BEING "IN THE GAME"

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ABSTRACT

When people describe themselves as being "in the game" this is often thought to mean they have a sense of presence, i.e. they feel like they are in the virtual environment (Brown & Cairns, 2004). Presence is currently being emphasised in modern gaming technologies (e.g. Playstation 3, Nintendo Wii) and it is thought that games which engender presence will be more enjoyable (Ravaja et al. 2006). However such views may be misguided. Presence research traditionally focuses on user experiences in virtual reality systems (e.g. head mounted displays, CAVE-like systems). In contrast, the experience of gaming is very different. Gamers willingly submit to the rules of the game, learn arbitrary relationships between the controls and the screen output, and take on the persona of their game character. Also whereas presence in VR systems is immediate, presence in gaming is gradual. Due to these differences, one can question the extent to which people feel present during gaming. A qualitative study was conducted to explore what gamers actually mean when they describe themselves as being "in the game". Thirteen gamers were interviewed (8 male, 5 female, age range 19-32 years). The resulting grounded theory suggests being "in the game" does not necessarily mean presence (i.e. feeling like you are the character). Some people use this phrase just to emphasise their high involvement in the game. These findings differ with Brown and Cairns (2004) as they suggest at the highest state of immersion not everybody experiences presence. Furthermore, the experience of presence does not appear dependent on the game being in the first person perspective or the gamer being able to empathise with the character. Future research should investigate why some people experience presence and others do not. Possible explanations include: use of language, perception of presence, personality traits, types of immersion.

1 INTRODUCTION

A well designed computer game possesses the ability to keep people in their seats for hours on end at rapt attention, with players actively trying to reach new goals and determined to overcome their failures [15]. Sometimes people get so carried away that they even describe themselves as being "in the game" [2]. Such statements are often thought to be describing presence: the sense of being in a virtual environment

(VE) rather than the place in which the participant's body is actually located [17]. It has even been suggested that games that engender a strong sense of presence elicit higher overall enjoyment [16]. In accordance with such views, it is not surprising that the latest video game consoles released in the year 2007 allow users to experience more realistic graphics (e.g. Playstation 3; http://uk.playstation.com/ps3) and more natural forms of interaction (e.g. Nintendo Wii; http://wii.nintendo.comPS3).

However whereas presence research often focuses on user experiences while wearing head mounted displays (HMDs) or interacting within CAVE-like systems (i.e. a surround-screen projection-based virtual reality) [17], it is evident that the presence experiences of video games are much more limited. For example, whereas a person in a virtual reality (VR) system can make a full 360 degree turn, the VEs of computer games are restricted to a small screen. Therefore it is reasonable to question the extent to which people feel present during gaming. What do people actually mean when they describe themselves as being "in the game"?

The aim of this paper is to explore the concept of presence in gaming. First we will discuss a number of issues which are particular to the experience of gaming, making it differ from the experience of presence in VR environments. Then we will go on to discuss the results of a qualitative study in which gamers were asked to define the experience of being "in the game".

2 PRESENCE AND GAMING

Within the research community, presence is commonly viewed as the sense of being in a VE rather than the place in which one's body is actually located [17]. Participants know that the events they see, hear and feel in the VR systems are not real events in the physical meaning of the word, yet they find themselves thinking, feeling and behaving as if the place were real, and as if the events were happening. For example, during a public speaking task participants responded to a virtual audience as if they were real people [14]. Similarly, in a virtual reprise of the Stanley Milgram Obedience Experiments, participants responded to the situation of administering electric shocks to a virtual character as if it were real [19].

Designing a questionnaire to measure the degree of presence subjectively experienced, Witmer and Singer [24] emphasise factors such as the naturalness of the interactions with the VE and the extent to which they mimic real-world experiences. Hence one can suggest that HMDs and CAVE-like systems are effective in giving users the sense of presence because the environment appears to surround the user. Furthermore, VR systems are becoming increasingly realistic in terms of visual fidelity, sound and haptics (i.e. touch and force feedback) [17].

Clearly if presence is experienced in gaming at all, the experience is very different to that traditionally studied in presence research. Issues which are particular to the experience of gaming include: submission to the game, the mind / body illusion and immersion as a graded experience.

2.1 Submission to the Game

Whereas a person in a VR system can make a full 360 degree turn, the VEs of computer games are restricted to a small screen. Furthermore, interacting with the

game environment is limited to a number of pre-set gestures and can often be far from intuitive, e.g. players must learn the arbitrary relationship between, say, pressing the button "A" and kicking their on-screen opponent. Despite these restrictions however, not only do players accept the small screen and learn the arbitrary relationships between the controls and the screen output, but the rules of interaction often become fully internalised to the extent that the controls are made to seem transparent [8].

Jarvinen [9] explains that players willingly subject themselves to the rules of the game because rules are what make a game enjoyable. Gaming is in essence a process of problem solving [10]. Players are faced with a number of information processing tasks [8]: gathering clues and treasures; keeping track of one's ammunition, health, and other levels; constantly updating a mental map of the universe of the game, including the positions of pathways, doors, places to avoid, etc. The enjoyment of gaming lies in facing these challenges and overcoming them. In order to experience this enjoyment, the player willingly learns to behave in accordance with the game's boundaries.

Furthermore, despite the interaction with the game being limited to a number of pre-set gestures, players experience a great sense of control in gaming because unlike watching films or reading books when playing a game the player takes on an active role. For example, Frome [7] explains that when playing the first person shooter (FPS) Halo the player determines much of what they see on the screen. When the player presses a button, the character they control throws a grenade, causing a building to blow up. When the player pulls a trigger, their character fires his weapon, shooting an enemy. As a result of the player's actions the game then responds in turn, i.e. there is a "feedback loop" between the person and the game [6]. Therefore it is evident that the player experiences a high sense of control because the player is an essential part of the game: the player has to make their avatar act, otherwise there *is* no game [13].

2.2 The Mind / Body Split

Another difference between VR systems and gaming is that whereas in the VR system the person remains themselves, acting accordingly, in the world of a game the player takes on the persona of their character. As a result, when people play games for extended periods of time they ignore their physical bodies and concentrate on what is happening to their virtual bodies inside the game world. In extreme cases this can have disastrous consequences. For example, in 2002 a Taiwanese man was reported to have died from exhaustion after playing for 32 hours straight [8]. Similarly, in 2007 it was reported that an online games addict died after playing for seven days in a row [12].

As well as being disembodied from their real body, the player is also disembodied from their virtual body. Using the example of a FPS, Young [25] explains that the player looks through the eyes of a virtual character while playing, seeing what the character sees. The player does not see the character because the player is the character. In the heat of the game, all is forgotten except the action. People playing a FPS say things like "I got him!" and "He's over here", rather than "My avatar was out of ammo" or "Your character shot my character" [25].

Similarly, Sommerseth [21] writes that "regardless of whether the protagonist is a famous avatar that has an established autonomous identity and history, like Lara Croft or Mario, the moment I pick up the joypad to play Tomb Raider, I do not

become Lara, but rather, Lara becomes me." The virtual body is absent because it has been overshadowed by its actions [25]. Although the player takes on the mindset of owning the muscular virtual body in terms of their action within the game (e.g. strength), the body itself has been rendered "invisible".

Therefore it is evident that there are two forms of disembodiment during gaming. The virtual body is absent because it has been overshadowed by its actions, the player taking on the persona of the character. Even more absent from perception is the physical body, the body that pushed the keys on the keyboard, moved the mouse, and allowed the images on the screen to be seen.

2.3 Immersion as a Graded Experience

A third difference between VR systems and gaming is the length of time it takes for presence to occur. In VR systems the experience of presence is almost immediate, the environment appearing to surround the user. In contrast, the experience of presence in gaming builds up much more gradually. Only as a result of a successful interaction between the person and the game do players experience a decreased awareness of the real world and a high sense of involvement in the game world.

The term "immersion" is used to describe a person's degree of involvement with a computer game. In interviewing several gamers and developing a grounded theory [23], Brown and Cairns [2] identified a number of barriers that could limit the degree of involvement. These barriers arose from a combination of human, computer and contextual factors (e.g. gamer preference, game construction, environmental distracters), and the type of barrier suggested different levels of immersion: engagement, engrossment and total immersion.

An engaged user is one that has invested time, effort and attention in learning how to play the game and getting to grips with the controls. The reasons why people play and their gaming preference will influence whether a person picks up a game in the first place.

An engrossed user is one whose emotions are directly affected by the game. In order for engrossment to occur, good game construction is vital, e.g. visuals, interesting tasks, plot, challenge. The gamer is now less self aware than before.

Finally, a user that is totally immersed is one that feels detached from reality to such an extent that the game is all that matters. Total immersion requires the highest level of attention and is a rare and fleeting experience when gaming, whereas engagement and engrossment are more likely to occur. Presence is said to occur only in this last stage of immersion. Empathy and atmosphere interact in such a way that the user feels like they are in the VE.

3 BEING "IN THE GAME"

Overall it is evident that there are a number of differences between VR systems and gaming. Whereas presence in VR systems is immediate, presence in gaming is gradual. Furthermore, gamers willingly submit to the rules of the game, learning arbitrary relationships between the controls and the screen output, and take on the persona of their game character.

Due to these differences, one can question the extent to which people feel present during gaming. Does presence always occur at the highest state of immersion [2]? Is it necessary for a player to empathise with the character [2]? Furthermore, do players experience greater presence in games that offer the player a first-person perspective [11]?

3.1 Aim of Study

A qualitative study was conducted to explore the experience of presence during immersion. When gamers are involved in a game to the highest extent they often describe themselves as being "in the game". However what does this actually mean?

3.2 Method

Participants were recruited through an opportunity sample. They were told beforehand that the researcher would ask them about their gaming habits and why they enjoyed playing computer games. Each interview lasted for approximately 45-60 minutes and transcripts were analysed using open coding.

There were originally 14 gamers interviewed, however Participant 6 was excluded from the study due to a corruption of the voice recording. Therefore the resulting grounded theory [23] is based on the interviews of 13 gamers in total. 8 were male and 5 were female. Their ages ranged from 19-32 years (SD = 3.66). Between them they had experience in playing a wide range of games and consoles.

The grounded theory covered a number of research topics, including people's reasons for gaming, game features that make a good game, and the experience of immersion. For the purposes of this paper, only the part of the grounded theory related to the experience of presence during game immersion is reported.

3.3 Results

3.3.1 Defining Being "In the Game"

Three of the gamers interviewed defined being "in the game" as being immersed to such an extent that they became highly involved in the narrative and felt like they were the character (i.e. a sense of presence):

> *"I find that it's quite easy using a controller to forget that you're using a controller if the game is good."* ~ P10

> *"You get just so into that character you think it's kind of real, for like that moment in time."* ~ P2

> *"I like feeling you're part of a game, just the character that you're playing is you."* ~ P11

However, such an experience was not true for everyone. Several gamers claimed that they were always aware that they were just playing a game (i.e. no sense of presence), even at their highest state of immersion:

> *"I'm always aware that I'm just playing a game."* ~ P4

> *"I've never really felt like it was real."* ~ P7

> *"I don't feel like I'm actually in that world but it's very effective.. it's very effective in drawing you in, but you're always aware that it's a game."* ~ P13

Therefore it is evident that when people use the phrase "being in the game" this does not necessarily mean that they feel like the VE is physically real. Instead some gamers use this phrase to mean that they are simply able to believe in the game world. Through their interaction with the game they are able to become highly involved with the characters and the narrative to such an extent that they feel like they have a place within the VE (although they never actually feel like they are the character):

> *"It feels like you're in the game sometimes. You're always aware that you're obviously not, 'cos you're looking through a television screen… but you're kind of expressing yourself through the movement of the controller if you know what I mean.. you have a place in the game, an environment in the game."* ~ P11

> *"It's not that you believe you're the character but it's just kind of a version of you."* ~ P14

Therefore it would appear that "being in a game" can mean one of two things: either the player feels like the game world is real and they are the character they are playing, or the player simply finds the game world involving to such an extent that they are more aware of it than their real life surroundings:

> *"I think it varies from person to person really. Some people probably feel like they're actually in the game, doing the things the person's doing in the game… I generally get immersed in the sense that I don't really notice time passing. So I kind of just forget about whatever's going on around me."* ~ P5

> *"I wouldn't say that I feel like I'm inside the game, but I'm not thinking about being in a room."* ~ P10

These findings differ from Brown and Cairns [2], suggesting that at the highest state of immersion not everybody experiences presence.

In summary, when gamers were asked what it meant to "be in a game" there were two main definitions, one involving a sense of presence and the other not.

3.3.2 Empathising with Characters in the Game

Several of the gamers interviewed claimed that games involving VEs and characters (e.g. FPS, role playing games) are more immersive than games not based on characters (e.g. puzzle games such as Tetris). In some cases, gamers described themselves as becoming quite attached to characters in the game:

> *"You can be emotionally attached to like characters in a game, er like in a film or a book, and those tend to be the games that are the most memorable [...] there's a real story there."* ~ P10

> *"You get affections for the characters [...] I used to think 'I don't want them to grow up yet, it's too soon' so I.. there are things you can do to like slow it down, to prevent it, I think if you earn points and things you can get them to buy potions so they don't grow old."* ~ P14

In contrast, other gamers simply viewed the character as a tool in which they accessed the game:

> *"They were just there to do my business and that's it. Buh-bye. I don't care about you."* ~ P2

A person's view of the character appears to be an artefact of the type of game. For example, Participants 10 and 14 were both discussing narrative-based games in which characters' backgrounds and personalities played a major part, whereas Participant 2 was talking about a simple platform game. Furthermore, whereas Participant 10's game involved a first-person perspective, Participant 2's game involved a third-person perspective.

In terms of being "in the game", it is interesting to note that Participant l0 was one of the gamers discussed earlier that claimed that when he was immersed he never felt like he was in the VE. In contrast, Participant 2 was one of the gamers that claimed that, when immersed, she did feel like she was there. Therefore it would appear that because a person is able to relate to character, this does not necessarily mean that they will feel a sense of presence in the VE. Likewise, another person might view the character as a tool but yet have the experience of getting so caught up in the game that at times they view the game world as real.

In summary, whereas some gamers find themselves being able to empathise with the game characters, others simply view the characters as tools in which to access the game. A person's ability to empathise with the character did not appear to influence whether they experienced a sense of presence. Furthermore, not everybody that plays games with a first person perspective will necessarily experience presence.

3.4 Discussion

Overall it is evident that when people say they are "in the game" this does not necessarily mean that they feel a sense of presence in the VE (i.e. they feel like they are the character). Instead they might just be using this phrase to emphasise their high involvement in the game.

These findings differ with Brown and Cairns [2] as they suggest that not everybody experiences presence at the highest state of immersion (total immersion). In fact, several gamers claimed that they had never ever had the experience of feeling like they were the character. Furthermore, the experience of presence does not seem to be dependent on the game being in the first person perspective or the gamer being able to empathise with the character.

Naturally this leads us to the next question for future research: why do some people experience presence during gaming and others do not?

3.4.1 Use of Language

One possibility is that all gamers do actually experience presence at the height of their game immersion but some gamers might be reluctant to admit this sense of presence, due to the stigma attached. Computer games continue to be condemned by critics as antisocial, anti-educational and a pointless waste of time [3]. Furthermore, news stories reporting the cases of death as a result of non-stop gaming highlight the negative consequences of extreme gaming [8, 12].

Alternatively, another possibility is that nobody experiences presence. Perhaps some gamers are simply exaggerating, using terms such as "I felt like I was the character" not in their literal sense, but in order to emphasise their high level of immersion in the game and that they felt like they had a place in the game world.

3.4.2 Perception of Presence

As well as there being uncertainty in terms of the gamer's use of language when describing presence, there is also considerable uncertainty within the research community in terms of what presence actually is.

In accordance with the rationalistic tradition, Slater et al. [20] define presence as a psychological sense of being in a virtual environment. Furthermore, it is assumed that the visibility of the technical infrastructure would spoil the sense of presence and make the user "emerge" [22].

In contrast, Floridi [5] argues that it is debatable whether people actually believe they are in another world at all: instead it could be that the virtual world is now present in their space. Floridi [5] gives the example of a person knocking down a wall so they can now see into the room next door. One would not say that the person was present in the other room but instead it has now become part of the existing room. The person's viewpoint has expanded.

Alternatively, from a Gibsonian perspective, presence can be defined without the notion of subjective experience at all: presence is tantamount to successfully supported action in the environment [26]. When the environment responds to the user's actions in a way which is perceived as lawful, presence is more likely to occur.

Therefore, it is evident that the meaning of presence depends on one's concept of reality. Should gamers be asked whether they believe that they are now in another environment (present in VE), or should they be asked whether they believe that their environment has simply expanded to allow them to act in a space they could not act before (present in real world and VE)? Alternatively, maybe one should ask to what extent are actions supported by the environment (bypassing the whole issue of subjectivity)?

3.4.3 Personality Traits

Another possibility is that gamers are pre-disposed in terms of their presence experiences, i.e. presence might be dependent on the role of personality traits. For example, Sas and O'Hare [18] found that people who are highly fantasy prone, more empathic, more absorbed, more creative, or more willing to be transported to the virtual world are more likely to experience a greater sense of presence.

3.4.4 Types of Immersion

A further possibility is that there are different types of immersion. Perhaps people are more likely to experience presence in some types of immersion, and not in others?

Ermi and Mayra [4] propose the SCI model and argue that immersion can arise in a number of ways: sensory, challenge-based and imaginative. Sensory immersion occurs when a person's senses are overpowered (e.g. large screens, powerful sounds, realistic graphics). Challenge-based immersion occurs when a person is able to achieve a balance of challenges and abilities (e.g. engaging game play). Imaginative immersion occurs when a person becomes absorbed with the stories and the world, or begins to identify with a game character.

Referring to the SCI model, Arsenault [1] argues that in games such as Doom or Battlezone, two games notorious for their absence of plot and characters, it is impossible for the player to identify with the game characters (imaginative immersion) and experience presence. However it is still possible for the player to experience challenge-based immersion. Therefore one could suggest that the gradation of immersion [2] might have to be re-conceptualised, so as to apply to different types of immersion.

4 CONCLUSION

Presence is currently being emphasised in modern gaming technologies (e.g. Playstation 3, Nintendo Wii) and it has been suggested that games which elicit presence lead to higher levels of enjoyment [16]; however such views may be misguided. In this paper we have described a number of ways in which the experience of gaming differs from the experience of VR systems traditionally studied in presence research. We have also discussed the results of a qualitative study exploring the experience of presence during immersion. The study suggests that the phrase being "in the game" is not always being used to describe presence, i.e. people do not feel necessarily like they are the character in the game. Furthermore, the study suggests that at the highest state of immersion, total immersion [2], not everybody experiences presence. Future research should investigate why some people experience it and others do not.

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