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Immersion in Digital Games: What is immersion in the gaming spectrum?

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Master's in World Internet Studies

Supervisor:
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SOCIOLOGIA
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Acknowledgements

This was a very secluded and somewhat stressful dissertation to write, to the point that I almost felt like giving up on it, not because of the level of difficulty of the theme itself but rather the amount of work and time that I had to put into this. The current pandemic situation did not help in the slightest and made it a very lonesome project.

Luckily, I have had the perk of working with interviews as the main methodology used in this dissertation.

Firstly, and foremost, I would like to thank the people I interviewed, all 17 of them. Without them, it would not have been possible to conduct a study on the matter of immersion. Without them, I would have probably delved into a more impersonal methodology, such as the likes of surveys, which would make this work much more quantitative than qualitative. Therefore, it would be much more connected to more data, more graphics, and statistics. I am happy that it turned out to be the exact opposite as from a personal point of view I find it more interesting to work with a few select people and dig deeper into their thoughts of how something is or works.

Every interviewee was brave enough and accepted the challenge with open arms, and for that time spent with me which I do not consider waste, I am very thankful.

Furthermore, I would also like to thank my supervisor, Tiago Lapa (ISCTE-IUL), who has accompanied me for the last two years that I have been integrated in the master's degree of Internet Studies and accepted to supervise my work and my intents with it. Although few interactions were held when it comes to physical and or online (videocalls) communications, the papers, articles, and thesis recommended were helpful. Still in this line of thought, I would like to also thank Professor Cátia Ferreira (FCH-Católica) for documents sent to help me get started on this dissertation.

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Resumo

Este trabalho é composto em duas partes. Imersão é um tema muito ambíguo que tende a aparecer em inúmeras discussões nos dias de hoje, com especial foco no mundo dos jogos virtuais. A primeira parte da dissertação é a análise da palavra imersão e todos os seus componentes, dando ao leitor uma melhor percepção sobre o assunto – "o que é imersão?". Para responder a esta questão relativamente vaga, teremos de avaliar e definir esta noção de imersão em todas as suas variantes. Não apenas no campo dos jogos virtuais, mas noutros também. Apesar de que os jogos virtuais permaneçam o principal foco da dissertação.

Na segunda parte da dissertação, é apresentado um estudo de caso baseado em entrevistas, usadas para o efeito de saber o que os entrevistados pensam que é imersão e se está apenas conectado ao mundo dos jogos. Dito isto, é objectivo final desta dissertação, construir uma tipologia baseada no sexo e idade dos entrevistados, de modo a determinar o que uma pessoa de determinada idade achará imersivo e ao mesmo tempo desmistificando e clarificando a noção de imersão.

Palavras-Chave: Imersão; Envolvimento; Jogo Digital; Mecânicas; Narrativa.

Abstract

This work is comprised of two parts. Immersion is a very broad topic that tends to come up in a lot of discussions nowadays, with special focus on the world of digital games. The first part of this dissertation is the analysis the word immersion and all it encompasses, giving the reader a better perception on the matter - “what is immersion?”. To answer this relatively vague question, we must evaluate and define this notion of immersion in all its fields. Not just the digital gaming department, but in others as well. Although, virtual games remain the focus of the dissertation.

In the second part of the dissertation, it is presented a case study, based on interviews used to find out what people think immersion is and if it is only connected to digital games. With everything stated, it is the final objective of this dissertation to build a typology based of age and gender of the interviewees, in order to determine what a person of a certain age would find more immersive, and at the same time demystifying and clarifying the notion of immersion.

Keywords: Immersion; Engagement; Digital Game; Mechanics; Narrative.

Glossary

Term	Definition
F2P	Free to Play – a player that does spend in order to play a game
P2P	Pay to Play – a player that pays in order to play a game
UI	User Interface
SFX	Sound Effects
MMORPG	Massive Multiplayer Online Role-Playing Game
RPG	Role-Playing Game
AI	Artificial Intelligence
IP	Intellectual Property
PC	Computer
Shoot'em-Up	A frenetic type of shooter game (can be First or Third Person)
Beat'em-Up	A brawler type of game that focus on hand-to-hand combat (from the likes of fighting games)
Hack & Slash	Also known otherwise as Slash'em-Up (based on melee weapons combat)
Speed-Runners	Players that finish a game in the shortest time possible

Digital Games mentioned:

TLOU- The Last of Us; GOW – God of War; COD – Call of Duty; DMC- Devil May Cry; RE - Resident Evil; Dark Souls; Sonic; Mario; Just Dance; Beat Saber; Uncharted; Bloodborne; Dead Space; DOOM; MH – Monster Hunter; DA:O – Dragon Age: Origins; Mass Effect; Civilization; SIMS; Uncharted; Deus Ex; Life is Strange; Citizen Sleeper; In Other Waters; Dragon Ball Legends; Pong; LOTR – Lord of The Rings; BDO – Black Desert Online; Spacewar!.

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Part II

Introduction

This dissertation's structure is presented in a way that is both understandable and detailed for the reader. In the first part of the dissertation, the main focal point is the conceptualization of the word 'immersion'. Understanding what it is meant by that word in various fields, as well as looking at some definitions by some authors, which are important and may be considered *meta* definitions.

The second part is only related to a study case conducted by means of interviewing 17 players, whether being casual or hardcore, if they play digital games is what matters the most for the current study. The intuit of this portion is to build up a typology of players based on their age and gender, whilst always having in mind what games they find immersive. For that feat, some graphics were fabricated to showcase, both visually as well as written, a more detailed view on those interviews.

Immersion is an important and relevant topic to discuss nowadays, in various fields such as cinema, music, literature among others. However, when it comes to the digital games or game studies, immersion is discussed in innumerous and unique ways. In a world where creative industries generate a large amount of profit, digital games hold a high share. From the development of the industry itself with constant upgrades to graphic quality, sound designs and well-structured narratives, to the communities of gamers themselves, which are constantly changing.

The structure of the dissertation had the intention of answering the main research question, which is to find out what is considered immersion in the gaming spectrum. To answer the latter, some sub-research questions were needed to fully grasp the ideas that will be discussed. Namely, what do the players find immersive in a digital game and is there a socially constructed notion created? If players prefer specific genres of digital games, does that inform us the types of games they will purchase and play? Can a typology of players be defined, having into account the methodological approach (interviews)?

Having these main and subsidiary questions allowed for a solid core of the dissertation. Not only did it provide a starting point as to what would be researched, but it also helped when formulating questions for the interviews segment.

As it has been said previously, the dissertation will be commencing with a conceptual view on the matter, in a first instance. And in the next one, it will focus mainly on the case study. The main theoretical framework is based on the methodological research conducted by Brown and Cairns (2004), which has the name of Grounded Theory, whilst it being called theory, it is mostly an inductive method used to define immersion, as theories were proposed after the observation of interviewees in certain situations. This dissertation will be based on that specific research as it also works with interviews.

Suffice to say that other opinions from different authors were also used, analyzed, and taken into consideration. Some examples of these authors are, Goethe (2019), Lipscomb & Zehnder (2004), Jennett (2008, 2010), among many others which were used to complement this research and further develop it.

The notion of *flow*, originally approached by Csikszentmihalyi in the 1970's, is a concept that accounts for the pleasure/enjoyment found by immersion in everyday activities. An idea that originated through the observation of mundane work tasks, such as the creative process of an artist painting or more so in the field of games that is discussed in this dissertation, the observation of chess players and the overall enjoyment as the reason as to why they play it or participate in those activities and games. (Nakamura et al., 2014)

Csikszentmihalyi theorized that skills, difficulty, and experience of flow are all connected and that if a player's skills do not match the difficulty of the game, the occurrence of flow is non-existent. The mismatch of these elements can result in either exasperation and/or tediousness (Sherry, 2004). Csikszentmihalyi states in his research that games that possess ideal characteristics (the link between game difficulty and player skill) to create and maintain flow experiences are more likely to be played and the ones that do not create a flow experience are mostly discarded.

Flow's criteria are compiled from a list (Csikszentmihalyi, 1990) of sensations reported during a moment of flow but the elements from the list might not be applicable to everyone, thus considering *flow's dimension* more descriptive than definitive might suit the concept more, because if compared to the research conducted by (Brown and Cairns, 2004) on the stages of immersion, a similar outcome is provided where the characteristics of each stage of immersion might not happen, it is not guaranteed that the player will reach a moment of *total immersion*.

The dispute between flow and immersion lies mainly in the cognitive and sensory products of an immersive experience. The similarities between both flow and immersion are noticeable but there are differences as well. Some believe that flow is an optimal experience, based on an intense experience, whilst placing immersion under a sub-optimal experience. (Jennett,2008,2010) The less intense experience purported in immersion has to do with the first two stages of immersion: engagement and engrossment (Brown and Cairns, 2004). This is due to the last stage: total immersion, being a "relative" to the optimal and intense experience that flow offers, which in the case of immersion occurs rarely and can be compared a *deep-flow* status which is achieved by major components of the dimension's flow: skills and difficulty; concentration; clear goals; instant feedback; deep focus, yet effortless involvement; control over activity; loss of self-reflection; altered perception of time. (Csikszentmihalyi, 1990, 1992)

Part I

1. Conceptual Key Factors

The best way to start is by analyzing the various definitions of the word "immersion". At first glance it might feel either too obvious or too vague of definitions that we could attribute to that word but in fact it is rather complex to describe and define.

If we look at the definition of the word "immersion" in certain dictionaries, we will find something along the lines of:

Cambridge Dictionary: "Immersion: (involvement) the fact of being completely involved in something. Total immersion in a videogame is like living another life."

Merriam-Webster: "Immersion: The act of immersing or the state of being immersed such as absorbing involvement."

Just by looking at these definitions in two online dictionaries, we come across a very pertinent word as well, for it is mentioned in both, that word is "involvement". So, in a way, it is pertained for the player to be involved with or within the game they are playing.

Digital games have been part of the way of living of some people, namely the ones that enjoy playing games, for quite some time now, whether for leisurely or educational purposes. From *Spacewar!*, developed in 1962 by a group of hackers in MIT, assumed to

be the first real computer game (Graetz, 1981), which later Monnens and Goldberg (2015) write about the story of *Spacewar!* and the spread of that game/program from MIT to computer labs around the globe, to *Fortnite*, one of the biggest games of this generation both in terms of revenue and popularity (Carter et al., 2020). Many things have changed, from the early graphics that resembled nothing but a board with a few pixels to a fully-fledged digital game with outstanding visuals and an immense world to explore. With these changes in graphics, UI's, compelling narratives, advancements in sound production, among others, did immersion also change from one "era" to the other?

2. Concept of Immersion

There are different notions of the word *immersion*. Different people can and will consider different ideas when it comes to defining immersion in videogames. Another very interesting difference is that of platforms. What this means is that players that play in a determined platform – e.g., *PlayStation* versus *Nintendo* - their opinions may differ, having into account their gaming platform of choice of an individual.
However, one of the most interesting aspects of it is the fact that people might think that what they are experiencing in a videogame is synonym of immersion, when it cannot be immersion per say, but what researchers like to call – *spatial presence.* (Tamborini et al., 2006)

> "They do not call it "immersion." Instead, they call it "presence," which, admittedly, isn't as cool. Regardless, researchers have identified several kinds of presence regarding how we perceive media; but it's spatial presence that I think comes closest to what gamers think of as "immersion." (Madigan, 2012)

Having that said, a point is reached where it is also important to discuss the definitions of both *immersion* and *presence*. They are not the same but are somehow linked to one another.

When *immersion* is discussed, it is usually what people think, an ability of the virtual reality system of tricking your mind to believe that you are in another place. To this feeling we call it *sensorial information* (Ryan,1994), which is what gives the brain an impression of being somewhere else. Immersion tends to be implemented on a technical

level. Imagine two sets of virtual reality headpieces, one with HD resolution and one with 4k display. Which one of these headpieces would cause the user to feel more immersed? The answer here would be simple. The 4k display would cause the user to feel more immersed within the content of that VR, as it would enable the *sensorial information* to reach heights of the real world, basically portraying reality in a virtual system, a mechanism that not even our brain can tell the difference.

This little example preview explains what immersion is, as it regards to how good and comparable to actual reality the device really is.

But what about *presence*? *Presence* does present some virtual reality experience features, but it is not the same as immersion. Here is why. If we consider presence as a mechanism of engagement and emotional feeling, we can also layer out interesting features that only pan out in this presence field. Does the world offer us a way of communicating and interacting with other users or NPC's virtually, but always keeping that sense of reality? Is the story compelling, in a way that the user throws himself into the depths of said story?

This all strengthens the affirmation of the word *presence* being what most of the users experience as it indicates how much the user feels in that virtual world, how absorbed and swallowed they are, how that virtual reality experience makes them feel like a real one and so on.

A pressing issue is what we have here still, as regards to *immersion* versus *presence*, as one is objective and the other is subjective, accordingly. Immersion is objective due to the level of sensory fidelity and presence is subjective due to the different psychological responses of users. It only depends on the person you are speaking to, and you will most likely obtain different, but at the same time, valid answers, and results.

2.1. Grounded Theory

Brown & Cairns (2004) interviewed seven gamers. The interviews were semi-structured and were designed to understand the concept of game immersion, which is what this dissertation is all about. Even though Brown and Cairns (2004) had a more participatory research/physical presence as they put those seven players playing their favorite game and here, I only interviewed gamers through a conversation, as the means to putting or watching them play something was scarce. It is important to discuss the basic

premises of the *Grounded Theory* and for that, Brown and Cairns (2004), developed a hypothesis consisting of three levels of immersion.

According to Brown & Cairns (2004), the first level of immersion is *engagement* and that is how the grounded theory of immersion began. This is the lowest level of involvement (Bouvier, 2015) with a game. It requires the player to invest time and effort. However, this poses a barrier, which is what they call *access*. If we look at a gamers preference when it comes to digital games, we would be able to tell that a player that does not enjoy racing simulators would not even try to engage with a game of that category, unless he is forced to, even if by pure peer pressure.

Access also might refer to *game controls*. This feature is of extreme relevance. For instance, some fighting games have very intricate controls, that a professional player would know how to fully use a fighter's kit. However, if a comparison is made with a casual player that tends to just press any button on the controller and/or keyboard, it is likely that for them the controls of said game are not the most appropriate as they would mash buttons and eventually do something in game that would give them the edge in a fight simulator. With that said, the controls must be intuitive and of an easy comprehension. Even though some sort of skill ceiling must exist. If it were not for this *skill ceiling* mechanics one would not be able to differentiate between a good and bad player.

Without a good control scheme and parameters of usability, there is no total immersion. Good controls are one of the primary and most important sources to game developers and gamers alike. If it is not intuitive for them to play, they might feel lost right from the start and that hinders their progress into getting immersed in said game.

Engagement also poses another barrier – *gamer investment*. "To be or feel immersed, the player must invest time and effort into playing games. One very important aspect of this second barrier is that […] The effort the gamers invest relates to the energy they put into learning how to play. […]" (Emily et al., 2004, pg.2)

To be fully immersed takes both time and effort, but one thing is almost guaranteed if the steps above are performed, which is learning how to play. By doing this simple task of caring on how to play a game or even master the gameplay experience later, it is halfway to be immersed in something.

All of this would mean nothing without the effort that it is put in the game, but with such effort there must be some type of reward. Otherwise, what would be the point in investing precious time with something that does not even give anything back, other than perhaps the experience of playing a game? But if that were the case, then it would not be called immersion per say, but rather a casual playthrough.

These reward mechanics, more specifically in MMORPG's, where if invested in it, either via time or even monetarily there is guaranteed progress, there are guaranteed rewards, and there is the possibility of becoming stronger and be able to keep up with the *meta*. The major difference nowadays between P2P and F2P is usually the rapidness when it comes to progressing through a game, to reach faster what is usually called "Endgame". Although there are still games out there that just do not bother about gaming communities and decide to provide players that pay to get rarer items and gear or even costumes/outfits with attribute bonus to give them a bit of an unfair advantage when competing in leaderboards with the F2P's.

Once these two barriers are overcome, a second stage of the *Grounded Theory* appears which is *Engrossment*. Just like *Engagement*, this stage comes with more barriers. This time, the barrier to *Engrossment* is "game construction". This barrier pertains to several features within the game that affect one's emotions. These features tend to do with how much the developers of a game invested their own time, effort and resources into creating a world with fair bits of complexity and quests/tasks to do , a solid plot, and lastly but not less worthy of mentioning, the visuals, which pertains to the graphics and engines used to achieved certain levels of reality or even the opposite, levels of unrealistic stuff that in a way, it captivates the player for being so different and out of box – these types of games are usually called "Indies"- which tend to be on a wave of overflowing creativeness.

Once again, an example of MMORPG's can be used here due to the worldbuilding construction which tends to be developed in intricate ways. However, the example that would suit the most in here is story-driven digital games. The reason for that is the keyword "emotion". Whilst MMO's might have a solid lore with many twists and turns, sometimes they lack in the emotion department. It might be from personal experience but the emotion a player seeks is usually found in these narrative games which the main priority is the story itself.

> "One thing I feel it is important is the fact that even though I might feel immersed in an MMO, which is my case, I do not think is because of the story aspects of it, but rather the gameplay, the mechanical aspects of character building, skill upgrading, perfectioning my combo rotation, among others. These aspects alone make me feel immersed. I can play for hours without even noticing I am doing so." (Interviewee, Male, 25)

"The gamer is now less aware of their surroundings and less self-aware than previously." (Emily et al., 2004, pg.3)". This is when the theory becomes more interesting. The logic behind one feeling "completely" immersed can be through a Zen-like mindset that enables you to enjoy an experience with no worries, just you and your game of choice. Brown and Cairns (2004) even underlined the construction of a "distraction free environment" which is done by turning off the lights and turning up the sound. In this way, we can feel even more immersed, enabling us to move towards *total immersion*.

The third and final stage of the *Grounded Theory* is *Total Immersion*. Again, just like the other stages, it comes with more barriers. This time – *presence*.

Before diving into the barriers, a quick analysis must be made concerning what they mean by presence being *total immersion*. To this notion many might say that it is the ability of being able to detach from reality to a degree that makes the game the most important thing in the world. However, there is a catch, much like a lot of things, it tends to be nothing but a "fleeting experience", meaning that what you are experiencing is everything but a lasting experience.

As for the barriers, it is presented both *empathy* and *atmosphere*. If a player cannot emphasize with a character and transfer himself into that game realm, it is halfway for a player to lose focus, thus not entering a mental state of total immersion.

The atmosphere on the other hand has much more to do with the game building and construction (graphics, sounds, mechanics, and the plot) which must be relevant, otherwise what would be the point in having a fantastic plot with an amazing fighting mechanism accompanied by the latest generation graphics? For a gamer to feel immersed, these aspects must be tackled. The more attention and effort used when creating a game, the more immersion it should provide to the gamer.

> "Attention is an important part of immersion and in the case of total immersion in the extent and location is important. The games seem to play with three elements of attention: visual, auditory, and mental. The level of immersion felt by gamers seems to correlate to the number of attentional sources needed as well as the amount of each attentional type." (Emily et al.,2004, pg.4)

These three levels constitute a solid framework of how the word immersion can be defined in the gaming spectrum.

3. How do games create immersion?

As for a more personal input on the matter, three main cores can be identified in this procedure: 1- spatial immersion: coherent and evocative world design; Exploration based (world building); 2- narrative immersion: stronger characters, compelling themes, and a solid plot; (positioning the player in the shoes of a character or even get involved/immersed/invested with the story the game is telling (*Uncharted; TLOU; GOW*); 3- mechanical immersion: strong engaging mechanical gameplay loop; intuitive controls; diegetic interfaces.; 4- psychological space: the sense of attention regarding a player's activity and their psychological reactions.

3.1. Spatial immersion

To start of the *spatial immersion*, it is the one most people would associate with the word immersion: *Spatial immersion* comes from our enjoyment of playing in an environment that if not realistic, at least it would be believable, not a fairy tale dream like.

This type of immersion can be found in Immersive Simulators for instance, *Deus Ex* and others. Immersive sims are a genre of games, generally action-based games that focus on player agency and heavy use of systemic mechanics. This makes it so that the game world feels alive, it is not purely the static and artificial challenges and actions, usually saved for the ease of players, but instead they are living environments that illustrate the very sense of reality. To create a believable environment, an impression of its existence is extremely important even if it does not exist in the real life. Immersive Sims tend to do this well when adding certain small environmental stories that add up to the level of reliability, making it feel more real, they add more depth to the world but are not part of

the main narrative. This can be seen in a multitude of digital games but for instance, in *Fallout 3* or in these types of digital games where you are a character that simply walks into a town, and you have your usual NPC's that sell you stuff from their shops. You could do a series of mini quests, for example to find out the NPC's name, what he did, what he did not do, what he is hiding, etc. This idea makes it so that the NPC's feel real.

3.2. Narrative immersion

The second type is *narrative immersion*, this one is well-known as it is what most resembles to those triple A games like *God of War*, Uncharted, *The Last of Us* or even indie-like games such as *Square Enix's Life is Strange*. The storytelling tends to be the main attraction of this type of immersion. Usually, the player feels immersed in a story told from beginning to end and feels attached to either its story or even the character(s) him(them)self(elves). It does not have to be an action game, but these are the ones most people are acquainted with. Stories can be moving or not. Not every player has the same feelings towards a story driven game, either because everyone has different views on the plot itself or if their life experiences are considered, it could be a totally different experience. (Calleja, 2007, pg.87)

This type of immersion also suffered various changes throughout the years, which has a lot to do with player driven dialogue choices and story compelling changes that enables the user a more diverse experience when it comes to proceeding with the story.

A big shift in narrative immersion was for example when *Dragon Age: Origins* released back in 2019. It was the year that revolutionized the way the story is told in videogames. At least as both an RPG and triple A game, for it gives the player the option to change the story of the game through dialogue options, creating infinite possibilities of outcomes. The number of possibilities towards a narrated story within a digital game where the player could choose to do whatever he felt like doing were immense. This was a personal experience due to being a fan of Tolkien-like tales. It contained a plethora of choices in dialogues based on the race you picked as a character and a lot of those choices felt meaningful and let the player see repercussions of their actions and words.

If a comparison were to be made between *Dragon Age: Origins* and *Mass Effect*, which also offered multiple dialogue options, *Bioware's Mass Effect* had it easier. It did

offer the player a variety of choices on what to do but not in the way the *DA:O* did for *Mass Effect's* story is way more linear and contained.

The same thing could also be said for games such as *Monster Hunter* by *Capcom*. One would imagine that it would only be based on an adventurer killing monsters and dragons. In a way yes, but there is more than meets the eye, as some interactions are made between monsters. It is interesting because it would be odd to see a couple of dragons just casually passing by each other and no interaction was occurring during that moment. Furthermore, a simple yet intriguing task could have to do with a simple interaction between monsters to for example, find a weakness that allows the player to beat that monster more easily. All of this can add up to the lore of the game and/or characters themselves. The passage from non-immersive to immersive content within a game is also based on the smallest parts of a narrative that are not the main quest, but rather the little side missions that pull the player away from the main story.

Another important role is that of the secondary characters. These can influence the way you play a game, positively or negatively. Whilst they can be helpful and act as emotional anchors, they can also be dull characters with no charisma and no purpose other than to annoy the player and making them feel like a simple pet would suffice for the job or have no companion at all. Great examples for these roles are: The triple-A games, such as, *GOW* and *TLOU*. Both offer the player something to connect them to the lore and for that they use kids. A smart way to make the player care about them, preventing them from any harm and from becoming someone that you do not want them to be. When discussing this matter. It is not only about the story of the game or how the characters look but also gameplay wise. 'What do these secondary characters add to the game? Are there new mechanics of gameplay associated with them? Would it be the same to have them in this game or not?'. Questions such as these are important to distinguish a good from a bad character.

A bad example of a companion would be Sheva from the popular series *Resident Evil* by *Capcom*, for instance. *Resident Evil 5's* main feature was its cooperative mode. That mode made the story be centered around two characters. One of them known from the previous installments of the series and one that was new. With the idea of a cooperative game in mind, developers knew that a large chunk of the community would play it alone so they made it so that Sheva could be played by the AI. Little did they comprehend that she is more of a hassle to deal with than an actual help (at least gameplay wise, where

you must manage her inventory whilst the AI uses items without your consent, even if it is just a poorly introduced mechanic that can be fixed with patches, it is still bad). Lore wise, she does not add much to the table either but the worst part of it is that you must go through the game with her, it is mandatory because that is how the storytellers decided to create the main plotline.

Forcing the player these kinds of gameplay where a character is completely unnecessary is what makes a bad secondary role. One, it either makes the game worse or two, it does not matter if it exists in that world or not.

Another aspect of it this type of narrative immersion is the use of *diegesis* (Kleinman et al., 2019) which in simple terms, in this context is a diegetic UI coming from the narrative of the game rather than the world itself. It is up to the game to decide which convention suits better for establishing diegesis, such as non-interactive elements (e.g.: cutscenes or sound cues to alert players of an incoming action input). One of the best examples would be *Dead Space*, a horror third-person shooter that implements this UI system in a way that can feel immersive. Rather than a health bar placed in a box somewhere on the screen, they make use of the character's body suit with a meter that resembles a health core. The same thing happens with the ammo you use, being displayed on the actual gun in game with a holographic display. These examples are also portrayed as a form of narration in games. Whilst this can create a visually pleasant aesthetic for a game, there are some downsides to it as well, and that is where *mechanical immersion* comes in.

3.3. Mechanical immersion

Mechanical immersion struggles with the capacity of offering the player the most satisfying experiences whilst sacrificing button prompts, useful hints, and how much ammo you have left, just to name a few.

Nowadays most games offer the player the ability to turn the User Interface ON and OFF, thus offering the player either a more immersive experience or a more frustrating one. The reasoning behind it is that whilst some people might feel that having the UI OFF is more immersive because it feels more real and they do not have to look at other interfaces other than the actual game world itself, others find this matter infuriating. The

inability to tell if there is enough durability in a weapon so that a player can defeat a boss, the way you feel lost with no world map displayed on screen or even not having subtitles on and you cannot understand a word they are saying in game can become reasons that make a person feel stressed and anxious. This can happen in any game type but imagine horror style games. This problem would accentuate even further the downsides of having the option of the User Interface OFF. But at the end of the day, is that not the game developer's intension if we talk about the subject within the horror game thematic?

Therein lies another issue, the difference in mechanical immersion between *fast and slow-paced* digital games. Faster paced games can positively benefit from the non-usage of a UI, because in those type of games, there is usually adrenaline involved, the player feels satisfaction from the very first engagement of it.

However, when it comes to slower paced games, this option tends to be tackled in a different way and it makes sense, because in games that are played slow such as *Civilization Series* for instance, a UI is needed to benefit from the game. The UI in these types of games tends to be one of if not their main core (almost if mandatory having multiple boxes within our screens with a variety of useful information). With that in mind, slower paced games also try not to compromise the strategic pace of the game, because there is always something happening, a new decision to be made, a decision that you made that could be paying off or not. That way, there is always engagement. This is a comparison between faster and slower paced games. Whilst many might think that they are complete opposites, there are similarities, and a slower paced game does not have to have a lower amount of engagement by the player. It all depends on the game and the player. A more cerebral gameplay might offer more engagement from the player than an actual faster paced shooter, as the latter does not usually involve great amounts of concentration and the more tactical games do require the usage of the brain more often to complete tasks and progress through the game.

Developers nowadays can also adapt and have adapted slower paced games. Streamlined narrative games have difficulties in the aspect of exploration through diverse means of the player's imagination. This is a way to create entirely new immersive experiences and it is usually indie type of games that do this. E.g.: *Citizen Sleeper*, the new IP from the developing team *Jump Over The Age*, creators of the acclaimed (*In Other Waters*). Famous for being a narrative RPG that takes this slower paced gameplay in a narrative where you play as a digitized human consciousness in an artificial body owned

by a corporation, and the player needs to create friendships and explore an interstellar metropolis and its interstellar capitalist factions. It is sort of intuitive but fiddly regarding some aspects.

3.4. Psychological space

Immersion could also be viewed in terms of *psychological* space, as if someone is in that "zone/that moment/that focus point". This neglects the ideas referred above of realism, believability, and simulation. It does have more to do with a state of mind, particularly that moment where you are playing a game and all worries and problems vanish from your head. Time goes by faster and you just make that moment count. This can be considered a sort of "indie" like notion of immersion as it is, or it feels quite rare, but it portrays a peculiar outlook of the notion "immersion". As a result, it can be said that in a psychological space, immersion tends to do with the *temporal dissociation* and *awareness of surroundings* as it is inherently connected to a psychological experience with a digital game. (Jennett, 2008)

The simple act of engaging with a game does not have to do necessarily with the search of immersion but rather, that engagement can lead to immersion without the player realizing it. Nevertheless, immersion tends to be one of the keys to a good digital game.

4. Story-driven immersion

Well-told stories usually entice the attention to a said digital game, making it seem more credible. Therefore, these types of games are connected to immersion. From there two kinds of immersion in games can be identified – *impersonal and personal immersion***.** (Goethe, 2019)

4.1. Impersonal immersion: With this type of immersion, players tend to identify a specific character within a videogame, a character that offers traits such as personality, behavior, appearance, and context that somehow tend to be different from the observer point of view. The player looks at the characters actions and story-related behavior but does not put himself in the flesh of the character they are playing with. It is usually through cutscenes and dialogue story-driven context that the player experiences the point of view of said character. The player is just there for the linear

immersion that is offered by the game developers (more specifically the narrative team) themselves.

4.2. Personal immersion: Unlike the passiveness of player input in impersonal immersion, here the player takes full control and puts him/herself into the game. This can be considered a character that the player most identifies with, that does not look like him or her in the slightest but the one that the player opts to identify with rather.

5. Sound

Even though most are predisposed to always associate immersion with some type of imagery, it is also important to discuss the thematic of *sound*. It feels so meaningful to have such an option in games. Without it, a digital game would not be able to produce the number of good results when it comes to getting the full attention span of the player. Sound is often used to complement the action being displayed on screen (Fu and Zhang, 2015). The function of sound in digital games is becoming more prevalent and plays an important role when it comes to the user interaction with a certain environment. This combination of sound with interaction by the player makes sound a fundamental part of the player's overall experience. Although sound appears to be a staple in digital games, it is less discussed than high-end graphics and their properties.

From a personal perspective, it is safe to say that it is odd when there is no sound on the game currently being played. Does that make it non-immersive? Not quite. It can still be immersive as there are probably people that play with the sound options off for many reasons (Refer to Part II- Case Study), but it does maim the ability of calling it a solid immersive experience.

5.1. Background music in video games

For an immersive quality of a video game, background music plays an important role (Fu and Zhang, 2015). Sound can proportionate an impression of a realistic space, even though we are in a virtual world. This soundscape alone can create a sense of immersion/presence of something that is real, to be carried into the fictional game world. More than a passive component of a video game, game music can have the potential of

linking the gameplay with the background music. This way not only adds a more immersive experience by having sound effects usually by means of plain action sequences (SFX) but also by having an ambient sound as well in the mix. From the wave synthesized beeps of the arcade game, *Pong* (Atari,1972), one of the first computer games ever created, to the more futuristic and modern sounds of the rebooted version of *DOOM* (2016) and the subsequent *DOOM Eternal* (2020), with heavy electronics mixed with guitar sounds (composed by Mick Gordon), which adds up to the intensity of gameplay of a modern *Shoot'em-Up*, with a sound-sculpting masterpiece.

All of this is possible due to the modifications and advancements of sound components and audio engines, that have now the ability of dynamically shifting and altering sounds, which are appropriate to different situations within game. A harmonization between the sound and display is the outcome we have here. (Klimmt et al., 2018)

A connection between soundtrack music in digital games and *spatial presence* (Tamborini et al., 2006) can be made. Spatial presence refers to the experience of being physically situated in a virtual environment. This "illusion" alongside soundtrack music forms a richer sense of placement within the virtual world because all the sounds are made with the intention of making the game more appealing, convincing, and authentic to the point that it creates that illusion of being in the real world.

Ermi and Mayra (2011) developed a comprehensive model about gameplay experience and state that gameplay experience and immersion into a game are a multidimensional phenomenon. The model is a heuristic representation of key elements that structure the gameplay experience and when these three key elements are combined, they make the best digital game: sensory information; challenge-based immersion and imaginative immersion. Therefore, the name of SCI model (Ermi and Mayra, 2011). They claim that sensory immersion, whilst connected to the audiovisual execution of games, it can be recognized even for those who have less experience with games overall. The main premise is that powerful sounds easily overpower the sensory information coming from the real world, which makes the player entirely focus on the game world.

Case in point, game soundtracks can augment the player's experience of flow, creating a state that motivates them to surpass any given obstacle, leading to a sense of enjoyment when playing the game with soundtracks on. The opposite happens when no

sound is involved in the action of playing, where a player can feel too relaxed and uninterested just by the screen display and gameplay. (Lipscomb and Zehnder, 2004)

6. Immersion perceived as an addiction

6.1. Gacha Control/Gacha Mechanism

There is a type of game more within the mobile phone area that is called “Gacha”. Gacha might be a word that a lot of people might not be familiarized with. It comes from “gachapon/gashapon”. These consist of a variety of toy vending machines, most popular in Japan. Gachapon is an onomatopoeia from the sounds “gacha”, that comes from the hand-cracking of the vending machine when you twist the handle and “pon” for the toy capsule landing in the collection tray where you retrieve the prize.

What makes this theme interesting is the passage from a physical gacha (defined above), to a digital platform. It is called the virtual gacha. Imagine the same mechanism of the vending machine gacha in a videogame. You enter a game and there is a tab for you to summon characters. You get a random character that was featured in the current banner the game has.

The player can summon a character with in-game premium currency that can be purchased within the game and is often given for free to keep the current players interested and claiming attention to new players. Imagine loot boxes but instead of them giving you cosmetics, they give you a character that pretty much power creeps the game, thus incentivizing players to spend more on their game.

Why is this relevant? Because, if we think about what the companies are doing, we always come across a pattern of them wanting us to be loaded in the game. Playing their game makes them money and almost make us, the players, forget the real world and our jobs, because it may get us addicted to a certain game.

An example of a mobile gacha that requires you to grind the game and pull units within an in-game banner on what we call a summon pool is *Dragon Ball Legends*, a gacha mobile game that recently hit the three-year mark, produced by *BANDAI NAMCO*, which detains the rights for the “gacha mechanism” (Justia Trademark). For the user to keep up with the latest content and not fall behind the so called, “meta”. Users need to

pull characters from that mobile game and need to invest time, a lot of time grinding, participating, and completing events. The brief time investment comes into play here.

This game type is remarkably interesting. Not only due to the amount of money the companies make based on a player input and investment but also because this so called "addiction" might be confused with immersion. It depends on every people's mindset.

6.2. Economic and Gambling Ideas

Is it needed to talk about macro and microtransactions? It feels pointless in a way and interesting in another. Pointless because discussing immersion in and on itself, microtransactions add nothing to the table. But if we discuss it alongside addiction and gambling issues, it might be worth it to mention even if just a brief commentary about gambling as an immersion inducive activity.

For the gambling as an immersion inducive activity, a proposition would be looking at an example of a company and game which I am familiarized with. It is one of the most successful sandbox MMORPG's ever and it is developed by a Korean Studio, called *Pearl Abyss*. They released *Black Desert* back in 2015 for PC platform and has since then evolved into other platforms such as consoles and mobile in 2019.

One might wonder why the need to mention a particular game, which a lot of people might not even have heard about. It is important for the gambling idea because in that game, there is an enhancement system, which is common in these MMO type of games. But one of the differentiating points when compared to other MMO that offer a similar "enhancement build", is that in this case, the progressing system of your gear is only measured in the enhancements you do, otherwise you must grind certain areas to acquire game currency that enables the player to buy the gear to enhance. One of the worst things is that at higher levels, gear might break or decrease in rank. What has this to do with the gambling portion? For people to progress through the game and be considered prepared for Player versus Player or Node Wars and Sieges content, they need that high level gear, and the enhancement is what allows that. Some people, the so called, "whales", "megalodons", "dolphins", etc. (people that spend money on games), they spend exorbitant amounts of money and the gambling system in this game might be addicting

due to how much you can enhance a piece of gear and the possibilities of it failing or succeeding. This is one of the prime examples coming from personal experience.

This also brings to the table a type of game within types of games meaning, gachas as referred above. These gachas have one of the most addicting mechanics about a game, which is the pure ability of pulling a unit, a card, gear, or anything else at an extremely low rate is what makes gachas what they are, and people dive straight into it. They splash ridiculous amounts of money on a game that is known to have no more than five years usually, albeit there being some exceptions to this rule, but it tends to be those bigger IP's, and all of it due to an addiction to gambling systems within digital games.

Suffice to say, that this market practices are in a way a scam and in another with a deep connection to what might be considered gambling and its addictive component.

There are positive and negative aspects to these practices. For instance, if a player that does not have that much time to play a given game and has instead the ability to purchase certain packs sold in the game store, that allows him to somewhat get close to what a gamer would be at if he had the time to play the game. That sounds like a good practice, and it is also one that many companies lean towards to work around with. However, when the same player that has no time to play is given a bigger edge in their progression when they spend money, the system becomes unbalanced. It is the downfall of many games due to the dichotomy between Free to Play and Pay to Play. When a Free to Play can no longer compete with the Pay to Play players or at least keep up significantly, it is a sign that something in the game's structure is fundamentally wrong.

6.3. Trapped in a Virtual World

> "Immersion in a virtual world is viewed by most theorists of postmodernism as a passive subjection to the authority of the world-designer - a subjection exemplified by the entrapment of tourists in the self-enclosed virtual realities of theme parks or vacation resorts (where the visitor's only freedom is the freedom to use his credit card)." (Ryan, 1994, pg. 7)

The fact that one might consider immersion as the imprisonment of the self on a select virtual world, is something fascinating. From the perspective of a game developer, it is hard to know if this is their real intent. One thing is to want people to play the game,

another is to captivate your audience in a way that traps them in a game, almost like deceiving the player.

Challenging games or small sections that require our full focus and attention might be one way the developer tries to trap the player into feeling immersed in a digital game. All of this is dependent on the player. The player might feel like it is worth their time investment in completing a challenging section, whilst others might just quit and either call it a day or uninstall the game and never play it again due to the frustration of it being too difficult or, yet again, a non-intuitive control setting.

6.4. Challenges- a threat to immersion?

Challenging content can provide the player a means of achieving pure satisfaction, but it can also hinder the enjoyment factor on the other side. Usually, it is related to the player in question. If the player is a hardcore trophy hunter, the challenges faced in the game can boost his morale and bring him closer to a state of total immersion (Emily et al.,2004). However, if the player lacks the will of achievement grinding, because usually those sorts of tasks are linked to more difficult content, or at least to a more challenging task than what a casual is used to, then it can pose a threat to immersion. E.g.: a casual player playing *Dark Souls*, which by itself alone is not an easy game to play, even in the easiest of difficulties. Whilst it can be rewarding if you put your mind to it, it can also be frustrating at times.

These types of situations can happen in games with a particular system such as once the character dies, the player does not get to revive in the same area but rather they start in areas that feel like the beginning of a level, as you experience the journey to go back to a boss where you have died, for example. This happens in games like the *Dark Souls* series, *Bloodborne* and others.

Since in this segment it is being discussed the difficulty aspects of a game being threatening to immersion, I refrained to mention the core guidance of a game level, that might be frustrating inducive activity if not done correctly by the developers, leading the user to feel unattached with any sort of task within game, increasing the chance of a possible uninstalling of the latter. But it is as important as the difficulty level design of a game.

> "Designers should keep in mind that gaming experiences are subjective by nature and the perceived difficulty level of game challenges varies between players. Some players will lack the enthusiasm to engage with too difficult or too easy missions, while some others will classify them as not enjoyable." (Bostan, 2009, pg. 5)

Maintaining consistency in level design is the key to an enjoyable yet challenging experience, whilst keeping it achievable and believable. Imagine playing a game that is easy in the beginning but, for instance, as you reach the second chapter, or the next level, the difficulty ramps up, making the content extremely difficult – this is an example of a bad level design. To keep consistency, it would not be bad to implement a static level adjustment which lets the players progress through the game at their own pace, because the game automatically fills them in a bracket of difficulty standards. However, not all types of games can do this or are even allowed to pursue these types of ideologies. *Dark Souls* series and *Bloodborne* are meant to be challenging from the very first encounter. It is not like someone will just rush through the games and complete them as if they were a speed-runner unless they are actual *speed-runners*.

On the other hand, looking at the RPG genre, the most common thing is starting off at a low level and as the player develops his character, by means of upgrading skills and equipment, the content gets harder as well, but it is usually a slow and thought-out adjustment in difficulty level.

By raising the bar in difficulty level, it is not only combat gameplay wise. There are other variants that contribute to a more challenging experience. Some typical examples of these include the complexity of the map or the environment, the amount of time given to complete a task, mission, or quest.

Furthermore, this can also be linked to the challenging activity that requires skills, in the way that competition becomes an obstacle to the enjoyment and stimuli. Enjoyment tends to disappear when the concentration is solely focused on beating someone or surpassing someone else's high score, when instead the player should be focused on their performance. Competition only comes as an enjoyable feature when associated with the perfection of skills. (Csikszentmihalyi, 1990, 1992)

7. Misconception

7.1. Gender-wise

> "A misconception often perpetuated by the media is that gamers are mostly teenaged males who play alone." (Collins, 2013, pg.13)

This affirmation is relevant because the intent of this essay is to analyze the player's view on what immersion means to them in the world of digital games. For that, distinguishing between genders is important. In this specific case, looking at genders when it comes to play time or who plays the most and is there a significant gap between them? It depends, although the misconception is that there are significantly more male players than female (without making the difference between ages), it could not be farthest from the actual reality, at least nowadays. With that in mind, female recognition (both in development teams, voice acting and consumers themselves) in the game studies area still leaves much to be desired but paving the way for a more equal system is a must for the game industry to contribute to social inclusion (Busch et al., 2017). Digital games, instead of the common or popular belief that they are made to be played alone, are meant to unite players and their love for games. Besides the fact that this holds truth, the social experience is what characterizes most of the games now. Take strictly Single player-games for instance, most of the companies that develop those have a habit of adding social interactions, a social component whilst could be a trend of the new generation, it is an important factor to have into consideration when making these kinds of assumptions.

7.2. A solitary or social experience?

> "Rather than a solitary pursuit, today games are primarily a social experience and played in groups or pairs (virtually via online gaming or in the same physical space). As players become more involved in an online massive multiplayer game, they do not become more socially isolated (as the press might have us believe) but instead become more involved with the social networks that surround the game." (Collins, 2013, pg.4)

This is another misconception. E.g.: Playing a MMORPG, like the name of the genre of the game suggests, the player finds himself playing online with other players, but this type of interaction happens online and not in the same physical place the player finds

himself in. Does this contribute to the social isolation of a player? Not at all. It is possible to see both sides of the matter.

From a negative perspective, playing a game whilst not in the same room physically, can be a contributor to social isolation. However, playing an online game with other people, whilst it being connected with them virtually, can boost one's social status and provide them with a much more natural social experience if the person happened to be shy in person, for instance.

The social experience here is key to understand the involvement of a player in a determined digital game.

Part II

8. Case Study

8.1. Method

I decided to study immersion in digital games and for that I had to direct interviews to see where people stand in this field, meaning I wanted to know from a sociological and psychological perspective what people thought about immersion in videogames. For that to happen, a dense and dialogical methodology (Interviews) was used to evaluate and distinguish different mindsets, much like Brown and Cairns (2004) did.

At first it felt like a survey would suffice but if I want to know how people truly feel about something, I must dig deeper so that the case study is the most precise it can be. I intend to produce graphics in a way that is both informative and simple but also with a comprehensive analysis of the content. For that, multiple graphics will be made according to the answers that interviewees have given me, more precisely with the counts of "Yes" or "No" answers but with reasoning behind it explained.

8.2. Advantages and disadvantages of interviews as a research methodology

Much like any other type of methodology used in research, there are advantages and disadvantages, but that does not prevent their use. Instead, it pleads to question if that methodology was the right one for that research.

The advantages of interviews in this line of work were more apparent than the disadvantages and that is the reason why this was the methodology used in this dissertation. Seeing that what was needed the most was an "inside" look at one's mind and their thoughts, interviews allowed for a personal approach, where the interviewer was given the chance of interacting with each interviewee separately, even though only via online platforms, due to the current pandemic situation whereas it would have benefitted more if a physical interview was conducted. Despite the questionnaire format of interview, the interviewer is given the ability of talking with the interviewee and see their physical reactions to certain topics. The flexibility provided by this type of research method is also a bonus, as well as the capacity to judge an interviewee's spontaneity when answering a question, which also leads to the ability of people that cannot read or write to answer the questions.

As for disadvantages, in this specific case, were more connected to two aspects: a) time-consuming; b) lack of accessibility. Interviews are excruciatingly time-consuming. From the moment the interviewer understands and picks, and wishes to discuss, to the full-on planning of the interviews, questions, interviewees selection, and the analysis of the respective responses and feedback. All of these associated with the accessibility issues, which pertain to the difficult selection of interviewees, makes this research method a hard methodology to pursuit but also a rewarding one from the interviewer's self-fulfillment perspective.

When discussing the Grounded Theory (Brown and Cairns, 2004), as the inductive method followed in this case study, the only aspect that lacked besides the number of interviewees was the impossibility of conducting a physical interview.

8.3. Participants and Sampling

The sample may be rather small but for a methodology that involves interviews it is not terrible and is workable. I have interviewed 17 people and with a sample of this size I was able to produce some interesting research.

To make it more comprehensible, from the 17 interviewed, 10 were male and 7 were female. Due to the lack of people of ages of 40 upwards, the main subjects were concentrated around the ages of 20 to 40 years old.

No names were revealed with the intent of preserving their anonymity, which tends to be a flaw of this research method, the inability of preserving one's anonymity. However, in this case, I think just having both gender and age is sufficient to make a point and discuss.

8.4. Questionnaire

Notwithstanding that questionnaire and interviews are two different tools, this questionnaire was used as a form of interview and was built in a way that could facilitate a statistical approach, afterwards.

The Interviews had two main priorities, I did not need to know their names as it can be anonymous, but I had to know their age and gender. From there, nine questions were the main core of the interview itself. The questions were the same for every interviewee, but when the answers diverged that much, a type of bonus questions was needed to fully comprehend their point of view.

The questions in written format were as follows:

- Q1- What type of gamer do you consider yourself to be? (Casual, hardcore, none of the above)
- Q2- How many hours per day do you play?
- Q3- What do you reckon when you hear or see the word immersion in no context whatsoever? (You can add context if it is preferable)
- Q4- What is/are your favorite game(s)? Why? (Can name three)
- Q5- From those, would you consider it/them immersive? Why?
- Q6- Do you think the level of immersion might be connected to a certain type of digital game? Why?
- Q7- Do you think the level of immersion might be connected to the type of device/console you use to play games? Why?
- Q8- What do you think a digital game needs to become immersive? (Can name certain features/characteristics you might feel are pertinent and justify. Example: a good narrative)
- Q9- Would you buy a digital game solely based on its level of immersion or does it need to have more than just immersion for you?

8.5. General outlook on questions made to the interviewees

I started the Interviews by asking the interviewees their names (even though they will be anonymous in this dissertation, knowing their names allowed for a more relaxed interview and a better organization regarding the latter).

After that, we proceeded with an important part of the interview, which was their ages and gender, conducive to construct a typology. Once, those parameters were filled, I started with the previous mentioned questions that served as guidelines for the main and sub-research questions.

The (Q1) like it suggests, was made to find out what type of player the interviewees consider themselves to be. I managed to discover some interesting ideas on the categorization of each player.

The (Q2) relates to the time spent playing a digital game. In this case, measured in how many hours do they play in a day, for an easy estimative.

The (Q3) was intended to know what they thought about immersion without any given theme of where to apply it – E.g.: Immersion in the thematic of theatre, concerts, cinemas, etc. – with the main intent being to see if they would come up with as many different definitions for the word itself, compared to the one's approached by this essay.

The (Q4) and (Q5) are linked with one another. The first being the enumeration of the interviewee's favorite games and the reasoning behind it. The second focused more on the immersive aspect of their favorite games or if they thought there was even immersion attached to their favorite games.

The results were very similar in a lot of aspects, mostly due to their favorite games being largely narrative made, such as those popular triple A games we have discussed previously.

The (Q6) and (Q7) are also intertwined. The focus of the question is to try to understand their point of view regarding either the type of game or the device, are one of the main traits as to why those you could consider those games immersive. The outcome is mildly different than what I anticipated.

As for the (Q8), it revolved around the main features that can make a digital game immersive. The results here are not that divergent from one another.

And lastly, the (Q9) was merely an attempt at getting some input by the players regarding what would make them buy a digital game and if it is related to immersion or not. This question also conveys a more economical perspective on the matter. It was made to be a question to test the "purchasability" of immersion, meaning the capacity of immersion to be bought.

9. Further Refinement

With the simpler format explained, a much more detailed outlook is needed to fully understand the interviewees thoughts.

There are multiple designations for the type of gamers that exist worldwide, however when it comes to the (Q1) of the interview that I have produced, I decided to stick with the basics. Basics being the levels of novice and expert or casual and hardcore. Furthermore, the people interviewed could have been designated more specifically as leisure gamers, dormant gamers, social gamers and so on. The way you would define them as those types of gamers would be according to the time they play on average per day (Q2) and the types of games they enjoy the most (Q4). The reason why I decided to keep it simple is due to the extensiveness of the matter.

Although the (Q1) might feel unnecessary and unrelatable to the subject, I find it of an extreme importance. Not only does it allow us to understand what type of player they are but also draw a scheme comparing the differences between a casual and hardcore player, when it comes to immersion. We will soon realize that there is something very interesting about it. When I asked this question (Q1), I obtained a good variety of answers, ranging from casual to semi-casual, to semi-hardcore, to even hardcore "grinder".

What caught my attention was the fact that these so called hardcore "grinders", were not that much interested in immersion per say, but rather in the ability to grind a game as much as possible. If we take the definition of both *immersion* and *presence* (Madigan,2012) previously discussed and associate it with a moment of pure experience of some random action that you do in game, would that be considered immersion? In a

way, it makes sense to think so, but if asked this question to a hardcore grinder, the response attained will be very similar among themselves.

> "For instance, when I reach the endgame in any given MMORPG (my favorite genre), I am not interested if the content I am playing is immersive or not. The only thing I want is to experience the repeatable content repeatedly, and accomplish it in many ways, just so it does not get boring." (Anonymous Interviewee, Age 40, Male)

As we discussed this topic, an intriguing theme for the conversation had come up, the word "repeat" in all its forms. What the player valued the most was repetition. A game that allows him to focus on repeating a determined number of tasks, that can be the same but having innumerous ways to achieve the same outcome.

The way this type of activities in game provides the player with satisfaction and enjoyment is very peculiar and is somehow connected to immersion, even though he does not refer to the graphic quality needing to be top notch and the not caring for the lore but instead, being heavily focused on mechanical aspects of the game such as the gameplay and control schematics, is what makes this answer so interesting. The sheer notion that he has of it being a repeatable experience is enough to be able to call it an immersive action within game.

The reverse opinion lies with the more casual players, that tend to connect immersion to a sense of good graphics and a great storyline. It tends to be always associated with a more fleeting experience that instead of you repeating it many times in different ways, they play through it for the story's game. One playthrough might be enough for some but if the story is compelling enough, it might lead to a second playthrough and so forth. At least when discussing the more narrative induced digital games.

The (Q2) happened to be a confirmation of what type of players the interviewees considered themselves to be (Fig.1- See Annexes). Turns out some, a minority, whilst saying the word casual but playing for more than eight hours a day, surprised me. So, I asked an interviewee why he thought he was a casual.

> "Even though I play for over eight hours a day, I still consider myself a casual due to the types of games I play the most, which tend to be mobile games but with a twist. There is usually an Auto- Play mode/option in those." (Anonymous Interviewee, Male, 27)

This was an interesting response because I never thought about it in that way. If you are “auto-playing” or the game simply offers you the ability to do it, do you consider that time played in a game?

It feels strange to consider it as such because the game is literally playing for you in auto mode. This automatic mechanic is vastly used in mobile games and can create some sort of addiction in the way that traps the player into playing for hours without them even realizing because the player can just do other stuff and have the game on their phones the whole time or better yet, some of these have a computer port which enables the player to choose which platforms he wants to play in, whether it being on mobile or computer.

The results of the (Q3) were interesting because no one mentioned a definition that came close to that of other authors, namely the previous mentioned (Cairns et al., 2004) or even (Goethe, 2019). What they understood by immersion was the basic concept that usually aligns with that of a dictionary or common knowledge. By no means was this a worthless question even with such broad answers such as: “being deeply involved in the game you are playing” (Anonymous, Male 24) or “the feeling of unawareness” (Anonymous, Male 28). These still pose pertinent answers but none of them delved into more specificities.

Nevertheless, there were a few that I found peculiar. E.g.: “something that will get you addicted in a way that could be unhealthy, especially in extreme cases” (Anonymous, Female, 24). Very interesting outlook on the word immersion as a standalone word. The simple fact that the interviewee posed a negative connotation on the word without even having a positive side was mesmerizing. Thinking of immersion as a bad thing is not uncommon or at the very least associate a heavy portion of immersion to a more addicted lifestyle, but there is a silver lining most of the time and that interviewee did not even try to find it.

9.1. Distraction as main definition appointed by the interviewees

Many people in the interview described immersion as being distracted. This alone enticed me to dig in deeper, for it is both intriguing as it is sort of justifiable.

If I had done a physical interview where I would put my test subjects playing a game in whatever platforms they feel the most comfortable with, I do not doubt that there would

be someone amongst the group of subjects that would be distracted from the activity he was executing or the other way around, which would be total immersion – distracted from the outside world. Someone that would be so immersed in the game that no other type of fuzz in real life would bother him/her.

This is just a supposition as this experiment had not been done for this case study in specific, but since many interviewees pointed out the distraction as a possible definition for immersion. I think it would be interesting to do even more research on the matter and possibly do an experiment with some gamers and non-gamers alike. I say this because I believe that non-gamers or casuals would find enjoyment in story-driven games and maybe even other genre of digital games that we would not even think they would like. This sense of unawareness was one of the most utilized definitions for the word immersion by the interviewees.

The (Q4) and (Q5) are both linked as stated previously. The enumeration of the interviewees favorite digital games was not that far-fetched, as expected (Fig.5- See Annexes). However, there were some cases of intriguing favorite games and sub-sequent genres and their reasoning. E.g.: "I find *Just Dance* to be my favorite game. I enjoy dancing a lot and I just find Just Dance to be that immersive game that gets me out of the couch and onto the "dance floor" which happens to be a wireless mat, or I can simply use a *DualShock* controller/*PlayStation Move* controllers and dance." (Anonymous Interviewee, Female, 25). Picking the odd one out of the bunch of responses, this was one of the most unexpected but fascinating, nonetheless.

Having the ability to put on a wireless mat or using dedicated controllers for that feat whilst making use of a *PlayStation Eye* equipment so the game captures the player's movement can become an immersive activity or at the very least it might make this specific interviewee think that what she is doing is immersive. Or is it? People can have a favorite game but that does not mean that the game of their choice must be immersive. Furthermore, making use of other means of technology besides the digital game is commendable, but is that enough to call the game immersive? If thinking from a subjective point of view, it can be immersive.

Another important yet, not surprising were the results based on game genres between male and female. For instance, not a single male would consider *SIMS*, their favorite game, yet most of the females would. Much like most males would pick an

action/adventure game (from pure all-out shooters, such as *Call of Duty's* to a more shooter style whilst having a strong narrative component such as *The Last of Us*), and most female would neglect that option for they would choose something along the lines of a more arcade type of game, such as *Mario* Series, *Sonic* or even rhythmic games like *Beat Saber* and *Just Dance*. (Fig.2- See Annexes)

As for (Q6) and (Q7), which are both linked as well, according to the graphics shown by (Fig.3- See Annexes), it is noticeable that most of the interviewees, both female and male pointed out that immersion is connected in some way, shape or form to a specific type of game. Only a small portion alleged that immersion does not necessarily have to do with the genre of game played.

In addition to this, most of the interviewees, both female and male have also alleged that immersion is not connected to the type of device in which a game is played (Fig.4- See Annexes). If the statement "any digital game of any genre can be immersive", comes around. It is not necessarily untrue but given that most interviewees thought about it in a different manner, it is a worthwhile factor to further investigate.

The answer to these questions struck as an unexpected occurrence, as a lot of people would probably say that immersion should not be connected to a specific type of digital game. Everyone has different tastes regarding games and what is immersive to one person might be the exact opposite for another, breaking the chain of immersion.

When performing (Q8), many of the interviewees decided to point out factors that made a game less immersive for them, instead of the original question that was more inclined towards what a game needs to become immersive. Both answers work here because if the aspect they refer to is lacking in a game, it means that the game needs to have it with the aim of becoming immersive for them.

9.2. Numerous perspectives of what makes a game less immersive by players/interviewees

(These are in no order in particular)

1- **Control scheme/settings –** This is one of the main talked about reasons that do not proportionate the player a feeling of immersion.

"If my mindset is set at 'X' being the button to jump, I do not know why some game developers cannot keep up with the standard controls. Jumping with 'Square' just feels odd and unsatisfying, thus failing to achieve an immersive and intuitive sense of immersion." (Interviewee, Female, 24)

As the statement suggests, a good and simple, yet easy to memorize pattern, such as a classic control game input is advisable. Meaning not radically changing button inputs, which tends to trick players when they are playing more than one game. The simple fact that switching control settings may break the immersion of a player is something remarkable.

2- **Brightness display –** Even though this is not the reason, interviewees thought to be one of the things that makes a game less immersive, it is one mentioned and I find it extremely interesting. If I were to think by myself what would make a game less immersive, I could come up with the common 'graphics' answer. But here instead, a large number chose the brightness setting. A simple setting that most games nowadays offer the player the option to tweak this setting right at the start of the game. Usually, it is connected to a logo or symbol and the player must choose what best suits him depending on their surroundings because believe it or not, this setting changes the way you see the game drastically if you are in a very bright room or the complete opposite, a very dark room.

A lot of the answers regarding this issue were based on people that play horror games, thus the aggravation of the display settings for them.

If playing a horror game can already be a scary and immersive experience, playing around with the brightness display can effectively change this idea and it goes both ways. If a player chooses to augment their brightness to a fully radiant display where the color gradients are more of a white tone, thus allowing them to see things more clearly, it could give them the option to play the game without much stress. However, if a player chooses instead to play around with the brightness and make it look pitch dark, this can also add or detract to the sense of immersion.

3- **Sound –** "A good soundtrack can bring your entire focus into it, no matter if it is a slow-paced vibe that clears your mind or an energetic groove that lets you jam along." (Interviewee, Male, 24). When it comes to (Q8), sound came up as an important feature to make games less or more immersive. Most of the

interviewees said that the sound in an extremely important feature and should be tackled seriously because if a game has a bad musical score or it does not suit the thematic that the game imposes, it might break the immersive aspect and overall feel of it. However, one interviewee pointed out to something entirely different and in a way very comprehensible. He stated that as he is mainly focused on MMORPG's and considers himself a hardcore grinder of the genre, for the first time playing one of these types of digital games he usually turns the sound on, both music and SFX, as well as ambient among others. But once he reaches what we know as endgame he tends to turn all sounds off, except for the SFX, sounds of skills being executed and Boss moves that are predictable through sound cues. I found it fascinating because it is something much more related to MMORPG's or just RPGs in general. Once you reach endgame you will just hear the music and all sounds accompanied with it, all the time, which might make it unbearable to play if you are listening to the same sound repeatedly. Since the final push of an endgame RPG is usually maintained by a steady grind of a certain area or dungeon, it is not that odd to turn off the sound aspects of the game.

4- **Narrative –** This was also one of the main responses by the interviewees. If a game does not captivate the player with a compelling story, a well-written narrative, an intriguing plot, or a good perception of the lore within a game, then they consider it a non-immersive experience. If a game does not address those features, the player feels no connection with the game, especially if it is a story-driven digital game. "A good story can be as immersive as watching a movie or reading a book" (Interviewee, Male, 26)

5- **Graphics/Visual Display –** As for this feature, it is more so considered a special mention as the interviewees were more inclined towards the other features. It is enthralling, especially considering that most of the interviewees were concentrated around the ages of 20-30. It would be expectable a solid answer of graphics being a firm staple of an immersion experience. However, this was not the case, as a good graphic quality was far less mentioned compared to the other factors.

Continuing with (Q9), as mentioned previously, it had the intent of adding an economical perspective to immersion itself in digital games. For that effect, a graphic was formed (Fig.5- See Annexes). The interviewees had complete freedom of response as no possible answers were given by the interviewer. The results demonstrate a wide range of responses. The most noticeable difference has to do with the number of male interviewees that considered immersion as a possible reason to purchase a game or any type of additional content, compared to that of the opposite gender. Most males were very keen on buying a digital game solely based on its level of immersion (of what they consider it to be). In contrast, none of the female interviewees even considered immersion a possible reason of purchase. There were 2 of them that firmly stated that it would depend. "It depends on the premise. If solely based on immersion itself, no. But if I liked the concept of the game, I might buy it." (Interviewee, Female, 24)

A keyword here would be concept, the concept of a game is more so considered a factor to buy a game than immersion is. At least for these 2 female interviewees that chose to say that it depends.

Perhaps the most important discussion to have, is the even distribution of male responses which is constituted by 4 males saying "No", 1 saying that it depends, and the majority saying "Yes", but with the difference of "Yes"- 5 males, and "No"- 4 males, being extremely narrow, as it is only different by one person.

Seeing those results, it is possible to assume a wide variety of opinions. "In order for me to buy a game it has to have more than immersion alone. It would need to have some sort of interesting concept that I can relate to and all those other components that we discussed previously". (Interviewee, Male, 20)

> "I would most certainly buy a game if just by immersion, […] all the other features are connected to what I think of immersion, and if they are all linked, I see no reason not to buy it." (Interviewee, Male, 28)

A clear view on both sides can be witnessed with the answers above. But then again, why is the difference between the male genders and female genders so large? Having female interviewees saying that immersion is not a good enough reason to buy a game compared to the male counterpart that states otherwise is mind boggling.

Whilst this question had the intention of picking up some economical ideas and values it has gone towards a more interpretative route. When trying to find out if immersion was a good enough reason to buy a game, the differences between their older answers on what was immersion for them and compare them with the current question, the conflict became more apparent. Almost like a contradiction of what some interviewees had said previously. If some said that immersion was a combination of all those different aspects (narrative, sound, etc.), why would they say "No" to buying a game solely based on immersion?

With the data retrieved it is possible to uphold that part of the male interviewees adapted their answer according to the immersion definition given by them, meaning that if immersion for them was considered an agglomeration of all the mentioned characteristics, it would become a solid answer that they would buy a game based on immersion itself.

As for the female counterpart, they did not associate immersion as the previous agglomeration of characteristics and features that they previously referred immersion to be.

Conclusion and future work suggestions

As a response to the main goal of this study which is to answer to the main and subsequent sub-research questions, I concluded that what players find immersive in a digital game is not something meta defining and one-sided. There is a plethora of reasons that make a game immersive, as we have seen throughout this study.

Subsidiary question: What do the players find immersive in a digital game and is there a socially constructed notion created?

According to the interviews conducted, even though they had mostly a similar outlook on the word immersion, there were some disparities and peculiar points of reference. None of the interviewees got that close to well-structured definitions by authors mentioned in the thesis but some were considerably closer than others that just responded by the rule book, a pre-structured definition that is considered default and related to that of a common-sense answer. But to answer this sub-research question, the main thing that

comes to it are the words ‘distraction’ and ‘unawareness’. This is by no means a socially constructed notion but since the interviewees manifested a strong opinion towards these words, it is most likely the better definition for a socially constructed notion of immersion.

Subsidiary question: If players prefer specific genres of digital games, does that inform us the types of games they will purchase and play?

In a world where we see nowadays more people playing digital games, from the very young children to the elders, everyone has different taste regarding what they enjoy playing. Having said that, it is more likely to purchase and play a game or just play a F2P game without purchasing it, that is the genre the player enjoys the most. However, it is not too far-fetched the idea of trying out something new. Usually, the feeling that is associated with the word ‘new’ is ‘fear’. Most of the times, when people are given the opportunity to try out something new, they fear it. They fear they might enjoy it, or they fear the unknown. Either or, makes them push away new experiences due to that fear of the unknown.

As for the question itself, it is important to note the word ‘purchase’. This sub-research question was made to fill in the void of purchasing a type of digital game that can or not be the player’s preference or first choice. The objective here is to purchase a game, but seeing that, interviewees felt that it could be too risky, a proposition was made which was to use of a demo of said game and then the power of decision would come, on whether they would buy the game or not. This takes of the pressure of buying something you might feel you will not enjoy. The main issue here is that not all games have a demo version ready to be played or that is open to the public. Most demonstrations nowadays are sent to alpha and beta testers or partners that try out the game in its different stages, before releasing the full game to the public.

Nevertheless, if the player prefers a specific genre of a game, it is far more likely that will pursue that type of game content and purchase specific genres of digital games. But as stated previously. There is the possibility of delving into new experiences, albeit less foreseeable amongst the interviewed players.

Subsidiary question: Can a typology of players be defined, having into account the methodological approach (interviews)?

This was by far the hardest sub-research question to answer to. The methodology used (interviews), whilst it may seem great for a closer approach when it comes to thoughts and ideas of other people, it pales in terms of sampling. If not by the sampling, which is substantially small and very narrow in terms of age, this methodology might not be sufficient to build up a typology due to the difference in taste of all the players. As it turns out, late generation Y and beginning generation Z tend to have similar tastes in terms of games. However, it is still difficult to define a typology based on a small sample. Especially if tastes are that much different from one another. Whilst some males around the ages of 20-30 might enjoy more (FIFA), others of the exact same age pattern might not feel any type of connection to a football game or even any sports-based game and be more inclined towards Shooters (including both First and Third Person) or Gachas.

The exact same process can happen when it comes to the female community, whilst some might enjoy more lifestyle simulators (SIMS) other may feel better or be more immersed playing strongly narrative induced games. There is just no telling what a person will choose it is more immersive to them unless a thorough study is made and a quantitative one at that, because then we would have a bigger sample and an easier time managing and creating a typology instead of a small one.

Main Research Question: What is considered "immersion" in the gaming spectrum?

As for the main research question, there is not a "one and done answer", as it is a more complicated question due to the number of definitions given for the word in the gaming spectrum and a large quantity is not wrong. There are a variety of possible answers to be given and most of them acceptable in one way or another.

From the very first perspective of it in the form of dictionary definitions to the most articulate and more complex views such as *total immersion* (Emily et al., 2004). Even with all these perspectives, it is hard to ascribe one singular and unique definition for the word immersion. But since the word is accurately described in various parameters of the game characteristics and functionalities, perhaps a singular answer might not even be appropriate for such a word. If parameters like sound, gameplay, video quality are discussed in the form of whether it is considered immersion or not, maybe it should be addressed in separate forms. Gameplay mechanics whilst can be and have sound qualities, they can be lectured in different ways and separate ones at that.

Immersion is one of the most basic pleasures in digital games. The feeling of totally losing yourself in the world of a game can be a great way to relax and unwind, but it can also heighten the drama and tension of a gripping narrative game and consume away hours of your life, but it is not the 'be all and end all of the gaming world' as some would believe.

Immersion is a very tricky subject, a linguistic evasive one. It is very difficult to learn and discuss about a phenomenon which by its nature is already deeply personal. What gets one player invested into a game might totally break the immersion of someone else.

Is the fun and enjoyment I am getting from living and existing, inside a determined game due to the world design, the characters, the way my actions interact with the mechanics or any other reasons?

Having a typological conclusion was the main goal here, and in some way a possibility of building one is there. In contrast to it, it may be a bit skewed as the sample is lower than expected. But given those resources we can conclude that: If compared (by genres) what the interviewees thought about immersion, there is not a significant "side-track" to it. No one deviated much from the common-sense ideology. And given the sample used in this dissertation, the players interviewed, no matter the ages, were very keen on specific aspects such as narratives, sound, and control settings. Furthermore, it is apparent that players concentrated around the ages of 20-40 (as the ones interviewed for this case study), are not so keen on considering the graphic quality of a game an immersive conductor. It can look good with all those 4k displays and high screen resolutions but if it does not present the features above mentioned, they do not consider the game to be immersive, which is mesmerizing as from a personal point of view, and from a general worldwide view, this would be effectively a main component for an immersive digital game.

To conclude, this was not only an interesting topic to do research on but also a challenging one (methodologically wise). Albeit being able to manage interviews with a few select people was satisfactory, it became complicated when building a typology. No matter the responses obtained, the typology was only built around these 17 players and even though there were some differences, there were also similarities. Might have been coincidence that the players chosen for this interview were very much associated with a particular type of game, which would be MMORPG's or action/adventure games, but it

did depict a solid line of resemblance between the players, either male or female. (Fig.5-See Annexes)

Regarding the future work suggestions, these are some that could be pursued to better understand thoroughly one's mindset:

Sound field

Lipscomb and Zehnder (2004) conducted an experiment with the digital game for *PlayStation 2*, *Lord of the Rings: The Two Towers*. It consisted in playing the game with its original soundtrack score versus playing it without any music. They found out that this influences the player's agreement to a variety of self-report items describing the game experience. More specifically, instead of making the game "simple" and "relaxed", it creates a much more "dangerous" and "lively" environment if the music is present. (Klimmt et al., 2018).

On this note, an experimental condition that could be pursued is: Playing *DOOM* with its current original soundtrack, playing *DOOM* with no soundtrack but with SFX enabled and thirdly, playing *DOOM* with a more classic type of soundtrack, something more on the lines of slower paced sounds instead of the intense frenetic action original soundtrack that it already offers. Just by looking at these experiments without even doing it, I am sure that playing with the third option above is something most likely non-immersive. It almost makes me feel like a passive *First-Person-Shooter* that offers nothing new to the table and could be quite boring in the grand scheme of things.

The same thing could be applied to a game such as the *Devil May Cry* series, more specifically the latest entry in the series, *Devil May Cry 5* (composed by Casey Edwards), which whilst a *Hack and Slash* type of video game, very much close to what we know as a *Beat'em-Up,* that consists in defeating waves of enemies in quick succession. The act of killing or be killed in a video game can add a sense of vibrance that makes either your mind or body produce impulses of frenetic energy. The intensity that these types of video games can offer to a player just by their sounds is remarkable and therefore, worthwhile to investigate thoroughly.

Challenges/Difficulty field

Another proposition for a continuation of these investigations is related to the previously discussed challenges and its implications on a player concerning immersion in

a digital game. The main test that would have to be done is to gather some players (both genders), put them all in a room (physical space) with the same game. They would all play, firstly on the lowest difficulty and as they progress, the difficulty would be raised. The main objective would be seeing each player's reaction (face expressions, words used, any physical symptoms that might appear to be peculiar or relevant, among others) to a tweak in difficulty levels and find out who would remain persistent and keep on playing or who would leave the room in frustration, this breaking up the immersive aspect, for instance.

When speaking of difficulty settings, it is also possible to do a study of immersion alongside duration parameters in a digital game. Meaning that the observant would let players play a game, could be a rhythmic one at that. You would have the screen display and sound, but text on screen or UI would be disabled. In a game where the objective is to progress through many levels with the highest score possible, is this "disabling UI", preventing the players to know how they are doing, a reason to break immersion?

This would be a solid test to one's emotions and both visible and hidden traits that the player might feel.

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Annexes

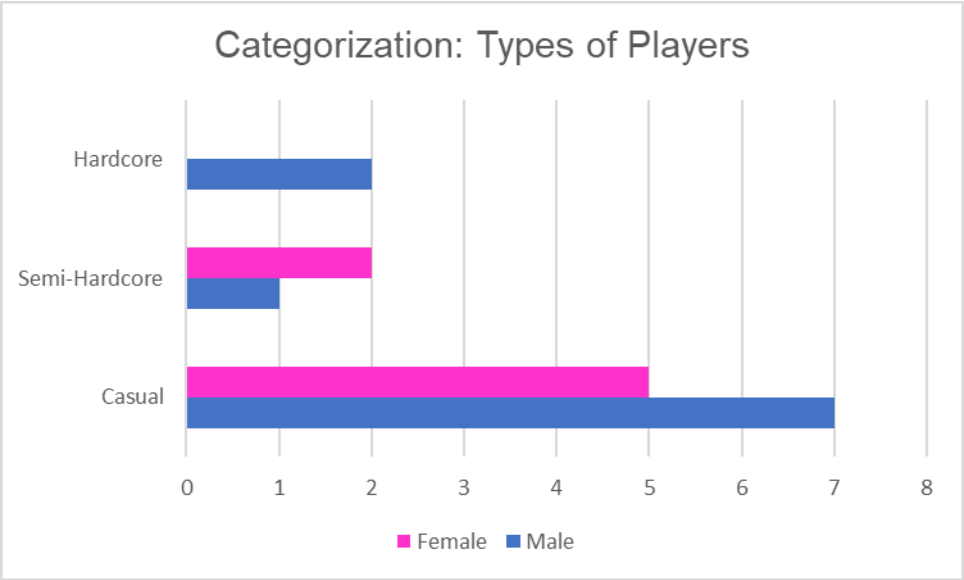

Figure 1. Categorization concerning types of players (Differentiated by genders).

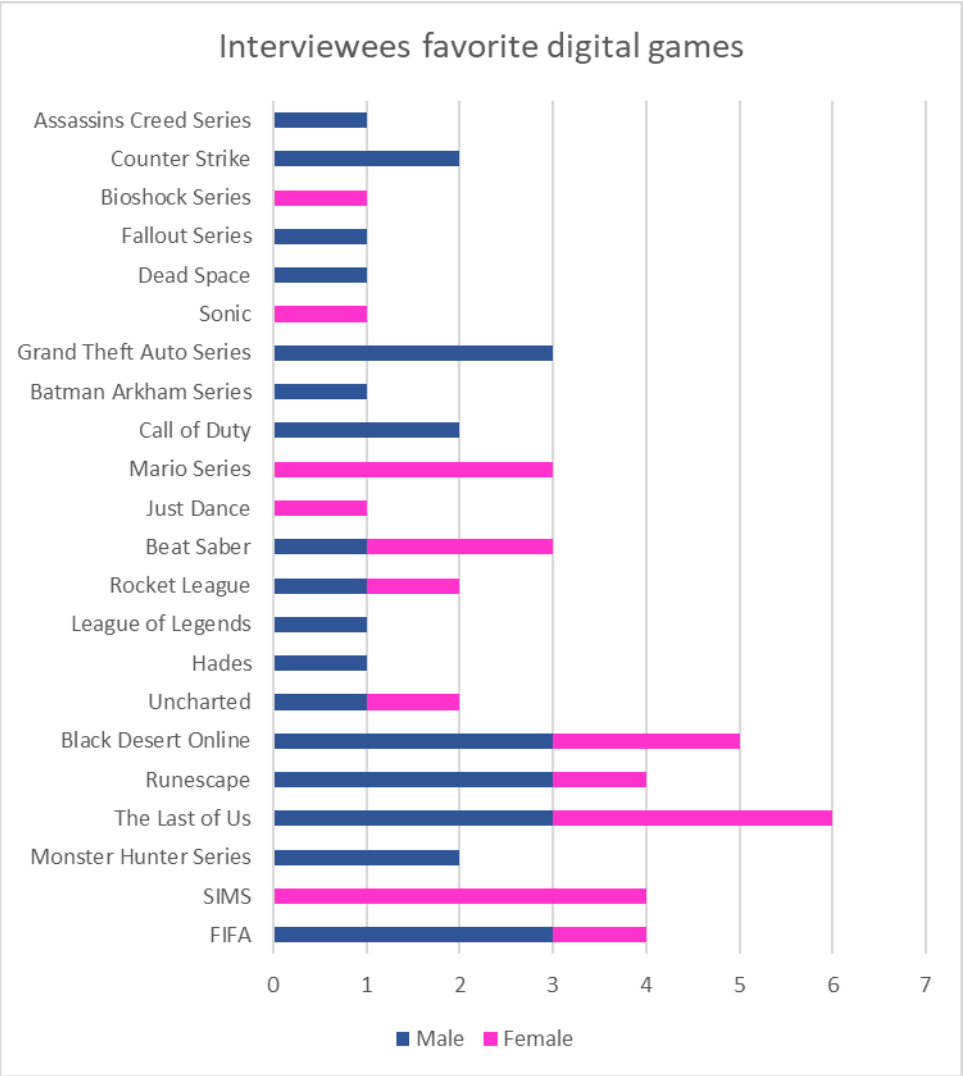

Figure 2. Interviewees favorite games. Each of them could select up to 3 games. (Differentiated by genders)

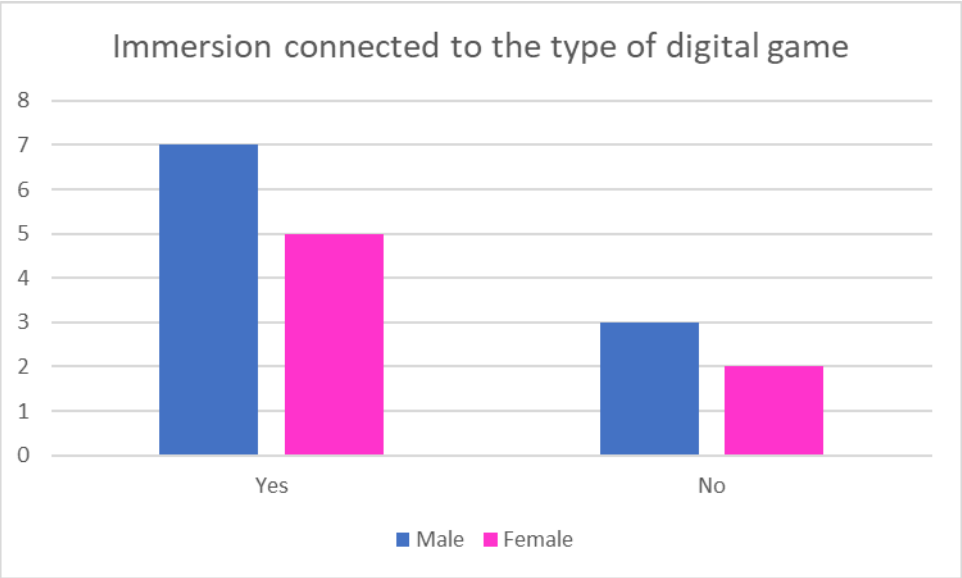

Figure 3. Is immersion connected to a type of digital game? (Differentiated by genders)

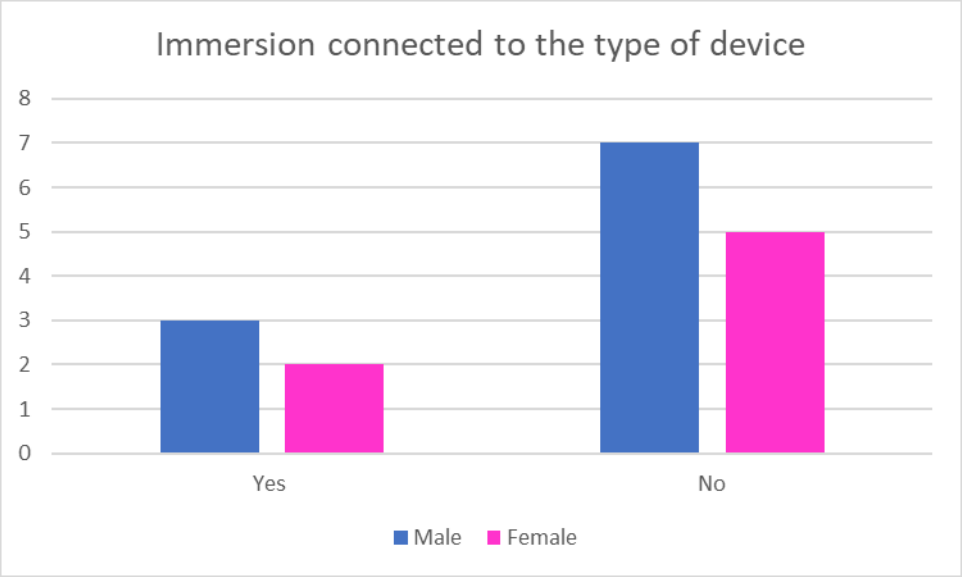

Figure 4. Is immersion connected to the type of device used? (Differentiated by genders).

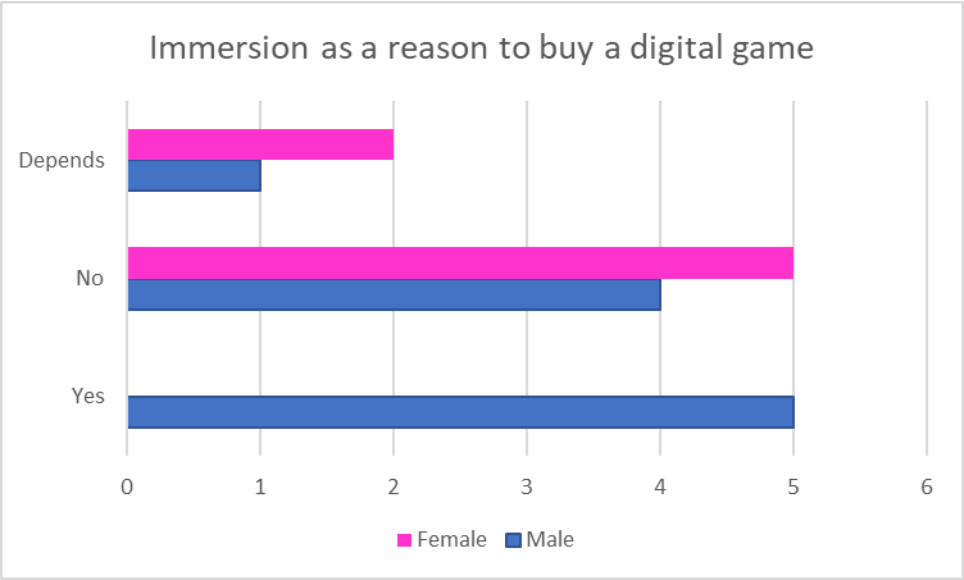

Figure 5. Immersion as a reason to buy a digital game (Differentiated by genders).