

A Worldwide Appeal: The Balance for A Reflective Community Engagement

Abstract

This study will focus on the newcomers when playing in a massive multiplayer online game, based on the research of Pan, Lu and Gupta (2014) of the three newcomers' identification: Visual, Information and Value. It will explore each issue in the game community world and evaluate the uniqueness and belonging of each. The study will be based on researchers' accounts, industry experts and an online game case study. This will be necessary to attempt to reveal the potential, as well as the hazards, such may offer to developers and designers as they construct the game world and player interaction. The study will be concluded with a future outlook of the multiplayer online game from newcomer's perspective. As well as outline possible future research in areas of interest.

Contents

Introduction

Chapter One - Diversity

Chapter Two - Communication

Chapter Three – Skills

Chapter Four – Time

Chapter Five – Playstyle

Conclusion

References

Introduction

With the advancement of multiplayer games such as cross-platform gaming, large-scale game servers, worldwide competition, powerful mobile gaming and a raft of other amenities, online gaming has never been more accessible, popular and successful (Smith, 2019).

According to SuperData (2020) ranking top grossing games in February 2020 across all major gaming platforms, mobile, PC and console, each and every game in the top ten is or have an online game features with the exception of two mobile games that although have online features, does not provide direct online competition, collaborate and/or communication. Studying more in depth this recent data, one will observe that the average span differs remarkably, if we first examine the mobile as a gaming platform, the average span of the game in the list that fits the study criteria of possessing to some extent reciprocal online gameplay, 3.5 years will be the average life-span from release to the date of this current study (SuperData, 2020). For a new platform, continuing with this analysis of the PC platform games in the list that fit the criteria, if we take where appropriate, the first release or instalment of the game which still contains a reciprocal online gameplay ignoring expansion, updates and sequels, the current to date life-span is an average of 8.8 years, similarly to the console platform; it will stand to an even higher 10 years average (SuperData, 2020). This unequivocally establishes Ducheneaut et al. (2011) study about the correlation of a game community and its growth and longevity to that of the game itself. During this study, many researches have been studied, especially in the massive multiplayer online genre (MMO) with various areas of examination, to provide expert views on current and past games of all genres and gamers of varying characteristics, as well as the analysis of wide range of games (Ducheneaut et al., 2011). However, the study has extended research beyond the game world to other media and community studies.

According to Sylvester (2013), games are not just non-rival goods, they go further than this. They are anti-rivals. Because of the Matthew Effect a term coined by Robert K. Merton. Games become better the more other people are playing them. More players mean stronger community, more potential play partners, more user-made content and culture, and more word of mouth (Sylvester, 2013). However, to start this network effect you need initially a critical mass, as Fritsch (2007) explains; in network economy early adopters are needed, to justify the purchase in this case the participation to the customers, they must believe that others will, this threshold is the critical mass, once this have been reached, phase 2 will begin and new users are highly attracted because of their individual gain which is generated through the network effect, and a rapid grow can be observed. Following will be phase 3 with a second critical mass, this will affect negatively on the network effect and growth will either be non-excitant or significantly decreased. In this study we will concentrate where few of other studies have considered, phase 2.

Many studies and talks exploring the online gaming community have focused on the community within, essentially phase 1 and 3, what features and system to get players interested by attracting different players to create a vivid gaming community based on the work of Bartle (1996) on different player type (essential what makes a fun game, a good game), or how to keep them playing, and engaged with the community, their retention value with work such as Hsu et al (2005) as post-critical mass. Few have explored the gaming community from the outside. Esther MacCallum-Stewart (2014) observes a distinction, noting the contribution they (the gaming communities) make toward each game provide a way of understanding the communities themselves (which is how they have previously been studied), but they also have a more generic influence on how players understand the game itself (which has been less well documented).

From this perspective, this study aims to understand the impact newcomers have on the game and the game community and vice versa, reflecting on the research of Pan, Lu and Gupta (2014) based on the role of community diversity beyond player type as previously been studies. But rather, in terms of the visible dissimilarity, informational dissimilarity and value

dissimilarity and its effect on newcomer's perception of inclusion and belonging. Sense of belonging has been widely reported as critical, as noted by Tardini et al (2005) and may be ascribed to the nature of the social relationship and the communication flows among their members. However, Pan Lu and Gupta (2014) research is based on social media and although they are some similarities; but, for the purpose of this study, there has been modification to apply to the online gaming community. For instance, informational dissimilarity is reference to knowledge and experience, in the context of a game world this will be referred as skill level. And for value dissimilarity, again as it refers to motivation in accordance with Pan, Lu and Gupta (2014), in a game world this will translate to playstyle, and not player type.

This dissertation will explore newcomers' perceptions when playing in multiplayer online games, through literature-based research. Chapter One, is an investigation on diversity, and its impact on newcomers. Chapter Two, discusses communication as an integrated part of the online gaming community. Chapter Three, focuses on skill and the ease of teaming up, meaningful contribution and identifying skilled players and leadership. Chapter Four, explores time, the gaming demographic is changing and how online games are adapting to the new changes. Chapter Five, examines playstyle, beyond player type by exploring decision-making.

Chapter One - Diversity

Since the beginning of online community in Computer-mediated communication (CMC), diversity have been an exponentially factor of its early adaptation. Rheingold in *The Virtual Community* (1993, p.7) observes:

The way the whole system is propagating and evolving, think of cyberspace as a social petri dish, the Net as the agar medium, and virtual communities, in all their diversity, as the colonies of microorganisms that grow in petri dishes. Each of the small colonies of microorganisms--the communities on the Net--is a social experiment that nobody planned but that is happening nevertheless.

refers to emerging interaction, a level of unpredictability, a world full of surprises, excitement and discovery, noting “the knowledge-sharing leverage of a large, diverse group of people who are motivated to help one another, and whose differences of place and time are erased by CMC, can be considerable” (Rheingold, 1993, p. 50).

‘The Third Place’ by go beyond knowledge sharing, but reclaim diversity as a tool for good mental health. Explaining that diversity keep us grounded and prevent us from unrealistic expectation or losing sight of opposite views noting “in such place, people intuitively recognize that what they have in that situation is worth far more than their moral speculation, petty prejudices, or political ideologies” (Oldenburg and Brissett, 1982, p. 274).

We know from social media, such as Twitter, the amount of harassment and abuse by opposing views. A recent major study by Amnesty International (2018) has found that women are harassed every 30 seconds on Twitter. Such is also reflected by countless studies in the online gaming community, in lesser animosity. For instance, Voulgari and Komis (2015) found in their study that similar ideology, common real-life interests increase the bond among members of the online gaming community, while disruption i.e. diversity, may lead to disbanding of the group.

No one would argue if either, or neither of Voulgari and Komis (2015) or Oldenburg and Brissett (1982) is right. But one could also argue that both are valid observations. In Oldenburg and Brissett (1982) evaluation it was stated that diversity comes as a side effect. Third Place foremost is that of freedom from responsibilities, duty and a sense of escapism. Another important characteristic of the Third Place, is that it is an open community, you have no influence of who gets involved and at the very least you both share this pursuit. Both parties are not to damage that pursuit or presumably be rejected from the establishment; easier to enforce in a real-world setting; something we will discuss in this paper with anti-social behavior in communication. But once, essentially with time, one will be compelled to engage with others because your friend is not around; for example, you may become open to new possibilities and get that sense of adventure and discovery. According to Oldenburg and Brissett (1982, p. 276) "in this respect Third Place represent one important vestiges of community: an experience of mutual concern and appreciation for people who are ostensibly different from oneself".

Spry Fox's game designer and co-founder Daniel Cook, in his 2018 GDC talk about meaningful friendship, referred to a previous study, the law of friendship formation. Among its four criteria is similarity and perception of shared norms. Daniel Cook acknowledged that although it is incredibly powerful, it is in his words, "a horrible one", besides being proven in countless studies and have consequences on diverse populations. Cook (2018) states that if developers would ignore it, they will import the worst of our communities to the gaming community and finds the most effective way of using it beneficial, as factions share experience and goals to create a new identity, a "positive fictional identity" with "positive fictional culture", in a utopia world setting, warning from real world identity. One will argue, that diversity should transcend genres, world settings and roles. One would also argue that creating fictional identity and fictional culture would in essence, create a false mirage of diversity, and in the process, lose all the benefits previously discussed, such as new lively, unpredictable social experiences, knowledge, appreciations and good mental health among others.

The study by Pan, Lu and Gupta (2014) on perception of newcomers in social media services, found that diversity or perceived dissimilarity “influences newcomers perceived inclusion in the social media services” (Pan, Lu and Gupta, 2014, p. 106). Furthermore, the study has divided diversity into three segments, perceived visual dissimilarity, perceived informational dissimilarity and perceived value dissimilarity, and had found that interestingly, although both visual dissimilarity and informational dissimilarity have a positive influence on newcomer’s engagement, perceive uniqueness was more effected by visual dissimilarity than informational dissimilarity. The study as also found that perceived value dissimilarity, which, among its definition includes motivation, has negative impact on perceived uniqueness. This is in line with Oldenburg and Brisset (1982) connotation that the benefit of emergent, escapism outweigh ideologies or morals; in effect, merely as a negativity but not preventive.

According to Pan, Lu and Gupta (2014), diversity should be enhanced to amplify our ability to self-described uniqueness, which in turn, influences our feeling of inclusion and belonging. By feeling unique, we get the ability to add something otherwise unavailable to an engagement. Talking during GDC 2014's Microtalks session, Kongregate's Emily Greer (2014) explains the importance of members to feel their presence, their contribution is important, stating “nothing reinforce a person sense of value and place in community than feeling needed”. By being unique, newcomers existentially have an extrinsic value.

Diversity, although admittedly this references the game contents, is very important in online gaming and subsequently for the online gaming community, and that is something that game designers and developers understand and strive for, whether it is class in a classic MMORPG, champion, in a MOBA game, weapon choice in *Battle Royale* game or base building in a strategy game. This diversity contents explores creativity, enhances specialty and builds connections through cooperation, competition and shared-knowledge. As previously discussed, these design choices are very important to achieve critical mass status i.e. phase 1, but also, this diversity will help with retention and variety for the long term of the game i.e. phase 3. At phase 1 they join the game because it is a good game, phase 3, according to many studies, is about the social aspect of the online gaming community. Koivisto (2003) observes

“player-to-player interaction has a huge effect on player’s gaming experience. The game community may be the most important reason for the player to stay”. But at phase 2, this is where the network effect happens, where players do not join a game because it is a good game essentially, but because of the community of the game in-thrusting with social media, YouTube channels, Twitch, Twitter, Facebook and the likes. Pan, Lu and Gupta (2014) research found that perceived dissimilarity influences both social identification (similarity) and uniqueness for newcomers. This indicates that a diverse community will attract both players associating with people they identify as similar to them and join a game in that is basis, but also attracts players that found value in diversity itself and relish possible encounters such might offer.

In this chapter we discussed the many benefits of diversity, whether is for the players and the community, or the game itself and its success. Despite Daniel Cook’s (2018) positive idealism, his solutions is to detach one from the other, the real world and the game world and in the process lose all the benefits But we also discuss in this chapter the difficulties of diversity, how some diversity are more influential than others, or that others have a negative impact and finally that diversity requires a change of perception. If online game developers believe in the benefits of diversity and confront this challenge objectively with a set of goals and metrics than new innovative gameplay would emerge. The gaming industry have this incredible power to import players imagination, exploration and engagement, but also great psychological tools, how many times players have spent five more minutes in game that they would have liked to, or spend five more pounds in game than they would have liked. These tools could be used to have great positive impact from the game world that it is felt and glorified in the real world. Jeff Kaplan director of Overwatch in a talk at the DICE summit (2017) discussed how “the values of the Overwatch team are now been embrace and own by the community in their own sort of positive way”.

In this paper we discussed how online games can foster and thrive diversity in the context of the gaming world. It was mentioned that social media and the contributors of such platform to represent the gaming community to newcomers, and contributors of such platforms have

a broad visual dissimilarity, that is age, gender, race and background. Therefore, developers would benefit from engaging with exciting and potential players in such channels and showcase the visual dissimilarity of its audience. Jeff Kaplan director of Overwatch personally replied to a player, discussing the game's diversity which got a lot of media attention, highlighting the game pursuit of visual diversity representation.

But away from avatar representation and more visual dissimilarity, is interaction between community members. Vella et al (2017) exploring AR games like *Pokémon GO*, identify and place identity as a contribution to a psychologically healthy sense of self. Game developers can foster and amplify this visual dissimilarity of culture and background by benefiting uniqueness. For instance, one could argue that certain ability is available in each passing hour and playing consistently in this hour, players can acquire such ability. As time, more often than not in an MMO, is associated with real world location, the community is most active in the evening after school or work in those time zones. Kolo and Baur (2004) in *Living a Virtual Life: Social Dynamics of Online Gaming*, found that 91% of its surveyed players play between the hours of 18:01 to 24:00 and only 14% 06:01 to 12:00. This will create a certain of place identity to this ability, and when players login at different times of the day; for example, a weekend or a day-off, they will be of interest to players of different time zones, subsequently of different visual diversity and ignite the possibility of new richer interaction and experiences. As these players are visiting at different time zones, they are also encountering new abilities and stem a sense of discovery and voyage.

Chapter Two - Communication

Communication is an intriguing part of online multiplayer games of all genres, whether it is an MMORPG, a FPS or an RTS. With many games doing it differently, for many reasons, in this chapter we will look at various modes of communication and the challenges they face.

Before plunging into the negative aspects of direct player to player or players communication, let us first analyze the importance of direct communication. Many studies have reported on the importance and attraction of online gaming directly to its social relationships and to extend the community. In fact, we mentioned such studies previously in this paper. However, how does direct communication enhance or perhaps hinder this effect? According to Howard Rheingold as quoted by Jason Rutter and Jo Bryce in *Understanding Digital Games* (2006) "Virtual communities are social aggregation that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in the cyberspace". To this approach the sole existence of community is based on communication, but further than that, it its emphasis on repeat communication.

The social experience is of intrinsic value to the game world are participants. Xu et al (2011) in the study of social relationships in online FPS, note "social experience is not only contextualized by the game experience, but can also provide the context for the game experience" and a direct form of communication may intensify such experiences. Chin-Lung Hu and His-Peng (2005) research on online game community's motivation factor found cohesion to be the most important determination in community participation. This was also evidenced in fellow Alexandra Buchan and Jacqui Taylor (2012) study of team cohesion in

MOBA, who categorized communication at its core, directly linking to the success or failure of the team online competitive game.

However, bad communication such as abusive, offensive and discriminative language has a negative effect on the game. Community relationship cannot be formed, negative social experiences increases, and team cohesion is diminished. This paper will examine the impact of newcomers into the game and vice versa. Ben Lewis-Evans (2015) from Player Research in his GDC 2015 talk, 'Anti-social Behavior in Games', quoted Mike Ambinder from Valve saying that "the only significant predictor we found why some would quite DOTA early on was having a game where someone was reported for abusive behavior – nothing else mattered", because the fundamental part of the game is damaged. In a 2016 GDC talk by Jeffrey Lin from Riot, it was revealed that in discussions of *League of Legends* game, 11% accounted for the vast majority of the negative posts and as a group, drove the perception of the majority. Players do not need to experience negative interactions personally to stop them from interacting in the first place. Xu et al (2011) in the study of social relationships in online FPS, note some players with the proximity of young children chose to mute the voice channel to prevent their children from hearing swearing. Some online games, dependent on the mode of play, have direct communication, which more or less impacts on the success of the outcome, regardless of the fact that communication enhances the game experience and success. Newcomers are not only more likely to quit a game due to negative communication, perhaps one will argue more than veteran players, because they have less investment, be it previous positive interactions, friends and long-term relationships, in-game achievements and/or leveling-up. But yet they are more likely to receive negative communication than veteran players, in many multiplayer online games, which is about cooperation, and many times they are complete strangers, more so if you are a newcomer.

Ben Lewis-Evans (2015) from Player Research in his GDC 2015 talk, 'Anti-social Behavior in Games', identify that many anti-social behaviors stem from the high pressure of the game competition; players making mistakes or not performing to a certain standard matching their expectation, and respond negatively. This could mean being newcomers, they make more

mistakes and perform less effectively; hence, receive more negative communication. Away from high pressured competitive situations, newcomers are also more likely to be subject to anti-social behaviors in passive interactions such as that provided in MMORPG for instance, Kolo and Baur (2004) in 'Living a Virtual Life: Social Dynamics of Online Gaming', reflect on Ultima Online having several categories of rules governing the interaction between players; among these are non-codified rules, whether they are general for all players, or all guild specifics. One would say a form of online gaming etiquette, that perhaps newcomers may be oblivious to, and cause negative annotations.

Newcomers may not be singled out with abusive and harmful comments from what they say or do in the game, but also what they do not say. In 'Gaining more than experience points: Learning social behavior in multiplayer computer games' by Ducheneaut and Moore (2004), outline the complexity of the social skills required to be an effective team player from humor to patience, leadership and sensitivity to others. Their findings indicate a high level of investment and nourishment is required from the part of the players to create a cohesion community far beyond the actual gameplay. This skill may require time and learning process from the player, which perhaps newcomers may struggle with and effect their social interactions.

From these notes, one will argue that online gaming communication is an active skill that has complex barriers of entry, and according to the study by Pan, Lu and Gupta (2014) on perception of newcomers in social media services, it was found that diversity or perceived dissimilarity "influences newcomers perceived inclusion in the social media services", and among its three segments is perceived information (hear by skill) dissimilarity. Newcomers tend to relish the acquisition of new skills and the observation and analyse of a ray of variety in a set skill; thereby, it is the role of developers to make such knowledge accessible and sharable to newcomers, be it directly; for example, Discord a multimedia chat application, which introduces newcomers with a humors phrase, but more effectively with considerable tips and pointers. The British Broadcasting Corporation (BBC) have newly released an App 'Own It' for children using text chat that monitors their input and offers advice accordingly.

Online games can use similar methods to guide and support newcomers' social interactions. Ben Lewis-Evans (2015) from Player Research in his GDC 2015 talk, noted *Halo 5: Guardians* to create semi-automatic communication from observing real-competitive team play communication. Or indirectly, by correlating positive live team interactions and matches successes using algorithm and monitorial tools such as the enforcement tools developed by the Riot team as discussed by Jeffrey Lin in both 2013 and its follow-up 2015 GDC talks 'Science Behind Shaping Player Behavior'. Making available to players support to improve or promote their own team communication participations.

Many games do communication differently, whether is the restriction, monitoring, enforcement or support. Dependent on genres, requirement or even size and its reach such being an e-sport game requires a robust, highly charged communication interaction. But also, from the view of a newcomer, is how developers take them into consideration? Previously mentioned is how communication is an active skill, thereby remnant in communication is skill diversity. However, Pan, Lu and Gupta (2014) study on perception of newcomers has two furthermore segments of interest to newcomers; identity and value dissimilarity; both incremented in the communication system. According to Pan, Lu and Gupta (2014) identity dissimilarity has a positive impact on uniqueness; however, it has a negative application on belonging and since belonging is a crucial part of online gaming according to many studies, identity dissimilarity may have a greater negative impact when communication is concerned.

A newcomer might participate in an online game world and be attracted by identity dissimilarity and feel unique in the process. However, when direct communication is established, the need to belong takes precedent. To form this level of connection, a certain level of empathy is required. Newcomers are required to kill off their anonymity, in order to receive this share bond, which according to Ben Lewis-Evans (2015), offers protection such as roles requiring anonymity i.e. moderators. However, one will argue it does go over by offering protection from abuse and discrimination to be targeted and thereby, is more harmful in its impact and causes even greater damage to the recipient; especially poignant are multiplayer games, which can be refuge for the socially isolated. Conversely, perhaps the lack of it, will

prevent deep connections to formulate (Lewis-Evans, 2015). Unfortunately, communication is an integral part of multiplayer games as of now. Damion Schubert (2011) in his talk, 'The Loner: Why some people play MMOs alone', noted his observation was that many players that do not participate in voice chat communication in MMO, tend to flunk out from the guild for failing to commit, as other player sees it. Further, is comment of voice chat in other ways a destroyer to anonymity. Whether it is gender, age to an extent, or locality, that are exposed on voice chat, each are a potential of graveness to the newcomers. Buchan and Taylor (2016) in 'A qualitative exploration of factors affecting group cohesion and team play in multiplayer online battle arena (MOBA)', noted that language barriers inhibit team cohesion, quoting one of her studied players "if someone's foreign, that will get on people nerves a lot" (Buchan and Taylor, 2016, p. 4). By retracting from their anonymity, players are in fact, exposing their diversity, which does have a knock effect on their sense of belonging. However, in a study by Lori J. Carrell (2009) named 'Diversity in the communication curriculum: Impact on student empathy', Carrell found that teaching students 'Intercultural Communication' and 'Interpersonal Communication' infuse with diversity and have shown a significant gain in empathy as a central component for players sense of belonging.

Lastly, is the value dissimilarity, this in essence could be viewed as the topic or topics discussed in chats by players. According to Voulgari and Komis (date) in their study 'Exploring group cohesion in massively multiplayer online games', state that players need real-life interest and ideology, thereby a diversity communication will subsequently damage a team's cohesion if not aligned with the rest of the team's accordance and could produce a negative value dissimilarity which is accordance with Pan, Lu and Gupta (2014) previously referred to study. However, in 'A semiotic approach to online communities: Belonging, interest and identity in websites and video games communities' by Tardini and Cantoni (2005), the authors go further by identifying a duel approach. Referring to the term coined by Yuri Lotman (2001, p. 131) the "semiosphere", is a philosophical approach on the range of communication of a given culture. This suggests that the more the semiosphere is restricted and impervious, the more close, homogeneous and self-referential it will be. On the contrary, the more open and permeable the semiosphere, the more open and accessible the community. Buchan and Taylor (2012) in 'A qualitative exploration of factors affecting group cohesion and team play

in multiplayer online battle arena (MOBA)' suggest the use of a supervisor who reduces the anonymity by being able to identify team members and as such, ensure online groups achieve balanced 'communication', but admit that such would not be possible in an MOBA setting as strangers are randomly matched; also, due to the high-intensity of the game, less relevant. Finding from Xu et al (2011) study, 'Sociable killers: Understanding social relationships in an online first-person shooter game', revealed the fact that social relationship can be less binary, suggesting a diversity of social relationships. Thereby, one could argue that although team cohesion is important however, policing the interactions of topic or topics permissible between players will damage the game, as there is no binary relationship. One could argue the role of moderator in regulating semiosphere of a guild or clan in a dynamic way, must come from within the group, although perhaps additional support could be beneficial.

Chapter Three - Skill

This chapter will explore the impact of newcomers in an online multiplayer game, and also how newcomers are hosted and encouraged to participate and engage with the online world by game developers. Based on the research of Pan, Lu and Gupta (2014), the authors identified three dissimilarities of a heterogeneous community, which online games are more or less exclusively in, such as parameter. According to Damion Schubert (2011), in his talk 'The Loner: Why some people play MMOs alone', Schubert states the industry (online games) are "hitting the mass market in a big way"; hence, a more heterogeneous community. To newcomers according to Pan, Lu and Gupta (2014), enjoy information dissimilarity. In a game setting such could be interpreted as game skill, gathered by game knowledge, cognitive skill via practice and/or leadership among others. Online games vary in depth and complexity and to extend the required skill to enjoy its full array of experiences. Elina Koivisto (2003), in "Supporting communities in massively multiplayer online role-playing games by game design" points out that the learning curve of the game is important to the newcomers; it is much more likely they decide to stay with the game and the game is more likely to reach or maintain its critical mass. However, the depth remains as a balancing design for the developer to ensure continuity. In a social game and setting where many required either PvP (player versus player) or PvE (player versus environment) collaborations, such learning curve combined with depth may not be so straightforward.

Many games offer newcomers a special status, such as in *Real Time Strategy* (RTS) a shield period where they cannot be attacked by other players, or a special zone such in Role Playing Games (RPG) where again, they cannot be attacked. During 'The Loner: Why some people play MMOs alone' talk by Damion Schubert (2011), it was identified that newcomers

sustained from socializing in order to form a relative understanding of the game before embarking in collaborative play or even simple interactions. Although such is essential, what is to follow is crucial to the retention of newcomers.

Newcomers are inevitably attracted to skilled players. It is a representation of the full experience the game has to offer. According to Pan, Lu and Gupta (2014) newcomers in our game setting are attracted to skill dissimilarity, i.e. variable level of skills from similar placed, to midlevel right up to the lead players in a guild or competitive teams. Thereby, ensuring active interaction and communication between different levels of skill must be encouraged. Some MMO results are by giving incentives to veteran players to guide newcomers; this according to Damion Schubert (2011) put additional pressure and urgency to newcomers. In studies such as Hau and Kim (2018), why would gamers share their innovation-conductive knowledge in the online game user community? Integrating individual motivations and social capital perspectives, found that skilled players are in fact, less likely to share knowledge if incentives are in place, which is in line with many studies in the early years of computer-mediated communications (CMC), of the intrinsic value of sharing knowledge. Popular games such as *League of Legend* can extract this need from skilled player to share and match with the need of newcomers to learn and experience. *League of Legend* has currently a match system, that combines players of similar level to form a 5 v 5 team match. Hence, skilled players never meet newcomers unless it is via friends teaming up.

As previously stated, under communication, newcomers can learn communication skills from skilled player and acquire a social norm. But designers must beware of conflict and frustration from the part of skilled players. Lewis-Evans (2015) states the game having influence on players anti-social behavior due to the high-pressured environment. However, there could be mitigation. Schubert (2015) talks about the *BattleTech* game, where newcomers will re-enter the game after each death. Allowing newcomers to interact with veteran players and create a holistic beneficial atmosphere for both types of players. Where newcomers can experience the intensity of the game and learn from others, all while feeling positively meaningful to the veteran players and the match outcome.

There are many ways designers and developers encourage interactivity between different skilled players. Some MMO will have In a PvE setting the A.I opponent(s) will target the skilled players more that the newcomers, although such solution might go some way with players interaction, but might have a negative impact on player perceived online justice. A study by Kim and Kim (2018) commented on the effect of perceived online justice on relational bounds and engagement intention. Evidence from an online game community has found that player continuance involvement relies among others; their perceived just contribution where the input/output ratio is valid. One can argue, the veteran players might feel unjust in terms of ration of input/output. Whereas, the battle tech system offers the veterans addition power, and because the newcomer will return to the match multiple times, their input might equal to a veteran input. In summing up, there are many other ways developers can offer newcomers meaningful contribution interaction with veteran players, while being mindful of perceived justice.

Lastly, identifying skilled player and leadership, in an MMO or even a MOBA with different skilled players interaction, or FPS and so forth, where multiplayer interact, identifying skilled player is vital for newcomers. Hsiao and Chiou (2012) question whether the impact of online community position, on online game continuance intention, do game knowledge and community size matter? The study found that the more players progress in the game, the more input he/she will receive form other players. Thereby, as they progress in the game, so will their intake from the game and from other players, enriching their experiences.

Skill dissimilarity is a crucial component for the diversity of the community, not only is it beneficial for newcomers, but veteran players also benefit from being a part of the variant, which will potentially, enhance more connections and new ways of playing and experiences.

Chapter Four - Time

Skill is predominantly gathered through gameplay and substantial investment from the newcomers, whether it is financial, dedication and/or time. Although financial, it has been a factor with extensive exploration mainly through free to play games, as well as multiple entry points for the players and even financial game rewards in exchange for player dedication and consumption. Dedication is also a factor with considerable attention going beyond developers and design theoretical approach, to player data analysis driven base development (Barr, 2018). However, time remains somewhat underdeveloped, there is no substitute for the game progression v minutes spent, no diversity. The previous chapters reviewed the impact of newcomers into the multiplayer online game and vice versa; however, time is crucial to create a greater heterogeneous community.

According to many data, among the Entertainment Software Association (ESA) (2019), it was found that the average age of a gamer in the United States is 34 years old; that is a great shift from previous findings. As a society, different age groups have potential with different responsibilities and engagement, which form certain levels of limitation. For example, a 14-year-old might have a greater time dedicated for entertainment, but due to parental overview, will play less in a session, potentially with more frequent sessions than an 18 to 21 age group, although they have similar obligations, presumably academic and extra curriculum activities commitments. Kolo and Baur (2004) identify players in four categories depending on frequency of session and duration of sessions, naming Moderate, Tenacious, frequent and heavy players. As the age group is greater, so are the obligations and time constrains, with the exploitation of moderate gamers. Newcomers will have to find themselves among these different categories of play and have their game experience and connections with meaningful contribution to their team members restricted by time.

Some MMO address this with World of Warcraft (WoW), having bots, which is a term to describe an AI that is active while a player is offline from the game world to their benefit. This is an element of Idle games genre. Alharthi et al (2018) in 'Playing to wait: a taxonomy of idle games,' explore the different elements and mechanics of the idle genre, considers the value of idle games design synergistic value to other 'standard' games. Alharthi et al (2018) describe idle games as games that can progress without player interaction for some period of time (or completely). WoW have used such mechanics, but one can argue not to the extent of narrowing the gap between hardcore players and moderate players in progressing across the game. For example, grinding is a term used in online games, where players repeat a giving action multiple times to advance one's character. Some players could spend an innumerable amount of time in such activities. Alharthi et al (2018) argue that the lure to idle games is that it encourages players to set it aside and not being penalized for it. By aiding moderate players with such outlook, will increase the number of newcomers and allow the game to hit critical mass. Interestingly Kolo and Baur (2004) found that there is a significant difference in a player's chosen character type. In their survey MMO game, 58% of players identified as heavy, chose a knowledge intensive service such as alchemist, magician, healer. This showcases that designers and developers need to construct character types based on the level of commitment a player can offer.

Unfortunately, due to the lack of designers and developers, allowing players progression to adhere to the commitment, having mainly a financial way of allowing players to advance within a shorter time is necessary. This not only creates dysfunction between the players, but causes restriction due to developers combating in regards of players unfair advantages. Financial gain is a bypass, or more of regulation of the level of difficulty, rather than gameplay time deduction, which have created a whole side industry within the purchase of accounts or so-called 'power-leveling', where players pay real-world wages or purchases to have another person play their in-game character. This dismantles the player value to their in-game character. In Manninen and Kujanpaa (2007) study, the value of virtual assets – the role of game characters, have identified multiple value associates with player avatar interaction, although some players may value one more than the other. In the course of the game, they will potentially experience all and assign accordingly. However, perhaps due to a player

needing to contribute, or having time constraints beyond the simplicity need of being a destructible opponent, these legitimate concerns and pressure are not addressed by the developers and may cause players to result to 'power-leveling' methods that can be detrimental to their experience and put them at risk of scams, as this is usually an illegal exercise.

One could argue, the fall in numbers of MMO such as World of Warcraft and the increase in popularity of games like *Battle Royale*, where all players enter the game equal, and other game genres like MOBA, is an indicative of the player's shift from long procedural progression to instant full-blown experiences, that contain all three values. According to Manninen and Kujanpaa (2007) immersion, achievement and social can be achieved. However, lack of significant player/avatar association, which arguably stems from decision-making playstyle could hinder the process.

Chapter Five - Playstyle

This chapter will identify and discuss the two factors with positive acclamation. According to Pan, Lu and Gupta (2014) study of newcomer's attraction to a heterogeneous community in relation to players, visual dissimilarity i.e. diversity; information dissimilarity i.e. skills, as well as communication in safeguarding but also enriching dissimilarity. Lastly, how time spent in a game can become fairer and just to different players commitment. A solution such as not penalizing a player's absence from the game for a period, or offering players characters or heroes requiring less skill; these methods could do more, but are still limited; the notion of being constructed under a linear progression system. In this chapter we will go further by exploring newcomers and other players in general value dissimilarity. According to Pan, Lu and Gupta (2014) value dissimilarity has a negative impact on newcomers' attraction to a community. Lewis-Evans (2015) talks about a player being banned for not collaborating and subsequently complaining about other players not collaborating and excluded banned players zone. Buchan and Taylor (2016) in 'A qualitative exploration of factors affecting group cohesion and team play in multiplayer online battle arena (MOBA)', found that teams made of friends despite having the potential to form the optimal team, due to not having a cohesion motives of play, i.e. having value dissimilarity, might cost them the match.

However, value dissimilarity is expected in an MMO. According to Bartle (1996), Player Types consist of four type of players that can co-exists in a game world. But one would argue that due to the linear progression system of the MMO genre, players need to be all four types to subsequently be successful to progress into the game. Although, admittedly, one type of player can dominate a player's game time in its given world, which in overall sense, makes it less of a value dissimilarity, as each player will have to adhere to all four throughout their game. Players cannot win subsequent matches without the aid of communication in an MOBA, or without knowing the map in in *Battle Royale* game. Thereby, to have a newcomer turning to a veteran player, and presumably attract other newcomers to follow suite, or simply have greater engagement, they need to develop all four types of skill requirements, which to say, is different than playstyle. In 'Rules of Play' by Salen and Zimmerman (2004)

the authors refer to the world encompassed by the game rules as the magic circle. One can argue that there are two value dissimilarities, one within the magic circle and one outside the magic circle.

Bartle's (1996) Player Types, could be seen as more of designers and developers' tools, to analyze their players and adhere to, with relevant game mechanics, rather than enrich game experiences and accommodate a range of value dissimilarity within the magic circle.

Another taxonomy of player type is that of Dr Jaime Banks (2015) from the University of West Virginia, who explored the relationship between player and avatar. Banks classified the relationship in four categories at an increasing level of social association, exploring the value dissimilarity from the real world to magical world. Noting that building a character or an avatar throughout the game in terms of decision-making, regardless of player to avatar level of association, reinforces player assertion of value within the magical circle. Hence, a variety of decision making would create a variety of value dissimilarity.

However, many multiplayer games force player to make a decision right from the start before even entering the game world, more so in MMO, but also in FPS with class selection; this is a variety of characters with set abilities and skills that players can acquire and upgrade. This in effect, limits player value assertion across the game progression, as they are forced to stick to a certain playstyle that they cannot differ from. This as implication in multiplayer game, as the player is required to fulfill such role in a team setting and offer less value dissimilarity and more of a value checkpoint. *Path of Exile* from Grinding Gear Games Ltd (2013) have a set of characters the player can chose from the start of the game, but the game skill tree is interlinked, and with enough coercion player character, can acquire skills and upgrade to a different class. This will have a nonlinear progression, but also an individualized character unique to player, hence, a unique value to the player.

This could be taken even further, by aligning some, or all of the skills gathered through gameplay actions. MMO like World of Warcraft have multiple categories of equipment to be acquired by the player for their character; this equipment can be acquired in multiple settings i.e. in PvE or in PvP, which allow players to progress in the game world while choosing their mode of play. Ducheneaut et al (2011) exploring the social dynamic of massive multiplayer online games noting that MMORPG are in essence, reputation games, which one would argue is less status driven and could be seen as a form of uniqueness and belongingness according to Pan, Lu and Gupta (2014). But the choice of PvE or PvP one could argue, is outside the magic circle value dissimilarity; to be truly within, it must come from gameplay actions interacting with the game world, not other players. The best way for this would be through systemic game design. Systemic game design is the interaction between different Artificial intelligent (AI) that can be manipulated by players. Now this can offer interesting gameplay, whether it is awareness of the game world, or interesting narrative and solutions to a game challenge.

Middle-Earth: Shadow of Mordor by Monolith Production and Feral Interactive (2014) have a so-called nemesis-system, whereby the AI enemy can not only be recruited by the player, but player interaction is remembered by the AI and acts accordingly in future interaction. These systems can offer value dissimilarity to player character build through the game; for example, a player can repeatedly kill a baby dragon colony, and subsequently in a raid, the mother dragon as the dungeon boss can remember that player among the team of players and gain additional strength, which in turn produces more loot if vanquished. Or choosing to aid rather than loot and the AI character can have consequences when you team up with fellow guild members. This not only offers a personalized character and value dissimilarity, but it could also be shared with other players. This is interesting, as a study by Casey Hart (2017) 'Getting into the game: An examination of player personality projection in video games avatars, explores the connections of actual-self and ideal-self to that of projected-self. The author found that players use avatars as a means by which to explore alternative version of themselves, or even anti-projection of their personality.

Once the system of having multiple choice dictating player character development, this can be furthered imported to direct player versus player interactions. In *Eve Online* by CCP Games (May 2003), Marcus Carter (2015) in *massively multiplayer dark play*, evaluates the treacherous play in *Eve Online* noting that it differs from cheating and anti-social behavior and that it is a form of social combat. This is a player building the value within the contrast of the game world. Trust, as referred to by Marcus Carter (2015), is regarded as a commodity, which players build over the course of the game. However, Marcus Carter also argues that the treacherous gameplay is homogeneous in the community, as players that fail to adapt to this gameplay do not participate in the game at all. One could argue that it is less to do with the treacherous system and more to do with the heavy-handed consequence of falling under it; it is not part of the game, but rather, becomes the entire game.

A combination of non-linear skill tree, systematic game design and player interaction with consequence that build player character and personalization, will offer value dissimilarity inside the magic circle, and in a sense, produce a multi-dimensional avatar that is part of the magic circle. Herman Narula (2019) goes even further to say, a computer science entrepreneur in a Ted talk (2019) with the advance of technology, playstyle and value dissimilarity, will even have greater change. Narula talks about a greater capacity of technology that can accommodate a substantial larger world than what is currently available, where there is not a multiple server, but a single shared one that remains once a player logged-off from the game world. This leaves the imagination questioning how such a world would affect player experiences, coining the term Ecosystem of experience, beyond the financial and market expansion. The value dissimilarity will move beyond the individual to groups. Once the player can modify and manipulate the world which is in continuing existence, and if developers and designers build the game in a way that allows diversity within the game world, using existing MMO and FPS among others balancing systems, the shared value dissimilarity will remain in an heterogeneous community to a varying degrees. Therefore, newcomers can find a rich diverse world that can instantly accommodate them and give them ample space to flex their uniqueness, all while satisfying their sense of belonging.

Conclusion

This study has focused, where few other researchers have; the newcomer's perception of game community and their integration within in it and its crucial partake of any massive multiplayer game expansion and assertion for longevity, regardless of genre. It has explored the magnitude and thereby, the attention it requires from game developers and designers, which is only set to increase with greater market reach, but also greater choices to newcomers. This study examined the main criteria of newcomers needs and explored each in detail with actual case studies. It offered areas of potentials such as new outlooks but all practical possibilities; it also outlined areas of cautions.

The study has also explored the extent of diversity in and outside the game world. As the market of the game industry is set to increase, the study has attempted to evaluate the perception of newcomers' views of a games community from the outside and from within. An emphasis on the image of the game portrays its community as a critical factor that needs attention beyond promoting the aesthetics, mechanics, storyline etc. but the need to promote the community and the players playing the game, supporting it and encouraging a code of conduct. The study has shed a light on the positive impact the game world can have in the real world, and for developers to promote localized balance in advantages to promote inter-global collaboration as a possible area of potential.

To provide a clear view of the journey of newcomers into the game world and subsequently into the games community, the study had to explore the communication system of the game, as well as assert its vital role. It also identified as an active skill, but beyond that the dissertation explored newcomers with the game and the games community via the three identifications outlined in the literature review. Communication was also categorized in these three identifications between newcomers and other players, where players have a role to play, such as to lead moderators and also the role of developers, to support and promote good communication conduct.

One of the basics of the literature reviews of newcomers' identification, is information. The dissertation has identified the organic system of information sharing providing these are identified and applied by newcomers. It also explored the implication of meaningful contribution to both newcomers and veteran players sense of belonging and uniqueness if developers and designer explore such opportunities and offer it more readily. It also argued how meaningful contribution can combat skill difference and game balance. But also found cautions against aggressive newcomers' integration into social situations and highlighted the fact that veteran players aggressive promotion to support newcomers will have negative effects. Emphasizing on organic sharing of knowledge supported both player benefit in intrinsic value, rather than by extrinsic means.

Although not part of the three newcomers' identifications, time spent in a game with correlation of progression in the game, is set to be a more pressing issue, being greater with the over 30-year-old gamers. This study thereby identified some of the potential, but also the negative impact and harmful effect it can have on players, although purposely avoided topic such as online addiction, as this study is based on newcomers and presumably this happens at a later stage in the game progression. However, from scams and losing the experiences designers and developers realized that players were being pressured to buying in-game characters by illegal means. The study explored the idle genre as a possible way to synergize with other genres to address different players commitment levels.

Finally, playstyle has been where the study differs from newcomers in social media. The value dissimilarity in the game could be of positive attribute rather than have a negative impact of the sense of belonging of newcomers. This would rather require the developers and designers to facilitate collaboration in a nonlinear progression system. Allowing players to interact with the game world and contract meaningful decision-making gameplay with consequences not in term of penalization, but skill gathering, that can transit the class system as observed in a case study. These meaningful contributions would require a greater crafted world in terms of technology, but also design. Systemic design has been applied in various game genre, but still lack representation in the multiplayer online game world. The study has concluded with the

potential of a new area of multiple online world, one that can sustain and retain players and player's creations and interactions with the world, whether it is modifying it, or by utilizing it. To be shared, manipulated and adopted by others creating a never seen before collaboration and experiences that will emphasize newcomers' uniqueness and belonging simultaneously.

This study has explored an area where new research and studies will emerge from. For example, the study has relied on previews researchers and various games features as well as industry experts to outline possibilities and difficulties. However, it could have benefited from direct study of newcomers, their views and responses to questions raised in this study. This would benefit from creating different scenarios to gauge multiple areas of further study. Other further studies could benefit from the exploration of the financial side of the section. Rather, what this study has shown is that newcomers are a multiphase that can be researched at each stage. A more theoretical toolset would benefit as developers and designers, as well as outside industry entity can learn from this unique journey, is hardly emanated in any other circumstance.

References

- Alharthi, S., Alsaedi, O., Tanenbaum, T. and Toups, Z. O. (2018) *Playing to Wait: A Taxonomy of Idle Games*. Conference Paper April 2018, Canada: CHI.
- Amnesty International (2018) *Woman abused on Twitter every 30 seconds- new study*. Available at: <https://www.amnesty.org.uk/press-releases/women-abused-twitter-every-30-seconds-new-study> (Accessed: 21 February 2020).
- Banks, J. (2015) 'Object, Me, Symbiote, Other: A social typology of player-avatar relationships'. *First Monday*, 20(2). [Online]. Available at: <https://journals.uic.edu/ojs/index.php/fm/article/view/5433> (Accessed: 07 March 2020).
- Barr, M. (2018) 'Student attitudes to games-based skills development: Learning from video games in higher education'. *Computers in Human Behavior*, 80, pp. 283-294.
- Bartle, R. (1996) *Hearts, Clubs, diamonds, spades: Player who suit muds*. United Kingdom: MUSE Ltd
- Buchan, A. and Taylor, J. (2016) 'A qualitative exploration of factors affecting group cohesion and team play in multiplayer online battle arena'. *The Computer Games Journal*, 6, pp. 65-89.
- Carrell, L. J. (2009) 'Diversity in the communication curriculum: Impact on student empathy'. *Communication Education*, 46(4), pp. 234-244.
- Carter, M. (2015) 'Massively multiplayer dark play evaluates the treacherous play in Eve Online'. In Mortensen, T., Linderoth, J., Brown, A. (Eds.) *The Dark Side of Game Play*. London: Routledge.
- Cook, D. (2018) *Game Design Patterns for Building Friendships*. Available at: <https://www.youtube.com/watch?v=voz6S7ryWC0&list=PLR1c8j-uOTiA-bFpi5nXLwJ91mcVeHLN&index=9&t=2133s> (Access 21 December 2019).
- Ducheneaut, N. and Moore, R. J. (2004) *Gaining more than experience points: Learning social behavior in multiplayer computer games*. Paper presented at the CHI Workshop on Social Learning Through Gaming. Vienna, Austria: CHI.
- Ducheneaut, N., Yee, N., Nickell, E. and Moore, R. J. (2011) *Alone together? Exploring the social dynamics of massively multiplayer online games*. Proceedings of the SIGCHI Conference on Human Factors in Computing Systems Canada April 2006. Canada: CHFCS.
- Entertainment Software Association (2019) *Essential Facts About the Computer and Video Game Industry*. Available at: <https://www.theesa.com/esa-research/2019-essential-facts-about-the-computer-and-video-game-industry/> (Accessed: 12 March 2020).
- Fritsch, T. (2007) *The Lead User Influence in Online Communities – A Gaming Community Example*. Germany: Grin Verlag GmbH.

- Greer, E. (2014) *The Importance of Community to Games*. Available at: https://www.youtube.com/watch?v=E8_vgnBTChU&list=PLR1c8j-uOTiA-bFpi5nXLwJ91mcVeHLN&index=9 (Access 21 December 2019).
- Hart, C. (2017) "Getting into the game: An examination of player personality projection in video games avatars". *The International Journal of Computer Game Research*, 17(2), pp. 22-44.
- Hsiao, C. and Chiou, J. (2012) 'The impact of online community position on online game continuance intention: Do game knowledge and community size matter?' *Information & Management*, 49, pp. 292-300.
- Hsu, C. and Lu, H. (2007) 'Consumer behavior in online game communities: A motivational factor perspective, Avoiding Simplicity, Confronting Complexity: Advances in Designing'. *Powerful Electronic Learning Environments*, 23, (3), pp. 1047-1720.
- Kaplan Veeildf, J. (2017) *D.I.C.E Summit 2017 | Overwatch | Jeff Kaplan (Stream with chat)*. Available at: <https://www.youtube.com/watch?v=QGHfF1U8kg4&list=PLR1c8j-uOTiA-bFpi5nXLwJ91mcVeHLN&index=10> (Accessed: 21 December 2019).
- Kim, M and Kim, M. (2018) 'The effect of perceived online justice on relational bounds and engagement intention: Evidence from an online game community'. *Computers in Human Behavior*, 84, pp. 410-419.
- Koivisto, M. I. E. (2003) *Supporting communities in massively multiplayer online role-playing games by game design*. Proceedings of the 2003 DiGRA International Conference: Level Up Volume: 2. Netherland: DiGRA.
- Kolo, C. and Baur, T. (2004) 'Living a Virtual Life: Social Dynamics of Online Gaming'. *Game Studies*, (4)1, pp. 1-31.
- Lewis-Evans, B. (2015) *Anti-Social Behavior in Games How Can Game Design Help?* Available at: https://www.youtube.com/watch?v=cS48AQdoi_I&list=PLR1c8j-uOTiA-bFpi5nXLwJ91mcVeHLN&index=5 (Accessed: 21 December 2019).
- Lin, J. (2015) *Riot Games Player Behavior Presentation GDC 2013*. Available at: <https://www.youtube.com/watch?v=PY6GYWhuS0I&list=PLR1c8j-uOTiA-bFpi5nXLwJ91mcVeHLN&index=7> (Accessed: 21 December 2019).
- Lin, J. (2016) *GDC 15 - More Science Behind Shaping Player Behavior in Online Game - Legendado (pt-br)*. Available at: <https://www.youtube.com/watch?v=isZSf6acFQ4&list=PLR1c8j-uOTiA-bFpi5nXLwJ91mcVeHLN&index=6> (Accessed: 21 December 2019).
- MacCallum-Stewart, E. (2014) *Online Games, Social Narrative*. USA: Taylor & Francis
- Madigan, J. (200 The Psychology of Video Games Podcast [Podcast]. 2 October 2018. Available at: <https://open.spotify.com/episode/5Xkk4JEfRvKjFw9JoyEIV?si=d9wFNv82S7S81OOLMjRgg> (Accessed: 26 December 2019).

Manninen, T. and Kujanpaa, T. (2007) 'The value of virtual assets – the role of game characters MMOG's'. *International Journal of Business Science and Applied Management*, 2(1), pp. 21-33

Mortensen, T. E., Linderoth, J. and Brown, A. M. L (2015) *The Dark Side of Game Play*. London: Routledge.

Narula, H. (2019) *The transformative power of video games | Herman Narula*. Available at: <https://www.youtube.com/watch?v=jzrcRcEBrmA&list=PLR1c8j-uOTiA-bFpi5nXLwJ91mcVeHLN&index=12> (Accessed: 21 December 2019).

Oldenburg, R. and Brissett, D. (1982) *The Third Place*. USA: Human Resource Press.

Pan, Z., Lu, Y. and Gupta, S. (2014) 'How heterogeneous community engage newcomers? The effect of community diversity on newcomers' perception of inclusion: An empirical study in media service'. *Computers in Human Behavior*, 39, pp.1-424.

Rheingold, H. (1993) *The Virtual Community*. USA: Addison-Wesley Publication Company.

Rutter, J. and Bryce, J. (2006) *Understanding Digital Games*. United Kingdom: Sage Publications Ltd.

Salen, K. and Zimmerman, E. (2004) *Rules of Play Game Design Fundamentals*. United Kingdom: The MIT Press.

Schubert, D. (2018) *The Loner: Why Some People Play MMOs Alone*. Available at: <https://www.youtube.com/watch?v=b2l2ZxNhCSg&list=PLR1c8j-uOTiA-bFpi5nXLwJ91mcVeHLN&index=4> (Accessed: 21 December 2019).

Smith, K. (2019) *The history of online gaming and its advancement today*. Available at: <https://thriveglobal.com/stories/the-history-of-online-gaming-and-its-advancement-today/> (Accessed: 17 March 2020).

SuperData (2020) *Top grossing title by category*. Available at: <https://www.superdataresearch.com/blog/worldwide-digital-games-market/> (Accessed: 17 March 2020).

Sylvester, T. (2013) *Designing Games*. USA: O'Reilly Media.

Tardini, S. and Cantoni, L. (2005) *A semiotic approach to online communities: belonging, interest and identity in websites' and videogames community*. Proceedings of IADIS International Conference e-Society. Switzerland: IADIS.

Vella, K., Johson, D., Cheng, V., ~Davenport, T., Mitchell, J., Klarkowski, M. and Phillips, C. (2017) 'A sense of belonging: Pokemon Go and social connectedness'. *Games and Culture*, 14(6), pp. 583-603.

Voulgari, I. and Komis, V. (2015) *Exploring group cohesion in massively multiplayer online games*. European Conference on Games Based Learning. Norway: Academic Conferences international Limited.

Yan Xu, Y., Cao, X., Abigail J. Sellen, A., Herbrich, R. and Graepel, T. (2011) *Sociable killers: understanding social relationships in an online first-person shooter game*. Proceedings of the ACM 2011 conference on Computer supported cooperative work. China: CSCW.

Games:

Bluehole (2017) *Battle Royale* (1) PC [Computer Game]. Bluehole, Korea.

CCP Games (2003) *Eve Online* (1) PC [Computer Game]. CCP Games, Reykjavik, Iceland.

Grinding Gear Games Ltd (2013) *Path of Exile* (Version 11) PC [Computer Game]. Grinding Gear Games Ltd, New Zealand.

Microsoft Studios (2015) *Halo 5: Guardians* (343 Industries) Xbox One [Video game]. Microsoft Studios, California.

Monolith Productions (2014) *Middle-Earth: Shadow of Mordor* (Game of the year edition) PC [Computer game]. Monolith Productions, Washington, USA.

Riot Games Inc (2017) *League of Legends* (1) PC [Computer Game]. Riot Games Inc., California.