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The effects of winning and losing on social presence in team-based digital games

Matthew Hudson*, Paul Cairns

Department of Computer Science, Deramore Lane, University of York, Heslington, York, YO10 5GH, UK

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ABSTRACT

Social play is an increasingly important constituent of the digital game experience. Though there is a growing understanding of how the social context influences the experience of playing, there is little known about how the experience of play influences the social experience. Specifically, it is not even known whether winning or losing affects a player's sense of social presence with their co-players. This paper provides the results of two studies aiming to explore this interaction. The first study is a lab-based study that looked at whether social presence varied in collocated teams playing team-based games depending on whether they won or lost. The second study is a user experience survey which measured how variables in the context of gameplay affected social presence across a number of team-based online games. The results of both studies show that when teams lose, the negative impact on social presence is greater within teams than between the competing teams. This has implications for how studies in this area should be analysed and also, through consideration of individual games, suggests that mechanisms in the games may lead to the reduced social presence.

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1. Introduction

Playing socially is now, and arguably always has been (Selnow, 1984), an important component of playing digital games. Massively multiplayer online role-playing games (MMORPG) have been the flagship of social digital games for some years now, epitomised by *World of Warcraft*. While such games are still played in large numbers, many other games have an important social component. Even games such as the *Call of Duty* series, which were originally designed for single players, are now dominated by the multiplayer gameplay. Multiplayer Online Battle Arena (MOBA) games, like *League of Legends* and *Dota 2*, are being played by literally millions of players in any one day (Gaudiosi, 2011), albeit grouped into small teams.

In some ways, the numbers of people playing socially should not be so surprising. It has been identified as an important component of why people play games in the first place (Sherry et al., 2006). Furthermore, social play fulfils a more wide-reaching human need to feel related to one another (Ryan, Scott Rigby, & Przybylski, 2006). Modern gaming networks offer the opportunity for

relatedness in ways that were previously not possible. However, despite the prevalence of playing socially, how the social aspect of play interacts with the experience of playing is not wholly understood. Evidence is accumulating that playing socially is more enjoyable (Gajadhar, deKort, & IJsselsteijn, 2008) and this might be because the experience of playing socially is more immersive than playing alone (Cairns, Cox, Day, Martin, & Perryman, 2013). Further, whilst it does matter if players are playing with friends or strangers (Gajadhar et al., 2008), it does not matter so much if the co-players are collocated or remote from each other (Cairns et al., 2013).

While existing research has focused a lot on the social context of play, it has not looked to the interaction between the game itself and the social experience of the players. This is a potential problem for online games developers as it may be that the games themselves can interfere with the social experience. Jeff Lin of Riot Games has shown that changes to aspects of the game can in fact influence the social behaviour of the players (Lin, 2013). Can it also affect their social experience and hence the overall experience of playing the game?

Additionally, regardless of the design of any particular game, it may be that the act of play itself is able to influence social experiences. Specifically, MOBAs are team-based games in which the goal is to win against an opposing team. Failure is of course a normal part of digital games (Juul, 2013) and can even be part of the fun

* Corresponding author.
E-mail address: matt.hudson@york.ac.uk (M. Hudson).

([Matias Kivikangas & Ravaja, 2013](#)). However, what happens when the failure happens publicly as part of a team rather than privately to individual players or friends playing at home? In the domains of online education ([Rockinson-Szapkiw, 2009](#)) and organizational studies ([Altschuller & Benbunan-Fich, 2010; Nash, Edwards, Thompson, & Barfield, 2000](#)) research has suggested some correlation between performance and social experience. In digital games though, it may be that losing has no effect on the social experience, after all, losing a game as a team has a degree of team responsibility and therefore could still be a full playing experience. Alternatively, it may reduce the feeling of team cohesion and hence reduce the sense of social connection that players seek. Conversely, winning a game may enhance the social experience and thus be a way to greatly enhance the value of the social play. Framed this way, playing socially in a public team could be a form of gamble with the social experience, where the winners take more away from the experience than the losers. Currently, very little is known about this aspect of social gameplay. Furthermore, current studies generally ignore this aspect, for example ([Emmerich & Masuch, 2013](#)), which may have consequences for the interpretation of the results of such studies.

Social presence is the term commonly used to understand social connections through media such as digital games but also including virtual environments, online communication such as Skype and so on. Within digital games, one particular measure, the Social Presence in Gaming Questionnaire (SPGQ) has been widely used ([de Kort, IJsselsteijn, & Poels, 2007](#)) as a validated measure of social presence. However, while it does seem appropriate for games where players are one-on-one, it does not fit so well with the more complex social situation of team vs team play ([Hudson & Cairns, 2014b](#)) even where there are still only two human players involved ([Järvelä, Matias Kivikangas, Kätsyri, & Ravaja, 2013](#)). In this work, a newer, more specific scale was used that makes the distinction between the competitive social presence between opponents and the cooperative social presence within teams ([Hudson & Cairns, 2014a](#)).

The goal then of this paper is to clarify the role of winning and losing on the social presence between players. The focus is on team vs team games because they provide the opportunity for complex social experiences that are valued by players. In addition, despite the dominance of this sort of social play in digital games, it has not been extensively studied in terms of social presence.

We report on two studies. The first study took an experimental approach to give strong control of the playing situation and so allow for a clear identification of the effect of winning and losing on the different aspects of social presence. This provided evidence that losing did not influence competitive social presence but it did reduce cooperative social presence. However, there are challenges in getting two teams, even small teams, together for a laboratory-style study and this limited the ability to produce a substantial dataset. Further, there is a wide variety of team vs team games any such study is necessarily limited in how many games can be addressed. Where the goal is to make the first in-roads to exploring the effect of winning and losing on social presence, a more wide-reaching methodology was required.

The second study was therefore a user experience survey which measured how variables in the context of gameplay affected social presence across a number of team-based online games. The survey data consists of 821 respondents from across 8 gaming communities, gathered via community forums. Again it was found that winning did provide an increased sense of cooperative social presence, that is, the social presence felt within a player's own team. There were differences in social presence with regards to the competition but they were much less marked. The breadth of the survey data also made it possible to examine differences in

presence experienced in individual games. For some games, there was a great deal of difference in cooperative social presence between winning and losing teams. It may be that in these games, the gameplay itself provokes this effect so that when players lose in these games there is a strong disconnect from their team. Where social presence is severely impaired by losing, there may be implications for the bad behaviour (trolling, team switching) in losing teams.

Thus, these studies suggest that where team vs team games are played online, the impact on social presence due to losing is more detrimental within teams than between teams and moreover that some games seem to exaggerate the impact of losing. Moreover in the competitive situation, it may not always appropriate to treat dyads of players or dyads of teams as the best way to analyse social experiences. As this is the first exploration of these in-game outcomes on social presence, it does suggest some important avenues for further research particularly for game developers who wish to promote good social experiences and good social behaviour in their online games.

2. Social presence in games

2.1. Measuring social presence in games

Social presence is a type of presence felt in virtual environments and is distinct from the more widely discussed concept of general (spatial) presence. While presence is defined simply as a psychological sense of 'being there' ([Usoh, Alberto, & Slater, 1996](#)) in a virtual environment, social presence is the sense of "being together with another" ([Biocca, Harms, & Burgoon, 2003](#)). Social presence is the social connection one makes with entities within a virtual environment, and the level of social presence one feels depends upon the strength of these connections. Schouten ([Schouten, 2014](#)) states that in digital games "social presence is the result of being in a social setting. The more opportunities for social interaction the setting has, the higher the degree of social presence will be". Schroeder ([Schroeder, 2002](#)) argues that mutual awareness, common focus of attention, and collaborative task performance, are all important elements of social presence in shared virtual environments. Social presence is a core concept in the experience of team-based online games, with previous studies suggesting that in addition to competitiveness and challenge, social reasons such as the possibility of cooperation and communication are strong motivators for people to play team-based online games ([Frostling-Henningsson, 2009; Jansz & Tanis, 2007](#)).

Social presence can be experienced to varying definable levels, from a low level perception of other social entities, to a deeper sense of psychological involvement, and finally a strong feeling of behavioural engagement and mutual co-presence ([Biocca, Harms, & Gregg, 2001; Biocca & Harms, 2002](#)). As such, it makes sense that social presence can be in some sense quantified through suitable measurement scales. However, though social presence is acknowledged as important to digital games, it is not often explicitly measured.

The SPGQ is one established questionnaire that has been used to measure social presence in games ([de Kort et al., 2007](#)). However, it does appear to have been primarily designed for use with competitive games. It includes items which refer to 'revenge' and 'schadenfreude', which are not expected components of social presence in cooperative games. In the SPGQ there is also no distinction between who the other players are in relation to the respondent. This is easily remedied if the respondent is playing one other person who is an opponent in the game, but it is difficult to make the SPGQ suitable for team-based games. In this situation, when there are both opponents and team-mates sharing the virtual