Interrogating social presence in games with experiential vignettes ☆

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ABSTRACT

Increasingly digital games are being played multiplayer online, not just massively multiplayer games but normal PC and console games. An important constituent of the gaming experience is the social relationships between players as mediated by games. Social presence is the foundation of this experience, being the extent to which players feel present to each other within the virtual environment. This paper sets out to explore the nature of social presence in digital games. Though substantial work has already been done in this area, our first study makes it clear that current formulations of social presence in games are only capturing certain aspects of gaming experience. We therefore conducted three other small scale, largely qualitative studies that set out to manipulate social presence in games, in particular using the ambiguity of whether co-players are human to probe the relevance of social presence. We term this novel methodological approach experiential vignettes. The vignettes show that, despite what players say, they are highly task-oriented when it comes to whether the presence of other humans is meaningful in game. Moreover, current measures of social presence in games are not sufficiently rich to capture the full extent to which social presence can occur in games.

1. Introduction

PC games and digital game platforms like Microsoft's XBox and the Sony PlayStation are increasingly offering multiplayer experiences. Whereas most games will have an individual player version, often this is but a lesser sibling to the much bigger online experience that the game can offer. For example, *Call of Duty: Black Ops* is one of the most successful games in recent times, having sales worth over $1 billion, however the single player part of the game is not particularly highly rated (e.g. gamespot.com). Rather it is in the online multiplayer parts that the game offers the best experiences.

When it comes to studying the gaming experience of online multiplayer games, understandably, it has been somewhat dominated by the Massively Multiplayer Online (MMO) games like *World of Warcraft* and *Everquest*. The multiplayer aspect of these games is intrinsic to the games and indeed forms the core of the experience of playing these games. By comparison, there is relatively little work in studying the experience of playing other multiplayer games, despite that these may actually be equally prevalent forms of social games. And within this, the dominant consideration has been in terms of competitive play. Indeed, the Gaming Experience Questionnaire, unpublished but mentioned in a number of papers, for example [15], aims to capture the full breadth of the gaming experience so understandably includes a social component. This is measured in a separate module the Social Presence in Gaming Questionnaire (SPGQ) [15]. This module was carefully developed and consists of three components: behavioural involvement, psychological involvement – empathy, psychological involvement – negative feelings. Even from this though, it is strongly suggestive that the SPGQ is only suited to games where players are enemies – for example negative feelings of the sort specified in the SPGQ may be entirely absent in collaborative games regardless of how socially present players feel towards each other.

Of course in MMO games, players surely do feel social presence but the virtual worlds are so rich and socially populated that simply referring to it as social presence does not do justice the extent of human experience within these games. For example, [55,56] in particular has documented extensively how players project their identity into these games, fall in love and build or build or existing family or friendship bonds. Many games, for example *Call of Duty*, not only do not offer the opportunity for such rich interaction but it would be a very odd game of *Call of Duty* where it did! There are of course opportunities for friendships and social bonds to arise in the communities and clans which grow around such games, however it is the role of social presence within these latter, less obviously social, games that is the focus of this paper.

The original intention of this work was to investigate the nature of social presence, building on previous work [20,12], but relating it to games with a collaborative rather than competitive component. The first study therefore investigated the gaming experience in collaborative Tetris. However, in this study, it immediately became clear that the current views of social presence in games, particularly that represented by the SPGQ, are not sufficient to understand social presence in this context. We therefore moved to explore more carefully the dimensions and range of social presence in games, and given the openness of our goals, we opted for a new approach which we are calling experiential vignettes. These are basically small-scale qualitative studies, but rather than relying on pure observation of qualitative data, we set up situations that aimed to manipulate the way players thought about games. Through these vignettes, the intention was to elicit a more wide-reaching account of social presence by requiring players to bring to mind less obvious aspects of what it means to play socially. In particular, we used ambiguity of whether other players were real people or virtual agents as a way to provoke players to think more deeply about the role of other people in games, and therefore probe the nature of social presence. What is made clear through the vignettes is that social presence is not simply a matter of the player configuration in both the physical and game worlds but that it is also the nature of the game in hand that influences the sense of social presence. Thus, previous models of social presence in games are at risk of bias because they did not explicitly explore the variety of social contexts in which games can be played. This is not to say that the work reported here is the last word either but rather that we have deliberately attempted to explore different games with different gameplays and moreover, through the vignette approach, manipulate and probe the social contexts of the games considered. The results show that a richer account based on a wider base of gaming experiences is needed to describe the complexities of social presence in games.

It may also seem desirable to have much larger studies to explore social presence rather than the small-scale vignettes. However, substantial quantitative experiments would not be effective without useful measures of social presence, which we would hold do not yet exist, and moreover would naturally be constrained to focus on a particular game. Qualitative studies are much better suited to exploring such subjective experiences like social presence and in which case, it is not so much the quantity of data that is important but the quality. The experiential vignette form of the studies was used to be flexible depending on what each study found and to allow players to express the richness and complexity of their expectations and actual experiences. This resulted in a substantial but varied dataset that offered a more complex appreciation of the nature of social presence in games.

2. Background

2.1. Social presence in gaming

Social presence is one aspect of a more general sensation of presence in virtual environments [34]. One common view of presence is that it is the illusion of non-mediation, that is, experiencing interactions mediated via a digital system as if they were not mediated. However Cairns et al. [13] argue that presence occurs "when the hypothesis on the virtual environment wins out over that of the real world. In some sense then, presence is the sensation of being somewhere else knowing that you are not. When we really are somewhere, there is no sense of presence as there is no conflicting perceptual hypothesis to be resolved". Supporting this view Sanchez-Vives and Slater [46] argue that while presence is the phenomenon of acting and feeling as if one is in the environment created by computer displays, one is simultaneously conscious of the fact that there is no environment. Based on a critical analysis of the *presence as epistemic failure* theory, Floridi [18] also suggests that presence is not a 'failure to perceive' the mediation, but can be defined by an observable presence, in other words, we are present in an environment if we have an observable effect on that environment.

Presence is typically divided into spatial components, the sense of being in a virtual space, and social components, the sense of being with others. So for example, Biocca et al. [5] state that social presence is the sense of being together with another. Schouten [48] argues that social presence is a concept built around the evidence of other humans within a virtual environment, with even simple cues such as the score of other players in a computer game being enough to increase social presence. As such, social presence is similar to the concept of 'Shared Involvement', introduced by Calleja [14]. Shared Involvement in games is the sense of being with other entities in a common environment, whether that involvement consists of explicit communication, working together, or "simply being aware that actions are occurring in a shared context". Calleja [14] argues that this feeling is enhanced by cooperation in competitive environments such as team based online FPS games.

Social presence may also be experienced to varying definable levels, from simply perceiving the co-presence of other entities, to a deeper sense of psychological involvement with the other entities, and finally a sense of behavioural engagement in which there is perceived mutual social presence [4,3]. These steps of depth are similar to the Brown and Cairs [9] model of immersion. Immersion is the sense of being cognitively engaged in a task as in the sense of being immersed in the activity. A player's level of immersion can vary from simply attending to a medium, to engaging with it and on to total immersion. Cairns et al. [13] argue that immersion and presence are entirely separate concepts (though they can occur together), giving the example of the game Tetris. In Tetris "there is little sense of 'being there' in this game as there is simply no 'there' for a player to be and yet the game is hugely absorbing and provides a strong immersive experience". In a study by Brown and Cairns [12] the interplay between immersion and social interaction/presence was explored, finding that immersion and presence did not seem to clearly correlate in a competitive game. Rather, it was sufficient for players to know they were playing another player (wherever located) to increase immersion but social presence, as might be expected, also increased if the players were in the same room.

2.2. Humans vs. bots

In the digital world, there is always the possibility that players are not playing other people but computer-based agents or bots, and this therefore probes at the role of social presence in the gaming experience. There have been a number of studies of how the perception of the agency of other entities within a virtual environment affect player experience. In one such study by Weibel et al. [54] groups of participants collaborated together on a multiplayer role-playing game to play against other groups of players. Some groups were informed they were playing against bots, and other groups against humans. It was reported that in this study the group who thought they were playing the humans felt a "greater sense of immersion and greater enjoyment" in addition to a greater sense of engagement and flow [54]. In another study investigating the effects of the perception of other entities within competitive/cooperative gaming environment, Lima and Reeves [33] found that participants not only "exhibited greater physiological arousal to otherwise identical interactions" when they assumed the other entities were controlled by humans rather than the computer, but also that participants generally disliked having a bot as a