his journey. This hero has to reflect people's problems and a way to resolve them along the hero's journey. Readers must see a part of themselves in the hero. So what is a hero and his journey?

But the relation between storytelling and game development can be anything but simple. Can storytelling be an essential component to create a game? Many games don't have story to be engaging, like tetris or Pac-Man, for example, Scott Rogers (2010) says: "Some games don't even have stories." He follows by saying that even games that don't have stories can be very narrative, and "games like Tetris or Bejeweled or even Pac-Man don't need them to be engaging for the player" (p. 41, 42). However, Scott Rogers that even this games can still generate a narrative, in the sense that they order the events. Other games, like the series of Telltale Games, raise interactive storytelling to its limits. In an interview, Dan Connors, the former CEO of Telltale Games, offered his vision for this games, and claims they actually tried to redefine Interactive Design, Licensed Gaming Episodic Gaming and Digital Distribution.¹

So why did the videogame medium become so important to anybody studying narrative and storytelling? Janet Murray, who studied this subject in *Hamlet on The Holodeck: The Future of Narrative in the Cyberspace* (1997), answered this question by pointing out that this medium is perfect to tell stories. First of all, videogames have moving images, sound, text, virtually created worlds, and interactivity, that literally mean a playable world with characters of varied moral alignments in environments. This means that, as a medium, videogames are both procedural and participatory.

By procedural Murray means that this medium is generated by rules, and participatory because they manipulated by the player and the game designer.

In order to understand how a game can tell stories, and, above all, convey serious messages, we will analyze some of the traditional linear structures and see how they can be gamified.

¹ "We just show the four things that people have given up on: Digital Distribution, Episodic Gaming, Licensed Gaming and Interactive Narrative. And said, you know what? It can be done."

3.1.1 Plots

First and foremost, we need to understand what a plot is and what types of plot do exist. A plot is the way a story is organized. It usually begins with the introduction of the problem and of the character of the story. Plots can be divided in a variety of manners, based on genres, for example, like drama, comedy, tragedy and even satirical plots. Hence, a plot is a sequence of events that lead to a climax, and a resolution produced by a logic of cause and effect. Aristotle referred in the *Poetics* (1922) that the plot, as the sequence of incidents, is an important component of every Tragedy (p. 25).

To characterize a plot and to distinguish it from a story we can quote E.M. Forster(2002): *“The king died and then the queen died, is a story. The king died, and then the queen died of grief is a plot.”* He follows by saying *“the queen died, no one knew why, until it was discovered that it was through grief at the death of the king. This is a plot with a mystery in it.”* (p. 61)

Plots are can be very diversified even though the strong common bounds between them. While studying the application of Aristotle’s plot structures in videogames, Marie-Laure Ryan (2008) offers the following typology: The epic plot which focuses the struggle of a character surviving a hostile world. Dramatic plot that focuses with the evolution of relationships between characters, this relation can change in any time during the elapse of the action. There are plots that are much more geared to their application in interactive situations media such as games. The epistemic plot is an example of the previous. Although similar to the epic plot, it defers in the creation of a story with the interaction of a player.

The classification of a plot may depend less on the genre or story being represented than on the mechanics of the representation. A story arc, for example, is the path that a story takes to reach a certain end. A story arcs may be the traditional act structure that is commonly used in film and theatre. The three-act story, studied by Syd Field (2005) amongst others, is a very common storytelling technique. The five-act story is a more elaborated and enhanced version of the three-act structure.

Three-act structure begins with the set-up of a problem or conflict that the character must eventually resolve. This problem affects and changes the character throughout the story. The beginning and the first plot point are a crucial part of a story, since the authors are trying to captivate the audience. Then we enter the second act and something goes wrong, a twist that changes the story somehow. This twist can be something or someone that changes a natural path or creates disorder, but must be rational and logic to ensure coherence of the story. Eventually, the problem is solved, and the character finally has its answers for the given situation, and some sort of equilibrium is restored, either the story as a happy or a bad ending.

Does the three-act structure hold the same definition in a game? Actually, the main difference is that the player can control events of the story. The three-act structure is represented in figure 2, in which each act corresponds respectively to the setup, confrontation and the resolution.

There are story arcs that can be far more complex, especially the ones that are based on myths or folktales. That is both the case of Vladimir Propp's functions and Joseph Campbell's hero's journey.

When studying Russian traditional tales, Propp (2003) encountered systematic pattern-like repetitions, and he compiled them into 31 functions that were common to these tales. He also identified characters and actions ("Spheres of action"): The villain (The enemy or the opposite of the hero), The Hero (The protagonist), The Donor (Gives the hero something magical or great use), The helper (seeks to help the hero), The Princess (The reward), Her Father (Who rewards), The Dispatcher (Who sends the hero) and the False Hero (delays the hero).

The 31 functions of Propp begins by 0: the setup, 1: Someone dies or leaves, 2: The interdiction, 3: Violation, 4: Reconnaissance, 5: Delivery, 6: Trickery, 7: Complicity, 8: Something bad happens, 9: Starts the quest to resolve the problem, 10: The hero fight back, 11: Departure, 12: The helper appears, 13: The Hero's reaction, 14: The helper finally helps the hero, 15: Transference, 16: Struggle, 17: The hero is rewarded, 18: Victory, 19: all the helpers help the hero and get their reward, 20: The return, 21: Pursuit, 22: Rescue, 23: Unrecognized, 24: Unfounded claims, 25: Difficult Task, 26: Solution, 27: Recognition, 28: Exposure, 29: Transfiguration, 30: Punishment, 31: The wedding. These functions were supposed to represent a chain, a sequential order of events and actions. As mentioned previously, Propp's conclusions would be criticized by authors who believed they couldn't be applied outside of a very specific genre.

In *The Hero with a Thousand Faces*, Joseph Campbell explains that a hero begins his journey by having to retrieve something of value to him and his community. What that objective in mind, the hero engages himself in an adventure against all odds to retrieve something and come back with a prize that everyone can benefit of. The path is not easy and the hero must challenge death and hostile places in order to survive and bring the reward home.

The hero's journey begins by introducing the fictional hero and his background. We assume this moment as The Ordinary World. The player needs to understand the environment where the hero lives and what he does before the Call to Adventure, a chaotic moment that will change this hero's life. Then, the hero refuses to go on the adventure, and, at this point,

someone appears to explain why he should embark on this adventure. The hero then realizes that he needs to pursue the journey in order to save something greater than himself.

The hero is still a long way from his goals and must face the hostile path that will lead to victory. After many challenges, dangers, and ordeals, the hero receives the knowledge, the weapons, the assistance or the magic he needs. And, in the end, the hero takes the journey back home with the reward.

This journey can be translated in an act-structure, and that is one of the reasons why it has been used so frequently in film, most notoriously in Star Wars. As shown above (FIGURE 3), the first act is the separation, the second represents the supreme ordeal and the third is the reunification.

Videogames have also used this formula. In order to immerse the player into the fictional world, the writer must deliver an experience worthwhile to the player. The player must identify himself with this journey. Crucial points for this to happen are the characters, settings, and dialogue, as well as interactivity, cutscenes and scripted events.

3.2 Stories and Games

Before going further and entering the chapter dedicated to interactive storytelling, we must address a controversy that involved both narrativists and ludologists. This discussion helped to clarify the relations between the ludic aspects of a game and the story it might be trying to tell. We will use this notorious discussion to understand how narratives can fit in the world of games and how they can relate into this field as an experience that can be given to players. Katie Salen and Eric Zimmerman in *Rules of Play* (2004) point out that they don't link or claim that games are narrative, on the contrary, they say that "it is not a question of whether games are narrative, but how they are narrative. can be narrative" (p.3).

Hence, we must start by explaining what Ludology is and how it does relate to Narratology and storytelling. Zagalo (2009) describes ludology as the "structural analyses of game mechanics" (p.211), distinguishing it from both storytelling and narratology, but also from play. The author attributes the term to Gonzalo Frasca, which, in turn, was influenced by Espen Aarseth's *Cybertext* (1997), that postulates the necessity for specific tools and categories to study interactive texts.

First and foremost, Ludology teaches us that a game is made of rules, mechanics, and ludology is the study of these rules. Games are games because they are made of rules, that work as strict boundaries to what a player can or cannot do in a virtual world. Mechanics that are presented to the player in order to "guide" him through the game, and that serve as a

bridge to the virtual world. So, ludologists believe that the main part of a game is made of rules and that storytelling has secondary role in the process, almost like a layer above the rules. Markku Eskelinen makes an interesting point in *Towards Computer Game Studies* (2004) when writing about story in games:

In short: a story, a backstory or a plot is not enough. A sequence of events enacted constitutes a drama, a sequence of events taking place a performance, a sequence of events recounted a narrative, and perhaps a sequence of events produced by manipulating equipment and following formal rules constitutes a game. (p.37)

Espen Aarseth (2004) also reminds us the fact that “Games are not “textual” or at least not primarily textual” He also mentions that “Any game consists in three aspects: (1) rules, (2) a material/semiotic system (a game world), and (3) gameplay (the events resulting from application of the rules to the game world)” (p.47). He also argues that in a certain point games are old, probably older than human culture, and claims that animals also play games (p. 46).

Indifferent to the academic quarrel that divided narratists and ludologists, the industry found some sort of middle ground, and tried to determine what games were suitable or not to tell stories. Kevin Bruner, the current CEO of Telltale games, says and defends the fact that their games are meant to be a narrative experience rather than mechanics, claiming that narrative games are more grounded, role playing, and, sometimes, verbal.

So, if on one hand we have a ludologist approach, on the other hand we have a narratologist approach, centered on the storytelling aspect of games. But, as Brathwaite & Schreiber (2009) claim both areas can be equally important:

Though primarily discussed in academic circles, an understanding of narratology and ludology is useful to those learning about storytelling in games. (p. 173)

The study of narratives allows for the enhancement of the ways the videogame media can tell its stories. Of course the representation of narratives in games depend on the rules and mechanics they are to be applied in. So Narratology and Ludology are indispensable for each other.(Brathwaite & Schreiber, 2009)(Brathwaite & Schreiber, 2009)(Brathwaite & Schreiber, 2009) To better understand the frontier between Ludology and Narratology. We can analyze some game companies that can push the boundaries of those two concepts, for instance, Telltale games create interactive storytelling games, such as *Game of Thrones*, *The Walking Dead*, *The Wolf Among Us*, among others. Those games have the particularity of creating an interactive story experience. This experience can only be achieved by a complex narrative structure in which all the player’s decisions can change the overcome of the game. In other

cases, like Real Time Strategy (RTSs) games the rules are carefully balanced in order to create more realism.

3.2.1 Interactive Storytelling

However, as Espen Aarseth (1997) argues, the idea of a text that it's written while being read, and that it is determined by the reader's choices, largely precedes digital media or even any electronic device. Aarseth helps to shed light to a variety of texts that were traditionally disregarded or hidden under the more conventional linear texts.

So, what exactly is an interactive storytelling? We studied how a narrative behaves in different environments and media like cinema, literature and videogames. In cinema we already have interactive movies that can let the audience make controlled choices during the elapse of the movie. In literature the author has full control of the story from the beginning to the end without interaction.

Storytelling is defined by Chris Crawford *on Interactive Storytelling* (2013) as a linguistic action, evolved from language. He follows presenting the evolution of a story: "The story of hunting the antelope". The general idea of this story is the constant evolution of the story. First the hunter adds his own knowledge to the story, then the hunter adds knowledge that he learned from other hunters and learned how to kill it. The idea here is that the hunter after reflecting and appended knowledge from himself and others gained more constancy.

In videogames the storytelling can take huge proportions and let us decide how we want to progress in the story. Some games have actually so many branches that can lead to many endings. In some cases, we can do the full main quests to achieve the end and therefore know everything about the hero. But there are more to it than just this linearity. We can actually interact with secondary characters that can change the main quest line and ultimately the world itself.

Cutscenes often appear in key moments of the games to continue the narrative, and they are separated from the game engine. In the other hand, we have scripted events that use the game engine, in some cases the player might make choices during the cinematic sequence choices to make, like we said before about Far Cry 4. Those two methods are essential to integrate emotions in an engaging way or even if the game is based in a great background story, which facilitates the storytelling of a great universe with great detail. A game series that often makes use of a lot of cutscenes is *Final Fantasy*. Cutscenes are, like we said before, used to integrate key moments in the story but can also break the gameplay to allow the player to suspend temporarily any kind of performance.

3.2.2 Story world

The relevance of the story world has grown immensely in contemporary narratology. The study of narratives tended to focus on the plot, and still do, but the importance of the story world has grown, due to the emergence of interactive storytelling, and, as Francisco Merino (2015) explains, because the construction of a story worlds can be as relevant as a plots in determined genres, like in science fiction or fantasy. (p. 119)

Like Brenda Brathwaite and Ian Schreiber describe in *Challenges for Game Designers* (2009):

People play games because they provide an opportunity to explore a world that they be unlikely to explore and play out an experience they would be unlikely to have in real life. People want to play cool characters. They want to explore exciting destinations. Sometimes, as in *The Sims*, they just want to experiment with everyday life and make their own stories.
(p. 177)

So the player is emerged into a computerized world made by rules. In this world we can identify some restricted narrative components, such as, characters (playable or not), a background for this world and the environment (settings) and, more importantly, an order of events in time. Of course that if this world is virtual, we can assume that the player can make his own choices that will change, inevitably, the behavior of some characters and of the world (to worse or better). Narratology is one component of this vast creation. For a computerized fictional world some other areas are needed in order to make it real. Henry Jenkins describes in *Game Design as Narrative Architecture* (2003) that game Designers craft worlds entire worlds.

Every story has a background story, it's an opening moment for the story itself that will introduce the game and reveal to the audience what is the journey ahead. It can be irrelevant, but it can contain some information that will be useful and crucial as the story unfolds. Generally, in games the background story shows us the problem that the character will need to face in order to save the world, save the princess, cleanse a sanctuary or protect a dying tree.

The setting is the "Where" of the question. Game developers create this places. Players want to explore a new environment with all sort of creatures with diversity. Of course that the background story, setting, characters and the story itself must be deeply tuned with each other to make sense and logic to the player and provoke an emotional response.

The environment is crucial to enhance those emotions and feelings. Designers can create an environment with the intend of transmitting something specific. They can create a wonderful forest with tall trees, in a shining day, and populated with friendly NPCs, or they can design an obscure and misty place, filled with corpses and something that follows the character. What we mean is that the base of this forest remains the same but what it contains changes the all experience. Simon Egenfeldt (2008) mentions that the game world as:

The most important component of a game world is the game space, understood as the setting for the gameplay. Game spaces are not realistic, but reductive; they reproduce some features of the real world, but create their own rules in order to facilitate gameplay (and to reduce the processing power required by a computer to run the game). (p. 175)

Almost everyone has identified himself with a hero. The hero that the writers want to create needs to have problems, and the player must be able to relate with him, either if his problems are real and similar to what the player face every day, or spectacular and totally outside the player's day to day life. This is the beginning, the hero must be so deeply characterized in order to grow within a story, learn with his mistakes and face his problems in order to resolve them.

Within a game, the character's growth depends on the choices of the player and how he levels up the hero. In some cases, like in *Fable* all the choices made during the course of the story are subject of what is "bad" or "good", taking us to different ways of characterizing a hero, and the player can have real choices with real consequences. In this case, if the player wants to create an evil hero, it will begin to grow horns, or, in case he wants to make a "good" hero, they will have an aura around their head. Depending on the choices made by the player in *Fable* the end will be different from player to player.

So, in storytelling one of the most important things is the 'Who' of the question: our hero. In a game, we only depend on what the hero is capable of and where he can be taken of. We mean that to fulfill our quest in the game the player needs to progress further in the story. The progress relies on crafting, leveling, farming or another form of character growing. In RPGs we rely on getting better equipment to solve the end of the game, or getting clues to solve a mystery. This is a progression of a character in a game is a little different than in other mediums, such as cinema. In a film, we can actually feel the emotions and growth of characters. In the saga of Harry Potter, for example, we clearly see the growth of all the three protagonists of the movie.

In the process of creating a character, the designer must know everything about him. Inside and out, in order to strengthen its personality, its way of thinking and its posture. We were talking about the main characters and the level of detail they need to have in order to captivate the attention of the player, but there are also many secondary characters, or NPC's, that at some point of the story can have a direct or indirect influence in the events. As Simon Egenfeldt (2008) describes other characters, such as stage characters, functional characters and cast characters or player characters, each one of them have roles that can be more or less relevant to the story. There are also other characters that can be filled in the game to fill it but also to mean something to the player, in other words those types of

character can be killed or worst but if the player begins to like him it can be useful to transmit emotions through the game.

3.2.3 Dialogue

Another huge component to tell a story is the dialogue. In traditional storytelling, dialogues can develop personalities and demonstrate emotions. They also give information about each characters of the story to the reader. What we mean is that the dialogue in a story must advance the character and the surroundings. In a game the dialogue can sometimes appear in rectangles in form of text rather than spoken. This is the case of *Pokémon*, *Zelda*, and many others. Or in rare cases dialogues can even not exist at all. A good example of that is *Limbo*, this game uses strong visuals to develop their story rather than make use of dialogues or text and the final result can be very interesting.

In newer games text moments can be found in many places such as journals, writings on the walls, notes, voice and so on. It forces the player to read in order to continue or to understand more about the story which can be frustrating while playing for a long period of time.

The dialogues in games take the player to another area: interactivity that in some moments of a game during a dialogue in a scripted event faces him with different choices situations. A good game to demonstrate the power of an interactive dialogue is *The Witcher 3: Wild Hunt* (2015). Every choice made will result in something different that will trigger consequences to the future in the virtual world. Another game that lets us make choices during dialogues is *Far Cry 4*. In this case at some points the player can decide if an important character dies or lives. For example, when facing the villain, he can choose during a script event with a trigger moment to shoot him or not. That will have consequences to the end of the game. Not as noticeably as in the case of *The Witcher* but it still has some kind of interaction.

3.3 Types of stories in games

Nowadays, designers need to understand the type of game they are making in order to choose the model that suits the story they want to tell. (Brathwaite & Schreiber, p 174, 2009) There are several story models to choose from. An RPG, for example, needs to be large enough to suit the story and the environment. But when we speak about storytelling in videogames we need to understand that a game is about the choices we make in order to progress through the game.

And this is where interactivity comes in. In other medias the storyteller retains full control of the story, but videogames require some sort of reciprocity between designers and players. If we read a book, for instance, we will face the choices that the writer wants us to follow and that will fulfill the logic of the narrative, but a games story is a little bit different and tricky.

For example, if a designer want to create an adventure game, the puzzles he presents may have many different solutions. Those same puzzles can result in a wide range of choices, even when the designer doesn't lose the full control over the narrative. RPGs are also a good example of the choices that players, and the impact they can have in a story. On the other hand, in an open-ended story, all of the player's choices must make sense, whatever the order of the actions or events. In this cases, the designer may implement mechanisms to restrain or make sure the action of the player doesn't destroy the narrative coherence. If the player wants to skip the main story arc completely and focus in the side quests, the designer needs to anticipate and control those choices.

Talking about story typology for videogames is also discussing interactivity, as well as the rules and constrictions to that same interactivity. That is why authors like Marie-Laure Ryan argue that the freedom of the player is often full with constraints and heavily regulated. Chris Crawford (2005) makes the same point and claims that, in interactive narratives, the author controls both the unfolding of the story and the player through what he calls the metaplot, the rules and mechanics that determine the ways that story can be told.

We will now discuss the most common types of stories that we encounter in a videogame. We will also give some examples of games in each point.

3.3.1 Linear Stories

The first type of story that we will present is the linear story. In this cases, the player has no choices at all, or they have little impact. Even if, sometimes, he can have side quests to fulfill the journey, and where is decisions will have a limited impact. Linear stories tend to be three-act story arcs, similar to the ones we can find in cinema or literature. This strategy brings some advantages: by the end of the game, the player will have accomplished the predetermined goals and won't miss the story. *Limbo* is a good example of how this type of story can be very emotional. It's a game that has no dialogues, as referred above, but it carries powerful emotions. And, since the player has no openings or branches to choose, he does not lose story content and remains focused.

3.3.2 Branching Stories

This type is used to tell a story, but with different branches. In some circumstances, these branches will come together in a critical point of the narrative and then diverge again, leading to multiple endings. Branching stories allow the game to be played in completely different ways, making each run-through unique.

Every branching of this tree can lead to multiple endings and multiple mid games plot points. In a game that is based on a branching story it may be difficult for the player to understand the complete story and some of the content can be missed. If we look closely to *The Witcher*

3: *Wild hunt (2015)*, we can find so many side quests that the game feels endless, and, in some cases, those side quests can lead to something different in the main storyline.

3.3.3 Open-Ended Stories

Open-ended (or multilinear or threaded) stories start players in a particular place or a variety of places and allow them to progress in many different directions, each of which affects the outcome of their play. (Brathwaite & Schreiber, p 174, 2009)

Open-ended stories are commonly found in RPGs and adventure games, in which the segment of events can be done in a number of ways. Writing a game with an open-ended structure is a difficult task because all the paths a player can chose must make sense. The player may want to skip the main storyline and begin with side quests first, and only later decide to follow the main quests. Interesting examples of open-ended structure games are the series "*The Elder Scrolls V: Skyrim*" (2012).

3.3.4 Instances

This type of stories can be found especially in MMO. They are like open-ended stories but with a difference: player receives simple quests that he must finish in order to progress further into the game. World of Warcraft is a great example of this sort of structure. At some point, a quest giver can tell the player to "fetch" some plants for him, to kill somebody, to talk to someone. Usually, those quests don't take more than 10 to 15 minutes to complete but can give the player a lot of experience. In World of Warcraft those mini quests can be found everywhere.

One of the interesting aspects of instance stories is the fact that the story they unfold tends to remain restricted to the quest, having little or no impact outside of it. The lasting effect of this instance stories seem to be the rewards that they can give to a player.

3.3.5 Emergent Stories

An emergent story is a story generated by the player, and that the game designer has no control over, like the stories generated in *The Sims*, for example. In *From Game-Story to Cyberdrama* (2004), Janet Murray claims that "the story of *The Sims* is the collective story of all its many instantiations, and users share their events in comic strip "albums" - screenshots with captions that narrate the events of the simulated world" (Wardrip-Fruin & Harrigan, 2004, p. 5). This is probably one of the cases that better illustrates Chris Crawford's argument that the greater the interactivity is, the harder it will be for the designer to impose a plot upon the player.

3.3.6 Others

There are several other story types or hybrids that articulate different storytelling models. In The thematic setup, the story is only presented in the opening, through a cinematic sequence. And it can be the only story reference in the all game. Algorithmic Stories are types of stories generated by artificial intelligence (AI), in which the writing is still done by humans but all the decisions made by the player in the game are directed through the plot by the AI. An example of those types of stories is *Blade Runner (1997)* uses a randomized algorithm that in each play through the characters will be different.

Chapter IV

4.1 Serious Games

We believe that games and education can work together to form unique ways to share knowledge and even to change opinions and realities. The main focus of this dissertation is a class of games focused on this goals: serious games. We began by establishing a link between game design and narratology, precisely because we believe that narratology is the key transmit knowledge and raise awareness through games.

The proposal that is the main reason for this dissertation, the project of a serious game for UNICEF to tackle child labor abuse, aims to address a very specific problem in our societies, aggravated by globalization and capitalism. A problem that affects the poorest countries of the globe. We know for a fact, as we will see later on, that the game industry can do more than just entertaining an audience, and that it can be used to transmit ideas that will induce individual and collective changes. In the following pages, we will try to define and characterize a game whose main purpose goes beyond “*having fun*”. In *Why so Serious?* Johannes Breuer and Gary Bente (2010) mentions:

Depending on the definitions of ‘serious’ and ‘game’, ‘serious games’ can be considered and oxymoron or a tautology.
(p. 8)

In fact, if we analyze these two words, serious and game, they seem to be opposites. So, we got to ask ourselves one question: do players play games seriously? To answer this, we can quote Johannes Breuer and Gary Bente (2010): “Play and games have an evolutionary background as instruments for survival and in some cases the players take the game they play seriously.” (p. 7). Others authors, like Huizinga, argue that animals play in order to learn how to survive in the wild. So, while they are having fun, they are also learning how to hunt and hide from predators. Here, the term play has a serious connotation because it provides knowledge and training. Furthermore, we can assume that this happens with humans too.

So, there are games that can have a serious outcome. Now we are going to take a closer look at the book *Serious Games*, written by Clark C. Abt (1970) and that is still a good starting point to define a serious game. He defends that serious games are indeed games, but their primary goal isn’t entertainment, they are carefully built around an educational purpose, either by game design or by context. Breuer and Bente make the same point about board game and claim that a game “... originally designed for fun can be used in a military training context to teach strategic thinking and the principals of tactical warfare.” (p. 8)

Furthermore, they explain that the learning process is integrated into the game, but with an outcome on the real world. It may begin as a board game, but serve as a purpose in actual warfare. Another interesting definition of serious games is offered by Michael Zyda (2005) that, while comparing them with computer games, argue that serious games not only have story, art and software, but, in addition, they have pedagogic components, activities that educate or instruct. He also states that what makes the game serious is precisely pedagogy, even though it is linked to entertainment.

As we will see in the next sub-chapters there is still much discussion on what is a serious game and in what context it can be applied. Apparently, serious games can have many uses, from educational purposes up to political propaganda. However, there is something that all definitions of serious game seem to share as Susi et al. states in *Serious Games an Overview* (2007):

One issue most definitions agree upon, more or less, is that serious games are concerned with the use of games and gaming technology for purposes other than mere entertainment or “fun”.
(p. 7)

Another definition of serious games that is equally important is the one proposed by Michael and Chen (2006) which states that, first of all, a serious game is more than what they call edutainment.

So, this type of game is apparently the product two apparently opposite words: serious and game. However, it turns out that it's even more complicated to figure out how serious must a game be in order to be classified as a serious game. Common sense says that games are supposed to be fun, but Ralph Koster's (2013), in *A Theory of Fun for Game Design*, defines fun as a side effect of learning something new. Hence, if we learn something new from a game, even though serious, we can consider it fun. But as Michael and Chen states “Whether serious games need to be fun or should be fun, is an open debate” (p.20, 2006) So, there is still no consensus about the possibility of a serious game actually being fun to play.

Just like there are many partially conflicting definitions of serious games and their use for learning purposes, there are also several different attempts to classify serious games in genres or similar typologies.

As a gaming product, serious games are a part of this industry. The following graphic (FIGURE 4) shows the Global Gaming Software revenue. The gaming industry has grown exponentially in the last years, as we can see in this chart from OGA (Open Gaming Alliance). We need to have an overview of the global market to better position and understand serious game. As we

can see this market is growing exponentially, and many believe that serious will grow alongside it.²

What makes this market so interesting is that, as Michael and Chen state in their book, the initial investment on a serious game doesn't need to be very high and these games don't require the ultimate technology in the market. This creates opportunities to explore and experiment new types of gameplay and distribution.

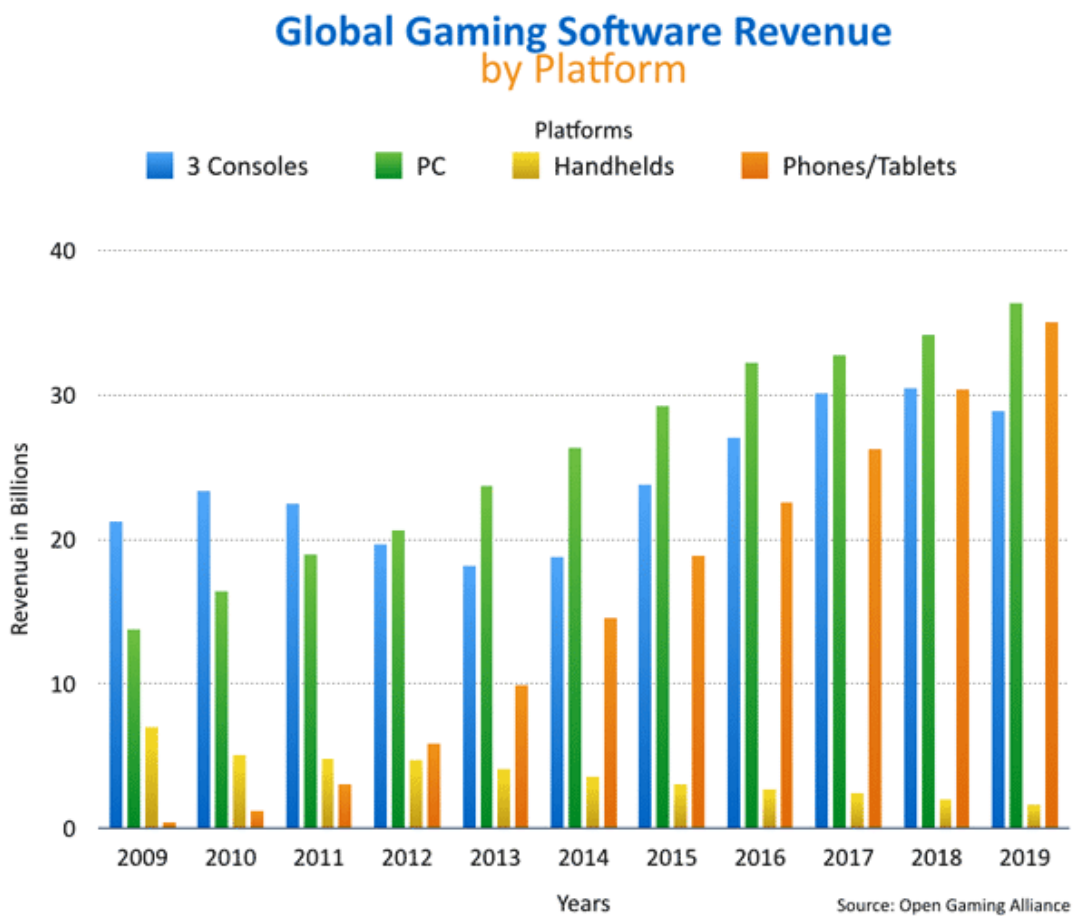


Figure 3 - <https://opengamingalliance.org/press/details/core-gamers-are-expected-to-drive-record-growth-for-pc-games>

4.2 Differences between entertaining games and serious games

To illustrate the differences between entertaining games and serious games we will use a chart developed by Suzi and other authors. We believe it will help us to better understand the many differences between them. Although some entertaining games can have serious components, that doesn't mean that they are serious. There are, in fact, some differences

² According to MarketAndMarket the serious game market will reach 5.448.82 Million by 2020.

between the two. First of all, in its purpose. In entertaining games there is a need to entertain people, and on the other hand, a serious game needs to teach something. Serious games actually educate players, train and can even change their behavior. And, of course, they try to resolve issues and reflects real life. According to Michael Zyda (2007) the difference between a normal game and a serious game is the importance that pedagogy has in the second, while the first is primarily focused on entertainment. Table 1 represents the principal differences that we discussed so far,

Table 1. Differences between Entertaining Games and Serious Games according to Suzi et all in: *Serious Games an Overview* (p.6, 2007)

Differences	Serious Games	Entertainment Games
Player Experience	Solving problems	More focused on experience
Goal	Learning	Fun
Simulations	realist	Simplified
Communication	Reflect reality	Often real

4.3 Types of serious games

Serious games have become more important in the course of the evolution of videogames as a medium. The definition for serious games first appeared in 2003 by Ben Sawyer in *potential of using digital games for policy making* quoted by Johannes Breuer and Gary Bent in *why so Serious?* (2010, p. 8), even though, prior to that, Clark C. Abt (1970) already addressed the issue of games that were more serious than entertaining. According to Djaouti et al (2010), serious games are defined as a digital game that was “designed for a purpose going beyond entertainment””.

Another way to understand this class of games is to analyze the areas in which serious gaming can be applied. We can apply this concept in all the fields where we can learn or share something with others, including simulators. We discussed the case of *America’s Army*, in which the ultimate purpose is not for the players to have fun but to try to enlist them for the United States Army. This game uses the First Person Shooter genre, that is meant to be entertaining, to attract young people to the army. So, there is a range of areas in which we can apply the serious game concept s.

In *Serious Games - An Overview* (2007), Susi explains how the term serious games can be applied in a variety of areas such as: military, government, educational, corporate and healthcare.

There are also Government Games, Corporate Games, Healthcare Games, that actually inform, teach or persuade something. As Johannes Breuer and Gary Bente mention in *Why So*

Serious (2010). Later on, we will analyze two different approaches to serious gaming: *Never Alone* and *This War of Mine*.

We know that we didn't mentioned games that were referred in the papers above, serious games like: *Children of Darfour*, *America's Army* (Among others), but our major focus will understand how games that are more entertaining can and do transmit messages, like we mentioned earlier with *Witcher 3: Wild Hunt*, where they convey aspects of serious messages through the gameplay, this is a mere example of an entertaining game that sometimes call on serious aspects. So, in the next chapters we will study two games that aim to transmit serious messages without losing much entertainment.

Chapter V

5.1 Never Alone



Figure 4 - screenshot of the introduction of the game *Never Alone*

To successfully transmit a message, one must be incorporated in a medium which can be viewed by a large audience, for example: television, newspaper and the subject of this dissertation: videogames. If television initially was, and still is, a medium of communication whose main goal is to entertain an audience, naturally it can also transmit a non-entertaining message through, like the newscast for example. The goal here is to understand the viability of the videogame medium as a way to invite an audience to understand certain and sensible subjects outside the field of entertainment. We have a large number of games that do just that in a finite number of matters: war issues, educational purposes, training, cultural messages, etc. A videogame can be more than just pure entertainment, as we saw before, it's a medium that can integrate and teach a target audience, help the military win a war or can even train the young to enter the US army. A game can be more than a simple medium, a union of a vast number of media that integrate a unique form of communication, this means that a videogame can involve text, images, moving pictures, that combined together with interactivity creates a union of powerful tools that can be used in a very effective and

immersive way to attend a target audience. This means that this medium has a huge amount of possibilities to create a unique communication system that can be used effectively to send a serious message. This is a graphical computing application, which means that it emerges from a variety of areas that includes: computing (programming), design (game and narrative) and arts (3D modeling, 2D drawing, animation, etc.). all together will create a virtual world that expresses the vision of a group of people. In this study case we will study a very peculiar game that exists to share globally a story about native cultures, that maybe would be impossible without this communication medium and its gaming community which is big enough to get the information directly to the target audience. What is interesting about *Never Alone* is its design, which involve the junction of a videogame with a documentary. What is relevant about this original connection is the enhancement of something, in this case: the story. This helps transmit the message to a larger public, in one side the gaming community and on the other side a television-like audience.

This chapter exists to understand how we can build a game with the purpose of transmitting a message to the player. As we will see this particular game does just that in its own unique way. We will approach this case of study based in what we have learned in the state of the art chapter and incorporate it in *Never Alone*. We will divide this segment into two parts: a closer look of *Never Alone* and then we will address about the conversation we had with *E-Line media* and *upper one games*, in specific the Product Manager of E-Line Media, Brian Alspach.

To begin with, the game as an interesting concept of creating a multimedia platform where E-Line Media tell the story about the Iñupiat culture. They literally have a documentary cut in pieces that the player unlocks while progressing in a frozen side scrolling 3D game. The main objective of the game is to take Nuna, the main character which means earth, through this wilderness, escape the bear and the manslayer (villains) to get to the ice giant that is causing the icy wind that disturbs the village. This is the first story of the Iñupiat people, there are a total of 24 unlockable pieces of content that give us a glimpse of their story. The second story of the Iñupiat people takes us to a tale of a giant mouse, the essence of this DLC is to take down a boss along the way. This mouse is the embodiment of a human and Nuna is the prey and in order to survive she must defeat him. We can understand that those are linear storylines in which we advance by completing some puzzles. *Never Alone* doesn't have side quests or other objectives due to its main goal: educate and spread a story worldwide about cultures of Alaska. They pass their knowledge through stories which are told by the oldest of the Iñupiat people. They aim to share their values, techniques, how to face some quotidian problems and how to interact with the nature that surrounds them and of course that all of those problems can be overcome by simply working in a team. Through the game Nuna faces those same problems that are inspired by the reality.

5.1.1 The story and multimedia

When we aim to build a game that has a strong story we can choose the linear pattern, in which the content is organized in a three-act structure with a beginning, a middle and an end, without the need of inserting branching paths which can cause confusion and, in this case, diverge from the main goal. With this strategy they can control the entire unfolding of the narrative and incorporate the essence of the Iñupiat people. All the enemies that we encounter in *Never Alone* take part from the tails of the elders, where all of them have their purpose in the wilderness of Alaska and in the lives of the community.

While playing *Never alone* we unlock a documentary piece by piece, there are a total of 24 pieces that together create a 30-minute-long movie. In figure 5 we can see the unlockable pieces of the documentary. Those pieces are unlocked when you reach determined moments in the game, more precisely when we cross an owl. The balance between the two mediums is even, which means that the 24 unlockable documentary pieces were spread evenly throughout the unrolling of the game, which cause a sensation of raising interest to unlock the next piece of the documentary, which creates a system of rewards while playing the game. During the game we can feel and understand how those cultures sense the world because E-Line Media uses metaphors of the reality incorporating them into the game. In the beginning of the game they teach us who is *Sila* and its purpose in the world through the documentary, later on we understand that we can actually control the fox to surpass some obstacles. *Never Alone* is built around those metaphors beginning by *Sila* passing through the conception of the enemies, the values of the Iñupiat culture even the fact that Nuna have her hood on means something, E-Line Media took their time to create detail.

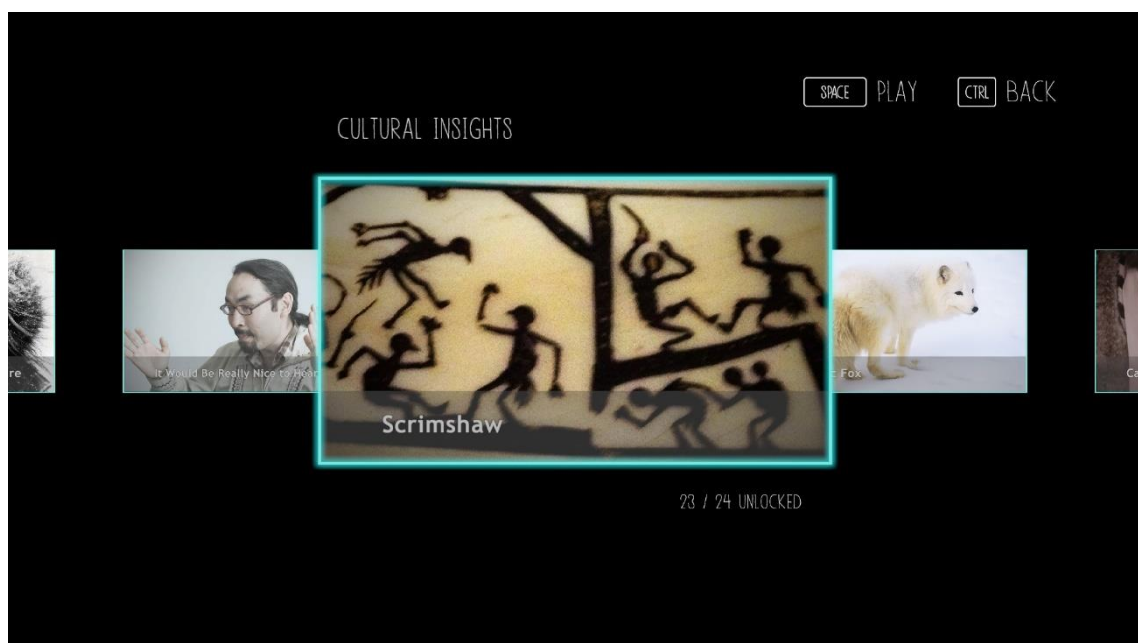


Figure 5 - The cultural insights (Documentary pieces)

5.1.2 Gameplay

Nuna doesn't have weapons or items of any kind, she can only count on her fox and herself to cross the snowy Alaska. The player will have to solve some very simple puzzles that will act as obstacles throughout the game, those puzzles will include playing with the fox and Nuna in a cooperative form. The player has a single goal, reach the mountain where the Icy giant is causing the frozen wind, in terms of gameplay the downloadable content is basically the same but they give you a boss to deal with, a giant mouse, the player must find a way during the puzzles to push his tail in order to defeat him. Aside the gameplay the true meaning of playing this game is in reality finishing the game and understanding the values of the Iñupiat people.



Figure 6 - A very simple puzzle that Nuna has to cross early in the game

5.1.3 Iñupiat values

E-line Media built a concept very similar with the real life of the Iñupiat people. We can play with two different characters each one with their own characteristics that are needed to pass the game. Those characters can be played alternatively by one player or can be played in coop mode, this allows the transmission of a very unique Iñupiat value: Cooperation between the communities.

Another interesting way of life is the deep belief of animals having a human form, sometimes when animals need help they let themselves be seen in their human form. As hunters socialize, some of them hunt with their fox pet, who can sense danger, alerting the hunters for potential traits.

Love and respect: for nature, for one another, for elders a very fundamental value. Key to life.³

By other words, the purpose of live is to respect each other and more importantly love nature. A key to survive.



Figure 7 - The human form of the owl

In figure 8 we can identify another value taught by the Iñupiat culture. This represents that every animal as a human form, that means that when an animal is in trouble and needs the help of a person he allows itself to be seen in their human form. This teach us that everything is equal to a human being.

Another interesting way of life is the deep belief of animals having a human form, sometimes when animal need help they let themselves being seen in their human form.

5.1.4 The interview

We asked E-Line Media how the players reacted about the game itself and if they actually got interested about the documentary. This was answered by Brian Alspach Product Manager of E-Line Media:

I would say that of all the elements of the game, we've gotten to most consistently positive responses regarding the story and the documentary portions. I think players have responded really well to the use of the traditional stories, as well as to the insights into the culture that the documentaries provide. Most players tell us that they really enjoy the

³ Extracted from the documentary of the videogame *Never Alone*.

documentaries and that watching each one as it is unlocked while they play the game was a great way to experience it.⁴

E-Line Media designed a game to encourage their audience to experience the stories of a culture. They found the way to do it, creating a bridge between the game and the documentary and a form of unlocking it piece by piece created a very unique way to discover those same stories. This was very well accepted by the players who felt that unique experience, the union of two worlds.

Of course that this wasn't possible without an Inclusive Development, which means that to understand the cultures of Alaska and to really understand them they had to work with them in an intensive collaboration.

The catalyst for *Never Alone's* project was the Cook Inlet Tribal Council (CITC) who wanted to do even more for the native people of Alaska and to create new audiences for them, so they had the idea of creating a game that represents just that. E-Line Medias believe in meaningful Entertainment which means that we actually can learn by playing games. Their history of educational gaming together with CITC to spread stories of native people of Alaska resulted in the creation of *Never Alone*. The intention of E-line Media is just that create a game that goes beyond pure entertainment; meaningful Entertainment.

E-Line's consumer games are designed to fire the imagination, catalyze curiosity, and create gateways to new ideas, themes and interests through highly engaging entertainment experiences.

Which means that with entertainment, in particular games, we can actually learn and generate something new and different.

⁴ Response by Brian Alspach in the Interview that we made with them.

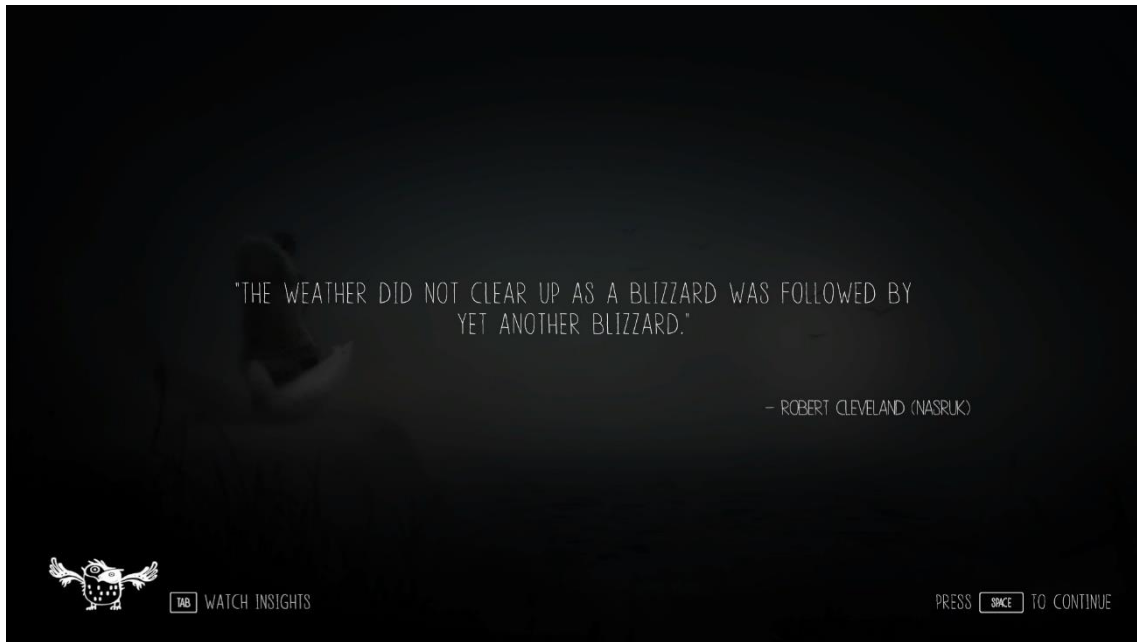


Figure 8 - A citation

5.1.5 The Development of *Never Alone*

The major focus of *Never Alone* is to share ideologies of a culture in Alaska. But of course that to have success in transmitting a message the development of the game must be true and faithful with reality. In this process and as we saw before, there must be a link and a close contact and working methodologies. An intimate relationship between the development team and the northern cultures must exist. We can see and understand the goal just by clicking play and see the first citation of Robert Cleveland (Nasruk) as we see in figure 8. The success of the game is connected with the successful marriage between two strong genres in a single media: Game and documentary, and the way they can be articulated throughout the story.

5.2 This War of Mine

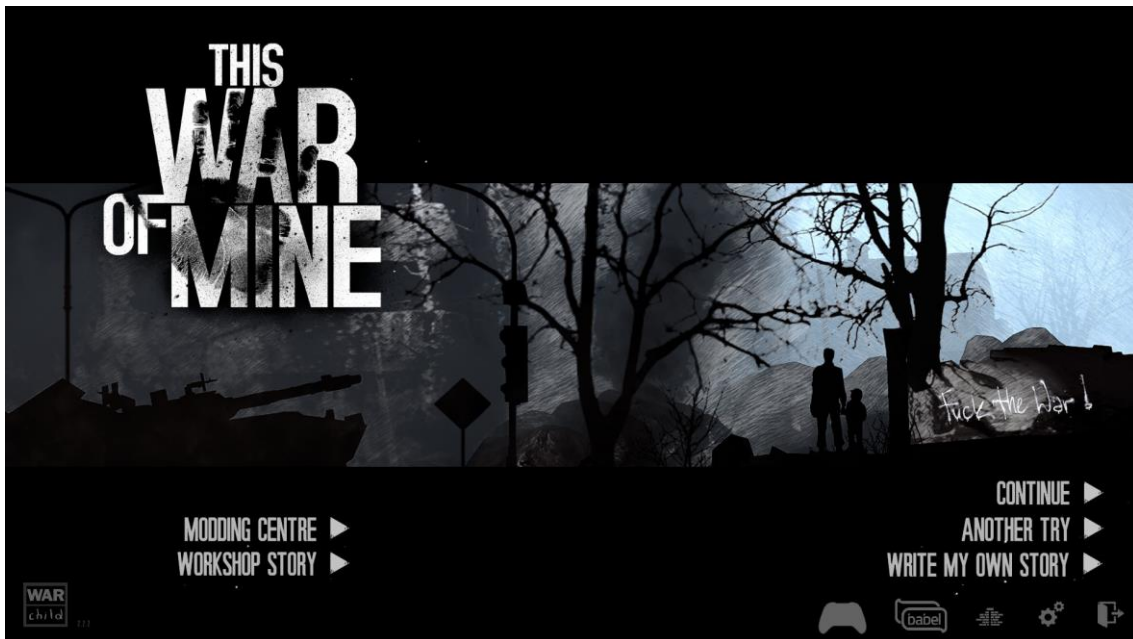


Figure 9 - Screenshot from the game: *This War of Mine*

This War of Mine (Figure 9) is a perfect example of what a serious game is, while *Never Alone*, shares with us the life of a culture, *This War of Mine* shares with us what could happen in a city and to people ravaged by modern warfare seen through the perspectives of adult civilians and children, the player controls the civilians and need to survive the long as possible.

This game was made by 11 bits' studios, with whom we had the privilege to talk to, but they referred us to several interview they done in the past and that answers to most of our questions.

The idea of the game was born in 2013 during a brainstorming reunion (p.95, *Edge*), where the CEO Grzegorz Miechowski wanted something that would share the life of civilians during warfare, something that would challenge both emotionally and physically approaching the game from what real persons experienced during those arch times precisely in Warsaw (Poland) during the invasions of the Russians and Nazis. They also refer in the *Edge magazine* interview (p.95,) that many players responded to them about actual wars in Syria, Algeria and other countries in Africa. To give realism to the game the creators opted to rely on true war micro stories experienced by real testimonies, another interesting and important thing: The visuals of the game. During the development process of the game they (developers) saw terrible images of war and didn't want to put them in the game, they follow mentioning in *Edge* (p. 95,) that players don't need those kinds of visuals to show emotions. We studied in the second chapter two very specific and important topics that *This War of Mine* explores: Characters and Player empathy. The characters that compose the game are built accordingly

to real life, the idea was making the characters as realistic as possible, this is why if a character smokes, they will have a worse temperament compared to others, a professional cook uses less ingredients in the game while another one uses more. Of course that there are also some professions that don't really fit a war situation. Players are responsible for the survival of a group of civilians, and of course that empathy emerges when players interact with the characters.

As a player, the attachment you feel to the characters in your charge is certainly potent. When they manage to survive another night you feel relief, and when someone dies it triggers a feeling of despondency that, for a few in-game days at least, is all but unbearable.⁵

So the general idea of the game is surviving for the longest period possible. In order to do this players need to get resources and upgrade their shelter. In the main game you control four characters: Katia, Bruno, Pavle and Marko. Each one has their own personalities. In the DLC: *This War of Mine: The Little Ones*, not only the player controls the adults but also the children. The idea is to protect them.

The important about this game for our proposal is first of all the bridge that 11 bits' studios make between a virtual world and the reality. Many games explore this subject but *This War of Mine* as a unique to convey the consequences of war and how they affect civilians. To reinforce the idea, we spoke directly with 11 bit's studios to understand how all the pieces came together and work with each other to made the game possible. The Developers also highlight the fact that what it matters is obviously the interaction; players can actually tell their stories through the game. It's a tool that allow them (developers) to raise awareness, the idea behind *This War of Mine* was making the game an opposite of what already exists. Although this was meant to be a drama or tragedy experience. At the end they understood that gamers actually got the idea that they were trying to transmit. The developers behind *This War of Mine* believe that games are an important tool or media that allow them to send specific messages to players, they also refer that games have an important feature that helps create the experience: Interactivity.

Another feature that the game support is the fact that players can contribute to the War Child initiative through a link that goes directly to their site, there players can actually donate money directly to the War Child in the figure 10 we can see it in the left bottom corner. One more time the idea was to raise awareness through their games. They also created an initiative through Steam that when players buy the game a portion of the price goes to organizations, such as War Child. In the site of This war of Mine we can find an idea of what the game is about:

⁵ Extracted from Edge: The Future of Interactive Entertainment #294

This War of Mine provides an experience of war seen from an entirely new angle. For the very first time you do not play as an elite soldier, rather a group of civilians trying to survive in a besieged city. During the day snipers outside stop you from leaving your refuge, so you need to focus on maintaining your hideout. At night you get a chance to scavenge nearby locations for items that will help you stay alive.

Make life-and-death decisions driven by your conscience. Try to protect everybody from your shelter or sacrifice some of them to endure the hardships. During war, there are no good or bad decisions; there is only survival. The sooner you realize that, the better.⁶

In the next sub-topics, we will describe the gameplay and the background stories. To understand how they fit in the theory we studied earlier.

5.2.1 Gameplay



Figure 10 - Screenshot that represents the gameplay of *This War of Mine*

This War of Mine approaches gameplay in a different way, players need indeed to survive in a harsh environment ravaged by war, but one of the differences resides in the view point of the player, the idea is that players control civilians instead of soldiers, this generate a turning point of conventional war games (as shown in figure 10). Players actually control the most fragile people that exist in an environment of war. This of course will trigger some emotions in the player that would not be possible otherwise. In order to survive, players need to gather resources both in the house or by scavenging other shelters by night. Resources can be food, herbs and parts to make useful tools (including wood and metal parts). Players control each of the characters where each one of them have their roles in the group, for example Bruno is a cook and had his own television show, we will explore this in more depth in the next sub-

⁶ <http://www.11bitstudios.com/games/16/this-war-of-mine>

topic: Background story. He is a better cook than the others, on the other side he has a dependency: Smoking, which can affect his mood. For this to happen you will need to find the resources necessary for each one of them (characters) in order to survive. During the day the player need to furnish his hideout, constructing beds, heaters, rainwater collector, metal workshop and crude stoves. Which allows the player to cook, get water or to create equipment, such as, shovel, lock pick and crowbar and weapons like knives. The equipment's are used to remove debris, pick locks and open certain doors. During the night the player have options, sending some of them may be sent to scavenge other hideouts and other places while the others can sleep during the night. During this phase the player can take a limited number of resources, which depends on the weight the character can carry, this will lead to various visits to the same place. This creates a work circle around day and night. In the figure 11 we can see the Day Log which informs the player what the character have brought during the night but also notify the player the condition of the other characters. The AI system behind the game is very complex, some characters react differently to moral choices and some of them can be affected by others when injured, wounded or dead. It's almost like an ecosystem within the game.



Figure 11 - Screenshot that represents the Day Log, here we can see what scavenge and the situation of the other characters.

5.2.2 Background stories and characters

As we said before the game offers the possibility to choose from two groups of characters, the first group includes: Katia, Bruno and Pavle; The second group contain: Pavle, Bruno and Marko. The DLC adds another group: Iskra and Christo. Those are the characters that appear when starting a new game, but there are also other characters, such as, Anton, Arica, Boris, Cveta, Emilia, Marin, Roman and Zlata. Of course that each of them has their own attributes

that influence the gameplay. The background story is important because it affects directly the outcome of the game, as we said before, if your character was a policeman he has attributes that a mathematician don't have. This can be applied to all the other characters. In the table below we can understand perks, abilities, personality, addictions and inventory space of each of the starting characters, through our experience so far with the game. In our case was Pavle, Bruno and Marko and Katia, Bruno and Pavle. To understand how they react with each other and how their personality and perks fit into the game we use a table from http://this-war-of-mine.wikia.com/wiki/Playable_Characters.

Table 1 - represents the characters played and their perks, abilities, personality, addictions and inventory space.

	Pavle	Bruno	Marko	Katia
perks	Fast Runner	Good cook	Skilled scavenger	Bargaining skills
abilities	Run faster than others.	Uses less resources to cook.	High inventory size.	Better prices when trading.
personality	Concerned with morality (Murder and Theft); Concerned with neighbors and NPC's; Can steal from shelter when living it.	Can get angry due to his addiction; Less concerned with others; Can be aggressive with others.	More concerned with others;	Concerned when helping neighbors and NPC's; Concerned when members die; Rarely steals when living the shelter;
addictions	None	Smoking	None	Coffee
inventory space	12	10	15	12

There are several roles in the game that each character possesses. As we can see in the table below:

Table 2 - represents all the roles that are accessible through gameplay

Role	Descriptions	Characters
Scavengers	Especially characters with high inventory space and are good at scavenging.	Boris, Marko, Pavle and Arica.
Fighters	Characters with high combat skills, good to takedown enemies and guarding the shelter.	Roman, Arica, Boris, Marko, Pavle
Supporters	Better at bargaining, trading, or managing the shelter.	Bruno, Marin, Anton, Katia, Zlata, Christo, Henrik, Irina
Others	Characters with unknown abilities or children.	Emilia and Cveta

5.3 Comparison of Never Alone and This War of Mine

There are many obvious differences between the two games, as we saw before, but to understand them in more depth we created the following table:

Table 3 - This table compares the two games studied

	Never Alone	This War of Mine
Unique traits	Uses two media (Documentary and game)	Uses a unique gameplay
Characters	Nuna and the fox.	See background stories and characters above
Environment	Icy environment (Alaska)	Besieged city
Gameplay	Resolving puzzles and story driven.	Survival and resources collecting (food materials and weapons), upgrade the shelter with the materials collected.
Enemies and Hazards	The white bear, the spirits and the giant mouse.	Military, bandits, when clearing rubble characters can end up wounded.
Story	The story behind Never Alone is about the culture and beliefs of Alaska and how they manage to	Each character has its own background story and their collective background story,

	<p>survive. The documentary unfolds during the gameplay that give an insight of the natives from Alaska.</p>	<p>many of them known each other before the war; There are events in some places that players need to visit (The Garage for instance: A man needs medicaments for his father); Players can create their own stories choosing from a set of professions; The story is molded during the gameplay.</p>
<p>AI system</p>	<p>The AI system of <i>Never Alone</i> is practically the hazards that appears like the ghosts for example.</p>	<p>The AI system of <i>This War of Mine</i> is much more complex, each character has their own addictions and personality issues which can lead to different character “endings” and sometimes this can cause morality issues with other characters. The construction of the characters giving them roles in the game (Scavengers, Fighters and supporters) gives the game more versatility.</p>
<p>Art</p>	<p><i>Never Alone</i> art is inspired by the native paintings, drawings and clothing which approach it to reality.</p>	<p>The art of <i>This War of Mine</i> was inspired by <i>The Schindler’s List</i> or <i>The Pianist</i></p>

Chapter VI

6.1 Proposal (Introduction)

Our final intention in the construction of this dissertation is to contribute to the society in a positive way using videogames as our communication medium. This medium has the possibility to incorporate many components that give a very unique experience and immersion to the public. As an example, the ability to “speak” with them in order to transmit serious messages, therefore the purpose of this study.

The objective of this dissertation is to create a game that goes beyond entertainment by transmitting a message to the user, we relied in the simplest way to share messages: Storytelling. We believe that interactive storytelling can be the answer to the successful delivery of a serious message to a specific public. Creating a game that at the same time shares knowledge or even educates the society is part of the objective. Like in the case of *Never Alone*, they share with us the story of a native culture of Alaska, maybe without the game we wouldn't have known this culture. And even *This War of Mine*, that uses games to incorporate realities of war with a unique view point: Civilians. Our work is focused on the study of how we can create a game trough an interactive storyline in a subject that we care about: Child labor. The reason for this specific study is because we think that the gaming community can help find a solution to diminish child labor.

Millions of children work to help their families in ways that are neither harmful nor exploitative. However, UNICEF estimates that around 150 million children aged 5-14 in developing countries, about 16 per cent of all children in this age group, are involved in child labor.

www.unicef.org/search.php?q_en=child+labor&go.x=0&go.y=0

These are official numbers printed down in the *Unicef* website. This little sentence tells us that developing countries in order to emerge need the cheapest labor situations that they can find. Unfortunately, children are the answer for most of them. In other cases, they help their families by getting money. Of course that each of these situations are due to something complex that we are not going to debate in this dissertation.

We are going to make choices based on the study presented on the first and second chapters to propose a project. It will incorporate the story of children around the world in a game that aims to sensitize people for this very specific question. We can begin by introducing a game that we thought about. The objective of this proposal is to create a bridge between reality and a virtual world where players have the fate of children in their own hands. The objective of the game is to survive during a limited period of time where the player will need to rescue other children and gather basic resources for survival. The idea is to create a hideout where the player will need to maintain, influenced by *This War of Mine*, there will be a map where

the player will have six choices for locations. Those places will resemble to the places that the children are, for instance if the child is working on a mine the player will have to enter a mine avoiding enemies and retrieving the child and resources. Each one will have a child to rescue and basic resources to get (food and wood). Furthermore, when the child is rescued, our idea is to contextualize the player about the background story of this specific child, and influenced by the game *Never Alone*, this background story will be a documentary. Each of the characters will have his own documentary.

6.1.1 Influences

In the table below we will see how those games (*Never Alone* and *This War of Mine*) influenced our proposal and we will compare them with our own proposal to transmit what we want to achieve and how we can finalize it with more precision.

Table 4 - Put the three games side by side to understand all the various components

	Our Proposal	<i>This War of Mine</i>	<i>Never Alone</i>
The story and characters	<ul style="list-style-type: none"> - players must incorporate children; -children’s characterization must be detailed (<i>This War of Mine</i> explores that kind of customization and gives characters a unique approach, with many variables) Characters are Civilians 	<ul style="list-style-type: none"> -Characterized Characters; -The story of <i>This War of Mine</i> is constructed during the gameplay; -Each character has his own backstory; The backstory can involve more characters; -All the characters have their own personalities (strengths and weaknesses); -Players can create their own stories, uploading their own customized photography; The characters of <i>This War of Mine</i> are deeply characterized, each character has their own 	<ul style="list-style-type: none"> - Static Characters; -<i>Never Alone</i> have a linear storyline; They make use of documentaries to create a bridge between reality and the virtual world; Characters are inspired by nature;

		<p>perks, abilities and personality which confers more strategy;</p> <p>-Players have the possibility to create their own stories through the game, they can create their own characters (Some players can create their own experience during a war).</p>	
Enemies and hazards	-The real threat that we want to explore is the people that explore the children, this way the objective of the player will be to sneak those men. If caught the children will be taken away.	-In <i>This War of Mine</i> enemies and hazards appear principally when scavenging and clearing debris. Enemies are militaries and other people.	-Enemies and hazards appear throughout the game in form of evil spirits that appear in real stories of their cultures.
Art	-The art need to reflects the reality as such, we believe that we need to incorporate the specifications of the countries.	-The art of <i>This War of Mine</i> are influenced by movies since <i>the Pianist</i> and <i>Schindler's List</i> .	-The art involves the creation of art world that is influenced by Alaska.

6.1.2 Methodology

The methodology that we adopt to create this proposed project begins by a brainstorming like presented in figure 12. Then by analyzing two approaches that we think are the best suited for the game.

6.1.3 Brainstorming

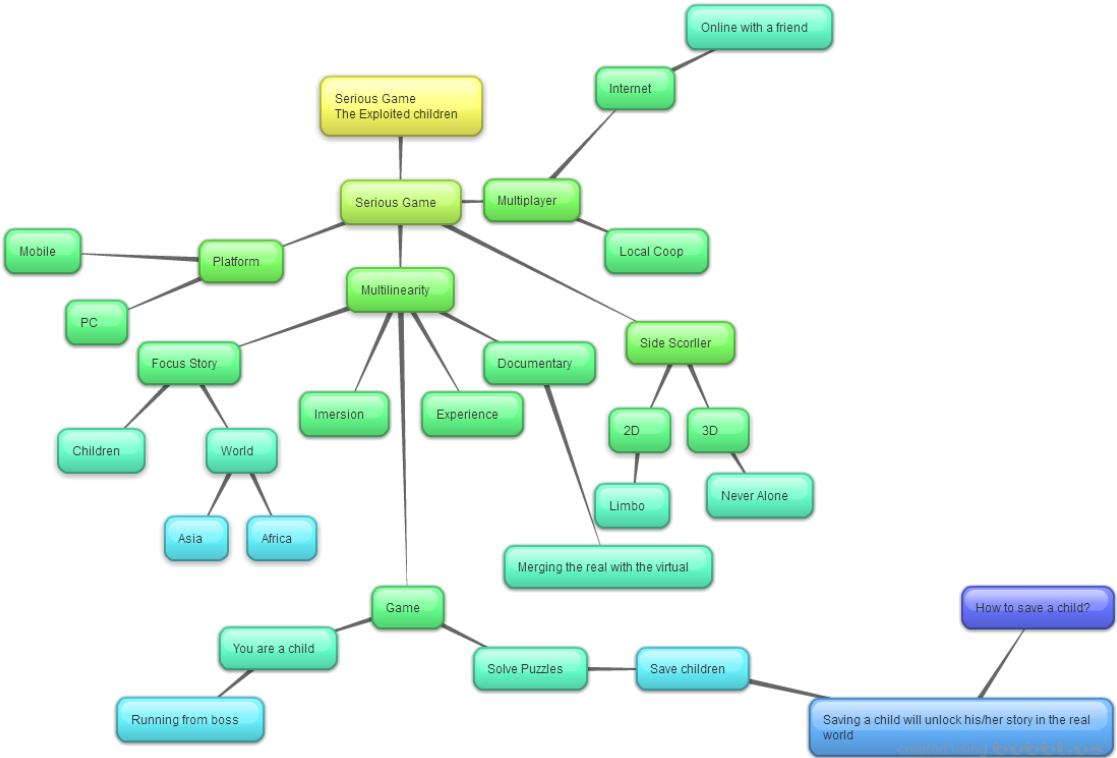


Figure 12 - Map of our proposal

We think that multi linearity can be an answer to agglomerate all the micro stories and create immersion and unique experiences. With this we can share all the stories of children worldwide that live this reality using a single medium. We aim to expand this game in an online coop mode to create the sensation of “unite we can do the difference”. Following this order of ideas.

Our approach is using a multi-linear story structure, incorporating documentaries within the videogame, by which we will attempt to tell real stories, as shown in figure 13.

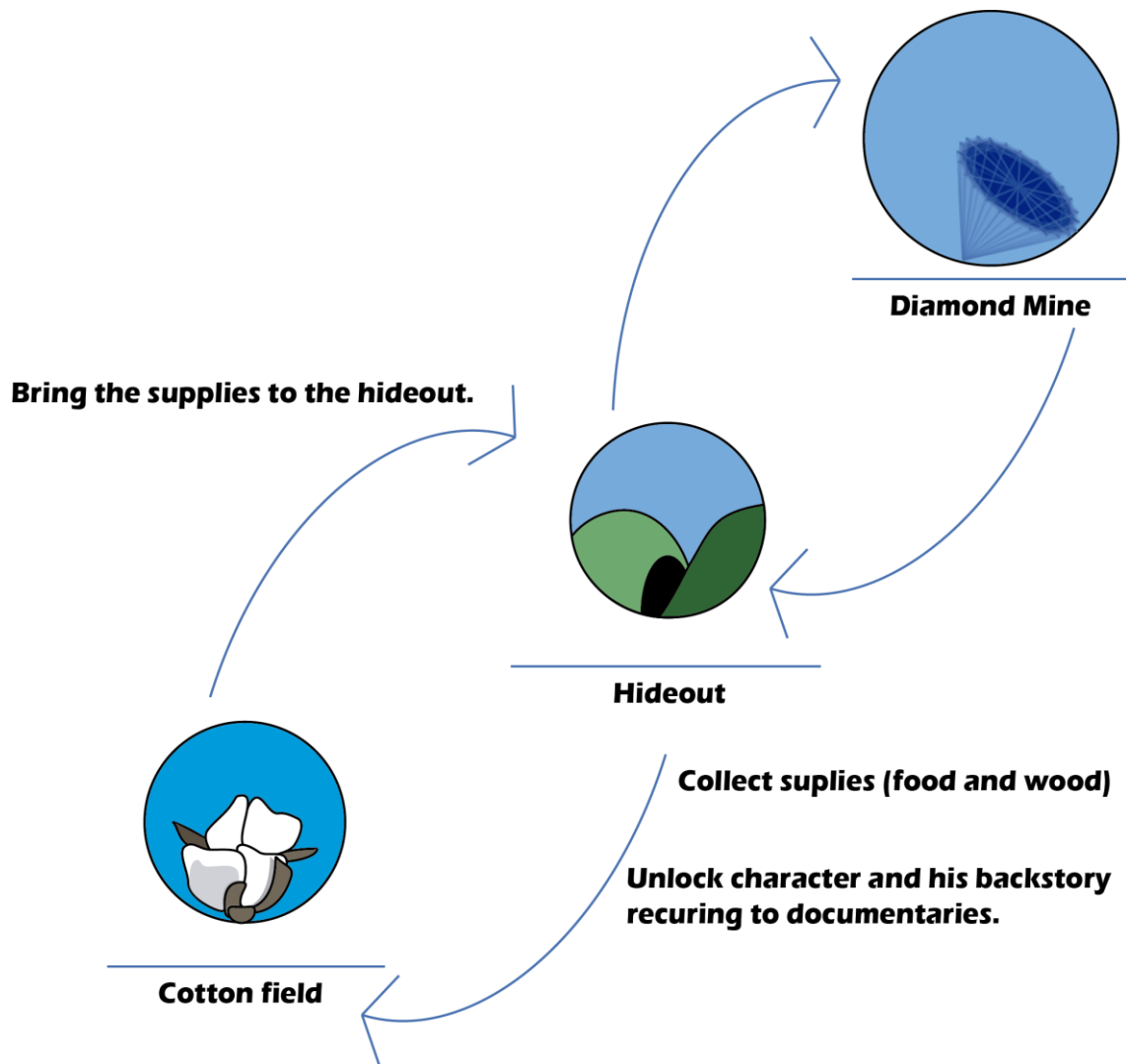


Figure 13 - The cycle of our proposal

The structure above illustrates our approach; we believe that with this organization we can capture the essence of the reality. Of course that this is not possible without *Unicef* approval and help. To engage the players, we want a real and solid foundation on real children stories that we will convert into a main and playable linear storyline. For the gameplay itself we will focus our efforts in creating unique challenges that upon completion will reward the player with the background stories and the resources.

6.1.4 Game Structure

The game structure will contain all the screens presented above in figure 11. This will begin by the home screen that will have the menu for options, play, unlockable and Donate. The option menu will have the option to change the language, subtitles and sound. Play will be divided in two modes: Online coop and single-player. Unlockable will have all the documentaries that have been already unlocked by the player and, the possibility to unlock

new skins via real money transactions (all reverted to the cause in question). The final point of our structure is the donation button that will redirect the player to *Unicef* donation page.

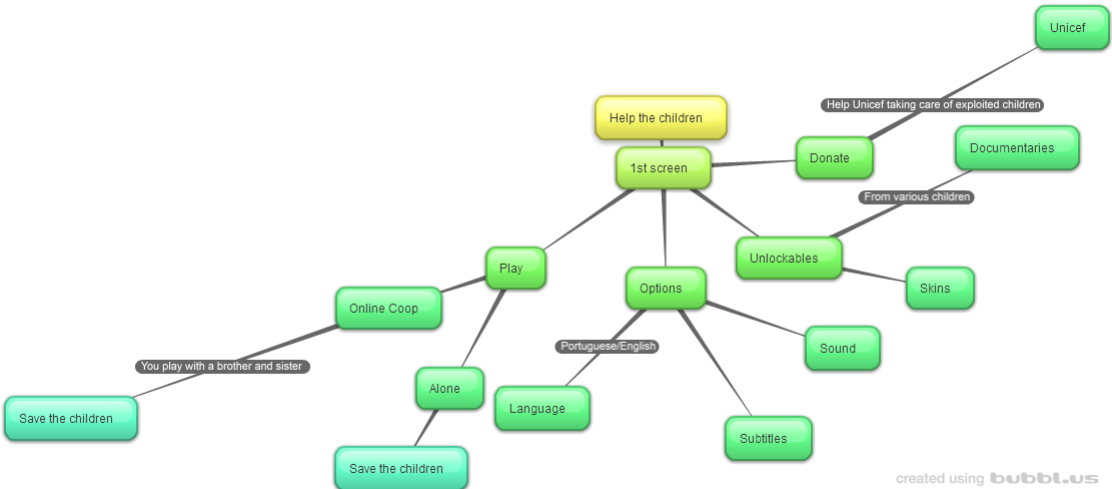


Figure 14 - Structure of the game.

This structure was created by studying the games *Never Alone* and *This War of Mine*. During the study of *Never Alone* we came across a documentary structure type game and, as well, a story that drives us into the artic, as a linear storyline. This game focuses in a story which creates a unique bridge between reality and the game itself. *This War of Mine* is a serious game and delivers to the player a set of action options like donating directly to the War Child.

6.1.5 Story

As mentioned before the idea behind the creation of this game is to increase the number of real stories presented to the players to immerse them into the reality, creating as such, a unique experience. In this case we will have six stories related with children from all over the world. Some of those documentaries already exist and have been sponsored by *Unicef*. The rest of the game was inspired by *Never Alone* and *This war of mine* in some aspects. We will embody a set of children in a fictional story world that will link the gameplay and the documentaries (The bridge between reality and fiction) together. The idea is to tell a story through them of children trying to escape labor. The characters will have to work together and cooperatively to rescue children and escape the hideout. There will be enemies that players will need to trick and hide in order to progress in the game. The idea is the creation of a stealth system. There will be a lot of hiding places for players to use.

We want to create a multi linear storyline. There is a vast number of children stories worldwide that are affected by poverty due to some reasons that, again, will not be discussed

in this dissertation, but we do believe that this subject can be spread even more through the game. If we take a look to the constant growth of the games industry, we can safely say that games have a huge audience that we can benefit of. Inspired by *Never Alone* and how they conveyed their message, we can do a similar game. The similarity would be the junction between documentaries and games, but with this proposal we will want to get as many real stories as we can that will be unlocked during the gameplay, the difference is that each documentary is a unique story and not pieces of one. That is also one of the reasons why we can use a multi-linear story, since the roles of each character are independent and don't require a specific order.

In the table below we can see examples of some stories from children all around the world, the idea is for each one of the children there will be a real documentary behind it. To insert this into the actual gameplay the player will need to rescue the children and take them back to his/her hideout. Try to survive until the rescue team arrive. We also want to provide background stories to contextualize the players. The stories below are only an example of stories that happen in reality.

Table 5 - Examples of real stories

Stories	Rescue the children
First story (character 1)	The first story is based in an actual real story that we found in Unicef youtube channel: https://www.youtube.com/watch?v=JfxpeHV-fXg . Those children work against their will in cotton fields.
Second story (character 2)	https://www.youtube.com/watch?v=JfxpeHV-fXg . This is the story of a child from Congo who work on getting diamonds.

6.1.6 Gameplay

The gameplay will be a 2D puzzle stealth side-scrolling. This choice was made due to the objective of escaping a hostile environment for the children. There will be no combat during the game, we want to focus in the original story and it seems an obvious choice regarding this reality.

As we learned before with *Never Alone* and *This war of mine*, the gameplay must be suitable for the purpose/objective of a game. If we want to transmit the reality of children worldwide suffering from any kind of exploitation, we can rely on documentaries that already exist and do something immersive with the power of interactivity. Above all, games can be more than just entertainment as we stated before. The gameplay will have to be an extension from reality. To immerse a player in a story driven world we need to understand the type of game for the purpose. A unique straightforward narrative that introduces a fictional story inspired by hundreds of children. And with the vision of E-line Media that unifies documentaries and gaming, we can design a serious game with a very interesting storyline. This gives us the

possibility to bring a very unique type of gameplay: Stealth in a 2D side-scrolling environment. For us this type of gameplay makes sense because it fits perfectly into the story and reality, this is what we are after. We have seen in *Never Alone* that everything in their game was made based on reality, even the name of the main character is called *Nuna*, which in their language means earth. Or even the fact that we play with a fox that helps *Nuna* and in the final stage it shows itself in human form. All these are little details that make a difference for the audience which perceives and understands it.

6.1.7 Characters

The main characters of the game will be, as mentioned before, brothers (boy and girl) that will have, as main objective, to escape a mine and rescue other children along the way. To focus the point that this is a worldwide problem we will have children to save from all over the world: Asian, African, South American, etc. The objective is also to understand where the problems are during the gameplay.

6.1.8 Controls

The controls will be very simple to understand; we will use a gamepad (Xbox). The analog stick to move the characters, the A button to interact with objects, X to jump, B to crawl, Y to change between characters, The LT and RT buttons allow to see more in front and behind the player.

6.1.9 Game Universe

One of the most important things in a game is the game universe, in this case is the environment and not the fictional world. Our idea to create the universe of the game is to remit the player to the reality, for this we believe that the environment should be closer to the reality as possible. For this, we will inspire ourselves by the Southern countries of the globe, like India or some African countries. If we pick India for instance and if the scene happens in a mine, we could design the game in order to also show the country.

6.1.10 Others

The enemies that will appear during the game are the people who will try to catch the children.

We want to create a simple interface that will reflect what the player will have to do in order to progress during the game, the main objective is to focus in the children and how to save them, progressing through the environment.

In the appendix we created a more elaborated Game Design Document with the general idea of the game.

Chapter VII

7.1 Conclusion

The aim of this dissertation was to reach a final point where our intention was to create an idea for a game aiming to create empathy and therefore a bridge between reality and a virtual world where players could feel in the perspective of children mainly in poor countries of the world and therefore what they endure to survive. As such, we saw that some children, instead of going to school work in cotton fields or even in diamond mines as examples. We wanted to create a reasoning line that showed the potential of games as tools to communicate messages through an alternative world where we could increase the player's awareness to what these children face, and, if possible, to help them in some way. Due to a variety of factors we discovered that games are a perfect tool for such messages. We also studied two games, although different they share a mutual objective, communicate messages through videogames. Taking this idea in mind we created the common thread. We began by introducing some important definitions that are essential to understand all the theory that we discussed along the way. Through Game Design we understood the process behind the creation of a videogame, specifically in Player Empathy, Immersion, Game Flow, Ideas, choices and Goals. With this in mind we discovered that Immersion is in fact a very difficult field to theorize, but can be a major objective of game design. For us, Immersion is essential to understand how we can "transport" the player into a virtual world, captivate the attention to the player and therefore inform or educate the players. With this in mind we can approach games as communication medium. They are a powerful tool that can captivate target audiences differently compared to other media. We analyzed core elements that are the bases of games, Game Design, Storytelling and Serious Games where we view two Serious Games. Through the initial core elements, we studied that play exists not only in humans but also in all animals, which tells us that play is a normal learning process that grow with each one of us. Games may not only be computer-based, of course, there is a variety of games, since board games, athletic games or even children's games. They demand rules, one or more players and above all they can be a social activity. We also view the classification of games, one from a former sociologist Roger Caillois and the other one from Game Designer Scott Rogers. We learned very unique ways to classify games, Roger Caillois divided games by their nature: Competition, chance, simulacre and vertigo.

Then we moved to the field of Game Design where we studied specific fields that we believe are key to understand how we can retain the attention of a player to a specific goal related to reality. Games can be a communication system as we see in *Never Alone* or even in *This War of Mine*, and how it makes sense to players. We also studied Immersion, in a very careful way due to its delicate nature. Immersion is in fact how the player can experience something,

in a game it can be by transporting him to a virtual reality, but to accomplish this, the developers must understand how players react and how they perceive and experience games (in this case). Storytelling can also be another crucial component of a game. Chris Crawford (2013) *on interactive storytelling* mentions that people fall back in what they already know and interpolation in something new, he follows saying that “Interactive storytelling is not made from a game” (p. 47), but narrative can be participatory in a game world, to enhance characters, dialogs and worlds. Developers can use those principles to make sense and deepen a story world. We can understand that those components can create unique media, formats and products. Narratives can be built to enhance the player empathy towards a game and, more importantly, to transmit through Storytelling important information and emotions, from Story worlds to Characters, and even structures. Through interactive Storytelling, we can transmit messages to a player in a very specific way, that combines both narrative and game.

Those two games are the base of what we believe fits with our proposal, *Never Alone* explores a concept of using different media to enhance their goal, share knowledge about a culture not well known from the rest of the world. On the other hand, *This War of Mine* explores an entirely new way to communicate how war can affect civilians and mainly children. Those two combine technologies in their own way to give emotions and new experiences to the player.

In the end *Never Alone* is one of the best examples for our proposal, considering that, as we will see in the next chapter, the importance of bringing the reality to a virtual environment to enhance the possibility to send our message successfully. We want to retain that the most important thing by telling something that has a powerful story its by adapting the narrative structure to the need. *Never Alone* uses a structure which enable unlocking documentary pieces, so it uses a medium, videogames and agglomerate two different genres: Documentary and a side-scroller. There is another important technique that they use to create that bridge between reality and a virtual world that we can use with the proper support of the organization: Documentaries. Recurring to a side scrolling game was intended for our goal, since the goal of *Never Alone* is very similar to our proposal in which the detachment is the subject. In our proposal we intend to spread and share a very specific problem of the society: the unbalanced distribution of money management that leads to the exploitation of poor people in certain areas of the globe, mainly children. What we want to learn with *Never Alone*, is that the videogames have a powerful set of tools that can touch a particular public and the junction they make with other mediums to enlarge their audience.

Although the reality behind *This War of Mine* is completely different from ours the objective remains the same, they make use of different features to create empathy, since making your own story to a group of characters predefined. They also use emotions in art and principally through gameplay. The narrative is generated by advancing into the game, players make decisions that will affect all the characters. The game will always be different each time the

player makes a new game. There are a set of characters where their personalities will vary according to their background stories. We believe that those key components are perfect to create a certain emotion to the player, in the sense that, by controlling and taking care of a character without a predictable ending can cause, in case of death, a mix of good and bad experiences. We then made a table to understand how the games behave relatively through story, characters, gameplay environment, enemies and hazards and AI. We concluded that *This War of Mine* is more complex in comparison of *Never Alone*, due mostly to an enlarged AI system and the complex characters, *Never Alone* uses different medium to create a unique experience. We analyzed those two games because *Never Alone* uses two different media and *This War of Mine* due to its complex characters and story.

Our proposal aims the creation of a game that, we hope, could support children worldwide, we wanted to make this proposal because we believe that tools like games could make a huge difference in society, as we said before we believe that games can be a communication medium that allow the transmission of serious messages and awareness. Our proposal is influenced by the two games that we analyze earlier and serves as pillars for our idea. We think that with the junction of documentaries with gameplay we can enhance the real stories within the game. If in a near future we could speak to Unicef the idea will be to make new documentaries for each children that appear in the game, and therefore creating a unique and diverse system. Games emerged in a completely different era of human culture and therefore new media and new technologies arose aside of other conventional media. There is an opportunity to understand how those tools can engage players and reflect reality. Games as we said before can be much more than just entertainment and this can be used to create games that aims to transmit serious content or messages. We see serious games as tools to communicate with others, and sensitize their players. The objective of this proposal is not only to understand how games can be extension of reality but also to relate our world and creating something worthy.

We also compared our proposal to the other games that we analyzed to understand how we could manipulate and transform our idea in an attempt to create a viable game. We tried to incorporate some of the features and we still believe that this game as potential and can contribute and help children worldwide. Games can be envisaging as tools to create entertainment but also to communicate with players more delicate subjects.

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Appendix

High Concept

This game is about stories of real children that suffers from exploitation. In this sense, the game will focus in sensitize players about this subject, this game will have a structure half documentary and half playable parts.

The player will have than to control a unique child at the beginning and then rescue others (from all the children that will be comprehended in the game the first one will be random, each time the player begins a new game the child will be always different), all the background stories will be in documentary format inspired by the documentaries from *Unicef*, the objective will reside in surviving the most days as possible (See *This War of Mine*).

The player will interact with those children simultaneously throughout the game, and will need to hide from the captors. Rescue the children and bring them back to the Hideout (a unique space that where the player will spend more time and from there get to other places in the map to rescue the other children).

The game is about creating a universe that includes sensitive subjects, therefore we understand that the objective of this game is to deliver serious messages to players. We frame this game in the genre of Serious Games and Documentaries. We believe that games are tools and can convey serious messages, independently from entertainment. We analyzed entertaining games that also convey those messages, therefore we want to create something similar due to their popularity.

Major Features

Map (rescue region, examples: Cotton Fields and Diamond mines).

The interactive map will serve for sending children into other areas with the objective of gathering food, wood and rescue other children.

Hideout

The hideout will give the player a unique space for him to hide from captors, the player will need to gather wood and food for the children, sometimes captors can enter the hideout. Here the player will need to clean the space and hide from them until they go away. We will create abilities for the children (some of them can survey the area to anticipate the arrival of captors, others will clean faster or even hide better from captors). Those abilities will be higher than others depending on his/her background, for example a child from a cotton field will clean faster than one from a mine, this one will hide faster.

Gameplay

Customized Characters

Characters will be created according to real children that experience exploitation in their life. They will have abilities as referred above.

Setting

Each part of the map will be unique categorized accordingly to reality (Asia, Africa and South American countries).

Story

The story will be based in real life stories, *Unicef* have some documentaries online that we were inspired from. If the game will be developed the idea will try to unite with *Unicef* to create new documentaries for the children's.

Target Audience

The target audience will be the public in general that relate themselves with those kind of stories, or want to help this cause.

Hardware Platforms

Platforms will be primarily PC and then mobile versions (IOS and Android)

Team

The team will comprehend two or three Designers, three or more Concept Artists and four to five Programmers. Due to the extensive AI components and environments.

Summary

We want to create an experience that transport the player through a virtual world into reality, we think that children's exploitation is a serious subject that can be minimized through donation and spreading real stories. Reality will be shared via documentaries inspired by *Never Alone* and the gameplay will be like delivered by *This War of Mine*. Those two games had success and we believe that if we adopt a similar process this game can be successful. This way we can create a tool that will expand reality and creating a donation program that hopefully will trigger motivation for the players to help those children.

Game Design Document

1. Game Name

- a. Children Rescue (Temporary name);

Section I (Project Overview)

1. Project Overview

a. Story Synopsis and Setting

- i. The stories of the children will be enveloped through a documentary that will trigger when the player rescues those children (via the mission that will be available in the map (Hideout));
- ii. Additionally, the player will have to manage and gather resources throughout the game, with an initial character, creating a micro story subjacent from the gameplay (each time this micro story will change with each new game);

b. Genre and Scope

- i. Serious Game;

c. Visual Style

- i. 2D;

d. Engine

- i. Unity or Unreal;

2. Core Gameplay

a. Single-player

- i. The player will need to explore the map rescuing children and gathering resources, sometimes the player will need to hide from captors to ensure their escape. The player will win the game if he survives long enough and rescue all the children. He will lose if all the children are captured;

b. Co-op

- i. The players will begin with two children and will need to play together to survive and rescue the other children (The difficulty level will be much higher, the captors will come more often to the hideout and will have an increased sighting when children are hidden);

3. Game Features

a. Gameplay Innovations

- i. Gameplay is inspired by *This War of Mine*, relatively to gathering resources, and in some features, like hiding, for example.

b. Advances in AI

- i. AI will be also similar to *This War of Mine* except that this game will be less complex than the previous, AI system will be used to give life to the characters (like doing tasks for themselves).

c. Art

- i. To create the environments like Africa or even Asia we will need to understand the landscape, as shown in the images below:



<http://www.theatlantic.com/china/archive/2013/06/ghanas-gold-mine-arrest-chinas-latest-headache-in-africa/276707/>

Asia in the other hand as a different type of dirt, people, etc. As shown in the image below:



<http://www.indoasiancommodities.com/2016/01/03/indian-cotton-exports-may-not-rise-significantly-says-cotton-corp/>

4. Project Scopes

- a. Number of locations

- i. There will be two locations, we referred a third earlier, but to we will start only with Asia (cotton fields) and Africa (Diamond/Gold Mines);
- b. Number of levels
 - ii. Within each location there will be various levels for the player to explore and rescue children, at first we will try to create 6 stories, 3 in each location;
- c. Number of NPC's
 - iii. There will be few characters that will help children hiding;

Section II (Story, Setting and Characters)

1. Story

a. Background stories

- i. Background stories will trigger when the player rescues a child within a level, at this point a documentary will give the story of this child;

b. In-game story

- ii. When the player begins the backstory of the character will trigger and then he will continue the story of this character until he rescues more characters;

2. Environments

a. Area 1 (Africa)

i. General Description:

- a) This area will be similar with mines in Africa;

ii. Physical characteristics:

- b) Dirt, mud, water...

iii. List of Levels:

- c) There will be 3 levels (it can increase later on) 3 mines for the player to explore and each one of them will have a child to rescue and bring back to the hideout, gather wood and food left from the captors. The levels will be similar due to the region that they are inserted, but there will be some differences like the layout of the mine;

b. Area 2 (Asia)

i. General Description:

- a) This area will be similar with cotton fields of India;

ii. Physical characteristics:

- b) Dry dirt, water...

iii. List of Levels:

- c) There also be 3 levels (it can increase later on) 3 cotton fields, each one with their unique layout, there will also have 3 children to rescue;

3. Characters

a. Character 1 (example)

i. Backstory:

- a) <https://www.youtube.com/watch?v=JfxpeHV-fXg> this is an example of a child that suffers from exploitation;

ii. Look:

- b) African boy;

iii. Special Abilities:

- c) Have a bonus on surveying the hideout therefore he can see traits faster;

b. Character 2 (example)

i. Backstory:

- a) <https://www.youtube.com/watch?v=JfxpeHV-fXg> this is an example of a child that suffers from exploitation;

ii. Look:

- b) Asian boy;

iii. Special Abilities:

- c) More agile with his hands he can stow the hideout faster;

c. Animations

- i. The animations that the characters will have is mainly: Movement (walk, run and jump), movement of gathering resources, open locks.

4. Allies

- a. Sometimes allies will appear within the levels to help children escaping or even hiding from captors;

5. Bad Guys

- a. Captors, if they catch the children he will be force to work again, therefore ending the game; (there will be no combat nor weapons)

Section III (Controls)

a. PC Keyboard/Mouse Commands

i. Movement keys:

- a) Move forward: W;

- b) Move backward: S;
 - c) Move left: A;
 - d) Move right: D;
 - e) Jump: Space;
 - f) Interact with objects: CTRL;
- ii. Inventory access
 - a) Access inventory: I;
- iii. Menu:
 - a) Access Menu: ESC;

Section IV (Interface)

1. Camera
 - a. Standard view
 - i. The camera view will be 2D, like in *This War of Mine*.
 - b. Player-controllable options
 - i. The player can interact with the characters, containers, chains, cages.
2. HUD
 - a. Worldview
 - i. The Player sees the interior of the hideout and can interact with the map to enter the levels. In the levels it will be similar to the hideout but with other features, such as, rescuing children and gathering materials.
 - b. Status Information
 - i. The unique information that the player will have access will be the how many characters he saved, food and wood. There will be no health, energy or weapons.
 - a) The objective of the player will be to rescue the children and surviving (gathering food and wood (to make fire)).
3. Menu
 - a. Single-player
 - i. New Game
 - ii. Load Game
 - b. Co-op
4. Game Menu
 - a. Control mapping
 - b. Display
 - c. Audio
 - d. Music
 - e. Map

- f. Advanced
 - g. Help Screen
 - h. Quit
5. Inventory Menu
 6. Credits