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# Putting The "Fun Factor" Into Gaming:
# The Influence of Social Contexts on Experiences
# of Playing Videogames

## Linda K Kaye[1], Jo Bryce[2]

*[1]Edge Hill University, Lancashire, United Kingdom,*
*[2]University of Central Lancashire, Preston, United Kingdom*

**Abstract:** The increasingly social nature of gaming suggests the importance of understanding its associated experiences and potential outcomes. This study examined the influence of social processes in gameplay and different gaming contexts on the experience of individual and group flow when engaged in the activity. It also examined the affective experiences associated with different types of social gaming. The research consisted of a series of focus groups with regular gamers. The results of the thematic analysis revealed the importance of social belonging, opportunities for social networking and the promotion of social integration for game enjoyment. However, social experiences could also facilitate feelings of frustration in gameplay as a result of poor social dynamics and competitiveness. The analysis also suggested that group flow occurs in social gaming contexts, particularly in cooperative gameplay. A number of antecedents of this shared experience were identified (e.g., collective competence, collaboration, task-relevant skills). Taken together, the findings suggest social gaming contexts enhance the emotional experiences of gaming. The study demonstrates the importance of examining social gaming processes and experiences to further understand their potential influence on associated affective outcomes. Areas of further empirical research are discussed in reference to the study's findings.

*Keywords:* Videogames, socialisation, group flow, processes, enjoyment, frustration

## Introduction

Although a large body of research has investigated the negative effects of playing videogames, there has been less examination of the psychological experiences associated with the activity. Studies which have addressed this area typically focus on experiences of immersion, presence or flow in gaming (Brown & Cairns, 2004; Gajadhar, de Kort & IJsselsteijn, 2008b; Sweetser & Wyeth, 2005). Although social interaction has been found to influence game engagement and enjoyment (Lim & Reeves, 2010; Ravaja et al., 2006; Weibel, Wissmath, Habeggar, Steiner, & Groner, 2008), the social processes involved in the experience of "group flow" and its potential influence on affective experiences of gameplay have yet to be examined in detail.

Address correspondence to Linda K. Kaye, Department of Psychology, Edge Hill University, St Helens Road, Ormskirk, Lancashire, L39 4QP, United Kingdom, Phone: (+44) 1695 584413, Linda.Kaye@edgehill.ac.uk

*Flow*

The concept of flow was developed by Csikszentmihalyi based on his observations of the immersion and high levels of enjoyment experienced by a group of artists. He explained this deep involvement as the result of the intrinsically motivating nature of the rewards derived from the process of painting itself (Csikszentmihalyi, 1988). Csikzentmihalyi's (1992) subsequent observations of individuals engaged in a range of activities (e.g., rock climbing, rock dancing, chess) led him to suggest that flow states occur more freely in those activities which are structurally designed to facilitate deeper levels of concentration and involvement. This distinguishes "optimal experiences" from everyday tasks, and describes a psychological state in which an individual behaves in the absence of societal or cultural controls (Csikszentmihalyi, 1988, 2003). To provide a holistic approach to the study of these enjoyable experiences, Csikszentmihalyi (1975) proposed the need to move beyond understanding the individual's learned responses to pleasant experiences and the characteristics of the activity, to examine the interaction between the individual's abilities and subjective evaluation of the situation in determining the enjoyment of the activity. As a result, flow theory focuses on the relationship between the individual's skills and the personal meanings they derive through an activity.

Flow is characterised as the positive subjective state an individual experiences when he/she is undertaking an enjoyable activity in which his/her capabilities match the high level of challenge required (Csikszentmihalyi, 1975; Csikszentmihalyi & Csikszentmihalyi, 1988; Massimini & Carli, 1988). This skill-challenge balance is integral to the individual's perceptions of the enjoyment derived from an activity, and has been found to be associated with a range of positive indicators including high levels of arousal, intrinsic motivation, positive affect and enjoyment (Csikszentmihalyi, 1975, 1982; Ellis, Voelkl & Morris, 1994; LeFevre, 1988). When experiencing flow, the individual is focused on the processes involved in the activity, rather than its potential consequences, and this is sufficiently rewarding to promote continued engagement (Csikszentmihalyi, 1975, 1992). This intrinsic motivation is a key component of the flow experience, and the theory assumes that an individual undertakes an activity purely for its own sake or is "autotelic" (Csikszentmihalyi, 1992, 1993).

Flow theory represents a suitable theoretical framework for examining the processes underlying the enjoyable experiences derived from gaming as the activity is largely intrinsically motivated (Bryce & Kaye, 2011). It has been found to occur in frequent gamers (Poels, de Kort & IJesselsteijn, 2007), and to be associated with gaming enjoyment and positive affect (Klimmt, Hartmann & Frey, 2007; Smith, 2007). The GameFlow model (Sweetser & Wyeth, 2005) suggests that the inherent structure of games (e.g., game goals/objectives, feedback, challenge) is associated with the experience of flow and enjoyment during gaming, at least for real-time strategy games. This framework acknowledges the role of social interactions in gameplay, but its ability to facilitate flow has yet to be determined (de Kort, Ijsselsteijn & Gajadhar, 2007; Sweetser & Wyeth, 2005). Whilst, there is some evidence of an association between flow and aspects of social interaction in gaming (e.g., Weibel et al., 2007), others have suggested that it may actually interrupt these experiences (e.g., Sweetser & Wyeth, 2005).

The original individualised flow model did not consider the social or shared dimensions of autotelic experiences, though Nakamura and Csikszentmihalyi (2002) later proposed the concept of shared or group flow to characterise situations in which an individual's "coparticipants may or may not be in flow" (p. 102). Sato's (1988) research on motorcycle gangs also suggests that the sense of social belonging and companionship provided by group contexts can enhance the enjoyment and intrinsic rewards of an activity in addition to the established flow components outlined by Csikszentmihalyi (1975). It seems reasonable to assume that similar experiences are facilitated by social gaming as it provides opportunities for friends to play together cooperatively to achieve group goals. It is likely that the experience of group flow is largely dependent on the way in which players coordinate, have collective competency to meet the challenge of the game, and are focused on feedback from each other and the game itself. Other factors such as competitiveness and leader-boards also enable players to demonstrate their competence to fellow gamers, which can also promote the experience of enjoyment and rewards in social gaming.

Gamers can also play competitively online against others through web-based platforms (e.g., Xbox Live), or offline against other players. These different gaming contexts could facilitate differential experiences of flow, and the physical presence of other players in offline contexts may restrict opportunities for this to occur. To date, no research has explored the concept of group flow in relation to gaming or identified the dimensions of these experiences which may be unique to social versus solo gaming contexts. As a result, the current study examined the association between social processes in gaming, and their experiential and affective outcomes. This led to the development of the first research question:

RQ 1    *How are social processes in gaming related to group flow within online and offline contexts?*

*The value of social gaming*

Playing videogames is often stereotypically conceptualised as a solo and socially isolating activity, but it is an increasingly social activity which facilitates online and offline interactions amongst existing and new friends (Bryce & Rutter, 2003; Yee, 2006, 2007). Massively Multiplayer Online Role-Playing Games (MMORPGs) and social networking games (e.g., Farmville), for example, encourage players to engage socially both in and through games. Thiss is consistent with evidence that gamers prefer to play with others rather than alone (Cupitt & Stockbridge, 1996; Durkin & Aisbett, 1999; Kubey & Larson, 1990; Vorderer & Ritterfield, 2003). Social interaction has been identified as both a motivational and experiential factor in gaming, particularly in multi-user environments (Colwell, 2007; Griffiths, Davies & Chappell, 2003; Kim & Ross, 2006; Lo, Wang & Fang, 2005a; 2005b, Sherry & Lucas, 2003; Sherry, Lucas, Greenberg & Lachlan, 2003; Wood, Gupta, Derevensky, & Griffiths, 2004). The motivational nature of social gaming is reflected in a number of player typologies, such as those proposed by Bartle (1996, 2004) and Yee (2006, 2007). These frameworks identify "socialisers" or "social-oriented players" as key types of gamer, highlighting the motivational influence of social factors on gaming behaviour. Self-Determination Theory provides a theoretical explanation of the relationship between social factors in gaming and enjoyment (Ryan, Rigby & Przybylski, 2006; Tamborini, Bowman, Eden, Gizzard & Organ, 2010), as the satisfaction of needs of relatedness (i.e., feeling connected with others), autonomy and competence have been found to predict game enjoyment. This is also consistent with findings that social motivations are associated with time spent playing (Williams, Yee & Caplan, 2008), and predictors of online game enjoyment (Cole & Griffiths, 2007). These studies suggest the potentially positive social value of gaming, and the associated influence of gaming contexts on the outcomes of the activity.

Cole and Griffiths (2007) examined the social interactions of players of Massively Multiplayer Online Role-Playing Games (MMORPGs).[1] The importance of interpersonal communication for this particular form of gaming has been well documented (e.g., Filiciak, 2003; Ng & Wiemer-Hastings, 2005). Players have reported enjoyment of playing these types of game as a result of involvement in a social community, and the ability to make friends and share personal information online while remaining anonymous. These factors can also enhance feelings of social belonging (Griffiths, 1997). Smyth (2007) suggests that the experience of playing MMORPGs is distinct from other gaming experiences, and has different psychological and social outcomes. For example, Smyth's (2007) comparisons of MMORPG and solo players showed greater enjoyment in playing and greater acquisition of new friendships in the MMORPG group compared to the "traditional" gamer group. This suggests that the social aspects of gaming have a largely positive influence on gaming experiences and consequences, and highlights the need to develop a greater understanding of their dynamics.

The positive dimensions of social gaming have also been demonstrated in empirical research examining the role of online communities and gaming clans in motivating online gameplay (Chappell, Eatough, Davies & Griffiths, 2006; Griffiths, Davies & Chappell, 2004; van Looy, Courtois & de Vocht, 2010). Research suggests that feeling connected to others, and recognising the importance of online friends, are key motivational factors for playing MMORPGs (van Looy et al., 2010). Competitive play between online "clans" has also been found to motivate and determine enjoyable gaming experiences in First Person Shooter (FPS) games (e.g., Jansz & Tanis, 2007). Similarly, the appeal of social contact and competition against others has also been shown to motivate gamers within offline gaming contexts (Jansz & Martens, 2005). This suggests that competitive dimensions of social gameplay are also important motivational and experiential influences in a variety of different gaming contexts. However, the extent to which the social dynamics associated with both competitive and cooperative gaming may be associated with a balance of positive or negative gaming experiences remains unclear. For example, heightened competitiveness may result in enhanced frustration or aggression in competitive tasks (Anderson & Morrow, 1995; Deutsch, 1993).

This is consistent with initial research suggesting that differences between cooperative and competitive gameplay influence the outcomes of the activity. For example, Lim and colleagues (Lim & Lee, 2009; Lim & Reeves, 2010) found significant differences in physiological arousal between conditions of solo and collaborative gameplay, and between collaborative and competitive gameplay, in conditions comparing a human player versus a computer-controlled agent. This is also supported by research suggesting that arousal, positive affect and engagement are enhanced when individuals play in the physical presence of other players compared to playing online or against computer-controlled opponents (de Kort et al., 2007; Gajadhar, de Kort & IJsselsteijn, 2008a; 2008b; 2009a; 2009b; Madryk Inkpen & Calvert, 2006; Ravaja, 2009; Ravaja et al., 2006). The mechanisms underlying the emotional enhancement of gaming experiences when playing socially can be

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[1] These are primarily a social-based phenomenon in which large numbers of users interact with each other over the Internet. MMORPGs differ from traditional videogames as the virtual world in which they are played is persistent and independent from the gamers playing at any given time. The introduction of MMORPGs established one of the first interactive mass medium platforms which incorporated both entertainment and communication.

attributed to a number of factors. These include self-efficacy (Trepte & Reinecke, 2011), identification with the game and/or other players (van Looy et al., 2010), and competitiveness (Klimmt, Schmid & Orthmann, 2009). Recent findings, for example, show that player performance and game-related self-efficacy are related to game enjoyment (Trepte & Reinecke, 2011). Although this study does not specifically explore the role of self-efficacy in *social* gameplay, it suggests that this factor influences the emotional outcomes of the activity. It is conceivable that the presence of others in gameplay will influence individuals' perceptions of self-efficacy, which could result in enhanced emotional responses to gameplay. It is also possible that these experiences will be enhanced by heightened competitiveness and/or arousal when playing in social compared to solo contextsdue to the individual's ability to monitor other gamers' performance and role in gameplay (de Kort et al., 2007). Although the reviewed studies demonstrate that the influence of social gaming experiences and motivations on affective and other outcomes is being examined, the available evidence is largely based on experimental designs rather than investigation of real-life gaming experiences.

The use of qualitative methods to address these issues allows an examination of the meanings associated with gaming, an alternative approach to the dominating media effects approach to understanding this activity. There has been a general lack of use of the focus group methodology in psychological research on gaming, with the exception of a small number of studies (e.g., Bracken, Lange & Denny, 2005; Poels, de Kort & IJsselsteijn, 2007). These studies have found evidence of different types of presence (e.g., spatial, social and co-presence) in online gaming, and enhanced game enjoyment through being with others. Other qualitative studies have examined experiences associated with offline forms of social gaming, and generally suggest that social interactions and the need for relatedness are associated with game enjoyment (Ackermann, 2012; Gajadhar, de Kort, IJsselsteijn, & Poels, 2009; Voida & Greenberg, 2011). Although these have provided interesting insights into social interactions and roles within this particular type of context, the involvement of other social processes in facilitating a range of positive and negative gaming experiences remains unclear. There is also currently little research examining how social processes may differ as a product of game context (e.g., online versus offline). The current study aimed to develop these findings by exploring the diversity of gaming experiences as a function of social factors and contexts. It specifically explored social processes in gaming within both online and offline contexts, and their associations with affective gaming experiences. This led to the development of the second research question:

*RQ 2     How are social gameplay processes associated with gamers' affective experiences?*

**Method**

*Participants*

Regular gamers were recruited by targeted sampling from Computer Game Development and Game Design degree programmes in the UK. This sample was selected to ensure that the participants would all play videogames on a regular basis. The overall sample consisted of 17 participants (16 males, 1 female) between the ages of 18 and 24. Four semi-structured focus group were conducted, each consisting of four or five individuals. This smaller group format allowed each participant to have a greater opportunity to share their thoughts, and a more in-depth discussion of the relevant issues (Hughes & Dunmont, 1993). Each session involved established friendship groups to more effectively facilitate discussions about shared social gaming experiences and their associated affective outcomes.

*Procedure*

Four semi-structured focus groups were conducted, each lasting approximately one hour. The sessions commenced with an introduction of the researcher and the overview of the purpose of the research. Following this, a review of the session goals was provided and ground rules established. Participants were then asked to complete a demographics questionnaire and sign a consent form. The sessions were concluded once the researcher felt that all relevant issues had been covered, and when participants indicated that they had nothing further to contribute. At the end of the session, participants were encouraged to ask any questions relating to the research and thanked for their participation.

*Agenda*

The focus group agenda was developed by identifying a number of themes, which have not previously received substantial empirical attention. The first theme explored motivations for playing videogames, including the importance of social aspects of the activity (example question: "Why do you play videogames?"). The second focused on gaming experiences, including the affective outcomes of the activity and the associated influence of the presence of other players (example question: "How do you feel during and after playing?"). These questions were open-ended to allow participants to explore issues and share opinions. Supplementary probes were also

developed for use in instances where more information might be required (e.g., "Does anyone else have any similar experiences, or think differently?"). Participants were also given the opportunity to raise any other issues which they perceived to be relevant to the themes under discussion.

All focus group sessions were recorded using a digital recorder to enable full transcription of the discussions. Thematic analysis was used as an appropriate framework for identifying, analysing and reporting themes in qualitative data (Braun & Clarke, 2006). It can also provide a detailed account of data which is not restrained by theory, in contrast to other qualitative analyses (e.g., conversation analysis; Braun & Clarke, 2006). The analytic process followed Braun and Clarke's (2006) suggested phases for thematic analysis. This commenced with the transcripts being read a number of times to achieve familiarisation with the data, during which initial themes were noted. The data was then coded by identifying relevant parts of the text which corresponded with each code. These codes were subsequently transformed into potential themes by collating relevant supporting extracts. These were checked in an iterative process to ensure consistency and that there was no evidence supporting an alternative interpretation of the identified themes. Finally, extracts were chosen to represent themes to be used to produce the written report of the research. Inter-coder data checking was not undertaken as thematic analysis is largely exploratory and "meaning-making" in nature, in contrast to alternative forms of qualitative analysis (e.g., content analysis) which rely more heavily on frequency-based methods for the identification of themes.

**Results**

A number of themes were identified in the analysis of participant discussions about their gaming experiences. The analysis identified a number of antecedent factors contributing to group flow during gaming in different contexts. "Fun" and "frustration" were also found to be associated with a number of social gaming processes (e.g., "being seen", "social integration", "social networking", and "social connectedness/belonging").

*1 Experiences*

*Fun.* The focus groups demonstrated that playing with others rather than alone enhanced gaming enjoyment, particularly for specific types of games consoles (e.g., Nintendo Wii). This was particularly clear from the discussions presented in Focus Group 2:

> "Wii games are fun though … There's just that fun factor. It's very much a social thing really … I think the Wii is only fun when it's not just you playing alone, when a group of people are playing together." (Male, FG 2).

This demonstrates the importance of other players in offline gaming contexts for the enhancement of fun in gaming. This experience was further enhanced by the gamers' perceptions that playing with "real" rather than "virtual" friends was more fun, regardless of whether this was in an online or offline context:

> "On online games is a lot more fun when you're playing with your actual friends, you actually know and talk with. It's an extra element of fun." (Male, FG 4).

> "It doesn't matter if it's online or at your house-if you play with your friends, it definitely is a lot more fun than when you're playing with random people." (Male, FG 3).

This highlights the importance of the social opportunities which gaming offers as a key factor enhancing the enjoyment derived through the activity, although this varied according to the type of game being played.

*Frustration.* Despite the positive experiences of enjoyment described in the focus groups, participants also highlighted the possibility for frustration to arise from social gaming contexts and experiences as a result of the competitiveness of other players. This was particularly apparent from the discussions in Focus Group 3, in which participants agreed that frustration was specific to instances where friends were beating them on a game:

> I: "I've flexed a few controllers before when I've get really frustrated; that's usually with my mates. If I play with my mates and they're just pounding me …" (Male, FG 3)
> L: "I don't think it's the game though; it's your friends you're annoyed with isn't it?" (Male, FG 3)
> A: "Yeah, usually." (Male, FG 3)
> I: "It's not because he's gloating, it's just because he's beating me so much, and there's nothing I can do, it's on *Street Fighter* mainly." (Male, FG 3)
> L: "One of my mates on *MBA*; it was the first time he'd ever played it and we couldn't beat him!" (Male, FG 3)

A further social factor discussed in relation to frustrating gaming experiences was the inappropriate in-game behaviour of other players. This is illustrated in the following excerpt taken from Focus Group 3:

> "When they (friends) do something wrong, you just can't deal with it and when they're on a different level, it just gets irritating." (Male, FG 3)

Poor social dynamics were also discussed as contributing to frustrating gaming experiences, particularly in online contexts:

> "A bad online community definitely ruins a game. If you don't like the people that you play with online it ruins the whole point of it really." (Male, FG 2).

> "With voice over IP, people talking to each other. Obviously it's made for people to talk about tactics, like how to work together. Obviously people don't use it for that and SPAM offensive words and that can really get you annoyed." (Male, FG 4)

> "I was on *Left for Dead* recently and you just get some 13 year old American kid who just screams down the microphone and just joins the game to kill you and then leave … it's not fun when that happens …" (Male, FG 3)

These social processes are specific to online contexts, but the results also suggested that social dynamics could lead to frustrating experiences in offline social contexts. These were largely due to external sources (e.g., other people in the room who were not directly involved in gameplay), as suggested by the discussion in Focus Group 4:

> T: "It also depends on external situations. Going back a few years, when I was living with my parents, it's like if I'm playing a game, I have to put it down because my parents would be like 'Do the washing up!!' That's more rage then, because I was in the middle of something and they don't understand the importance of it." (Male, FG 4)
> Ma: "Yeah, I think if you're sitting with someone who doesn't understand and you're dying quite a bit, and they're asking you why you're dying, and trying to give you tips …" (Male, FG 4)
> T: "That's so frustrating!" (Male, FG 4)
> Ma: "… it's pretty frustrating!" (Male, FG 4)
> Mi: "Or they're like "can you pause it?" And you're like "It's an online game. You want me to *pause* the Internet for everybody?" (Male, FG 4)

These results suggest that the social dynamics of gaming take a number of forms depending on the type of gaming context (online or offline), though both can result in frustration. Gaming experiences were found to both be "fun" and "frustrating", highlighting the influence of variations in social processes and gaming contexts on the dynamics of the activity.

*2 Group flow*

The results also indicated a number of social processes and factors which led to the experience of group flow during social gaming. These were collective competence, collaboration, task-relevant knowledge/skills, and complimentary participation..
Participants' knowledge of the competencies of other players, and their awareness of task-relevant skills were important when playing socially, particularly in competitive-based contexts. Awareness of these factors was associated with the enjoyment and thrill of social gaming.

> "The thrill of competing with others especially when you know they are above your skill level, every successful hit feels like a victory." (Male, FG 1).

The idea of collective competence in online cooperative gameplay was also described by a Focus Group 3 participant as providing a sense of exhilaration which resulted in an autotelic experience:

> "When playing FIFA co-operative play online with my friend I have had some of the most memorable and exhilarating gaming experiences of my life. As when we play well we play some amazing flowing football." (Male, FG 3)

Similarly, a participant in Focus Group 2 described the sense of intrinsic reward and thrill experienced during social gaming facilitated by competitive aspects of gameplay:

> "Playing CoD4 is great, once you get into the flow of things, the buzz you get from doing well is an amazing feeling, knowing you're beating other people to the extent they simply can't keep up with you, really gets me pumped." (Male, FG 2)

This autotelic experience appears to be largely characteristic of an individual flow experience, but one which is enhanced by the presence of others in gameplay. The associated feelings of accomplishment provided by competitive gameplay can create a sense of intrinsic drive and enjoyment which would not necessarily be facilitated in solo contexts. This suggests that group flow occurs not only through the previously described social processes of collective competence, but as a result of the awareness of comparative personal competence. This is consistent with Sato's (1988) conceptualisation of group flow as involving *being seen* and *showing off* in the presence of others.

Participant accounts also revealed that cooperative gaming tasks which required complementary participation resulted in enjoyable experiences:

> "I played this game Co-op with my boyfriend, it was a great experience for us to share time together and work together as a team in a common past-time. Due to being in a relationship we worked together really well and listened to each others ideas." (Female, FG 1)

> "It was enjoyable playing the game together. We talked about strategy and the story. Some of the boss fights are quite difficult and required several attempts to beat them. We discussed different tactics." (Male, FG 4).

One participant described the way in which complimentary participation enhanced their sense of achievement and enjoyment in cooperative-based gaming:

> "I enjoy gaming overall, it gives me a sense of achievement working with others and when our plans just click we are really strong; we help each other in any way we can." (Male, FG 4)

It was also found that enjoyable experiences were associated with gaming tasks which required coordination, cooperation and interdependence:

> "While playing WoW, I play with a group of friends, and often play co-operatively with 10, or 25 people. I have an important role in the group and feel useful, and enjoy working with a team to overcome obstacles". (Male, FG 1).

These quotations demonstrate that cooperation, collective competence and complementary participation can facilitate group flow. This appears to be particularly relevant for cooperative-based gameplay, although the notion of being seen as a result of the presence of other players appears to be more relevant within competitive-based gaming contexts.

Participant discussions of their social gameplay experiences also suggested processes which reflect the traditional conception of "flow" (e.g., merging of action and awareness, feedback on tasks). One participant described the way in which his gameplay became largely automatic, and his actions seemed distant from conscious thought during a social gaming experience;

> "It was easy and fun, after playing, practice and research it begins to become automatic; like hands have a memory." (Male, FG 1).

Another participant indicated that feedback from other players' performance and the game itself were important for facilitating experiences of flow in online gaming contexts:

> "When you are playing competitively online, sometimes you get in a zone where you seemed to be performing extremely well and can beat anyone". (Male, FG 4).

Overall, this suggests that flow can be experienced during cooperative social gaming in which players work together in a complementary way, and have collective competency to achieve gaming tasks. This involves the involved individuals having relevant skills, but also understanding those of their team members and the associated group dynamics. This latter process was also important for facilitating group flow within competitive-based gaming, in addition to the process of being seen by others. The discussions also suggested that the process of gaming itself can enable experiences which characterise the more traditional conception of flow in a manner similar to solo gaming.

*3 Social processes*

*Being Seen.* The analysis of the data also suggested that the sense of being seen was apparent in social gaming contexts as the visibility of players' gameplay performance to other players could enhance the emotional investment in the activity.

> "I react to the human element to multi player gaming … brings more emotion to my gaming. Not playing a cold computer, playing warm, squishy, awesome humans." (Male, FG2)

The idea of being seen within social gaming contexts was discussed as being potentially positive or negative. Playing with others could enhance fun and exhilaration, but also lead to greater frustration.

> "Playing online is more stressful, yet exciting than solo because you're not playing against the console, you're playing against actual people so you do care more about your experience." (Female, FG 1).

> "Playing the game competitively online makes for a far more intense experience that single player. Knowing I'm playing against other people heightens all the emotions; excitement, annoyance at losing, exhilaration at winning, anger at being beaten …" (Male, FG 1)

> "PvP provides a more intense gaming experience. I worry more about how I perform and if my poor performance may harm the group. I also feel some guilt over sinking, or killing another player. I feel no such guilt in solo or PvE play." (Male, FG 3)

Social contexts also had an influence on the emotional experiences of gameplay as the players' awareness that their performance wass visible to others intensified the associated emotional reactions. This could potentially lead to both enhanced positive or negative emotional experiences.

*Social Connectedness/Belonging.* The analysis of the focus group data suggested that playing videogames was an effective way of heightening a sense of social belonging with friends:

> *"Eve* online has the largest peak of any online game but it's nice just to be with your friends" (Male, FG 4).

This illustrates that although positive experiences of gameplay may be the primary motivation for participation, the social opportunities which gaming offers may be equally important. The discussions also indicated that playing videogames online was an effective way of connecting and maintaining contact with friends:

> "The online play has been important. I've been moving around quite a bit since I moved to the UK from about the age of eight, then to London, to Preston. So the friends I have left, I've managed to keep in contact with in real life so speaking to them online has been quite nice otherwise I would have lost that connection to them." (Male, FG 4)

*Social Integration.* Participants also described that gaming enjoyment derived from its ability to facilitate feelings of social integration with others, particularly in offline gaming contexts:

> "The Nintendo Wii, especially at parties is a good game to meet people in a social situation that I wouldn't usually talk to, and it's also a good laugh." (Male, FG 1)

> "It can be quite fun to have a few of your friends playing *Fifa* and you can eat and drink at the same time- it can be quite fun." (Male, FG 3)

In these cases, the social dimensions of gaming had a positive influence on the gaming experiences described, and could facilitate offline social interactions by providing a common focus in social situations.

> "Playing videogames is good for having fun with friends. It kills awkward silences and gives you something that you can have in common." (Male, FG 1)

This suggests that playing games socially is an enjoyable activity which helps brings friends together, and an effective way of enhancing a positive atmosphere and experiences in social situations.

> "Well sometimes there's just the whole multiplayer aspects for *Guitar Hero*, you'll be playing around and some people who have never played before maybe will come in and they'll see the stupid grin on your face and then they'll fancy a go and it's a good thing to create a mood or even just breaking the ice in a conversation, something like that." (Male, FG 4)

This form of social integration appears only to be relevant to offline gaming contexts, in contrast to the subsequent theme of "social networking" which relates to online gaming.

*Social Networking.* Gamers also discussed their enjoyment of the opportunities to engage in social networking during online gaming sessions, regardless of whether or not the conversations were relevant to gameplay:

> "When I play online, I have a good time chatting with others during the match. We have some fun conversations that usually are not related to the gameplay." (Male, FG 1)

This suggests that gaming can provide a platform to facilitate and maintain networking among friends, as well as meeting new people:

> "You can meet people who you can come back and play with again, like talk online and organise games." (Male, FG 3)

> "When you meet other people, it's the best experience." (Male, FG 3)

It was also found that some networking opportunities did not occur during gameplay at all, but in online "Guild Halls" associated with specific online gaming platforms (e.g., Xbox Live):

> "I've got friends who just go in Guild Halls and are just in there for hours on end, talking to everyone, so it's just like a Messenger clan for them" (Male, FG 2)

These results suggest that a range of different social processes and experiences are facilitated by gaming in both online and offline contexts. It provides opportunities for the experience of positive affect associated with social networking, feelings of social belonging, being seen, connectedness and integration.

**Discussion**

This study provided a qualitative examination of social gaming processes, their ability to facilitate experiences of group flow, and the associated affective outcomes of gameplay. The main findings and implications are discussed in the following sections.

*Social processes and affective experiences*

Social gaming experiences were found to be generally enjoyable and fun, regardless of the type of gameplay involved (e.g., competitive or cooperative). These were facilitated by feelings of social belonging, networking and interactions with friends in social gaming contexts. This is consistent with previous research (Cole & Griffiths, 2007; Klimmt et al., 2009), and highlights the ability of the social aspects of gaming to enhance the emotional experiences associated with the activity. The importance of social integration and "togetherness" identified in offline gaming contexts also supports previous empirical work (Gajadhar et al., 2009). This research extended the focus of these studies from the social processes facilitated by specific gaming contexts to provide a comparative examination of the relationship between social interactions and positive experiences in both online and offline gaming contexts. The identified differences between these environments suggests the need to further examine the interactions between the structural characteristics of games, and associated experiences and outcomes in specific contexts (e.g., online or offline) in order to identify additional processes which influence game enjoyment.

The results also demonstrate that poor social gaming dynamics (e.g., swearing, abuse by other gamers) and competition can lead to the experience of frustration as well as enjoyment. The potential for these factors to negatively influence the affective outcomes of the activity (e.g., hostility, aggression) suggests that competitiveness may have a differential impact on gaming experiences in specific social contexts, dependent on the behaviour of other gamers. Such effects have not been widely considered in the academic literature, but would be a useful inclusion in existing theoretical models (e.g., General Aggression Model; Anderson & Huesmann, 2003), which do not sufficiently account for the influence of different gameplay processes and contexts on the outcomes of the activity. The development of a process model of gameplay which integrates these factors, in addition to structural game characteristics (e.g., level of violent content) and individual differences (e.g., trait aggression), would provide a more comprehensive understanding of the range of potential experiences and effects of gaming.

*Group flow*

The study also provided preliminary findings which suggest the experience of group flow during gaming. Task-relevant skills, knowledge of the skills of other players, feedback from others and being seen were identified as antecedents for the experience of group flow in both cooperative and competitive gaming. Collective competency, interdependence, collaboration, coordination, complementary participation and a shared task focus were identified as additional antecedents of group flow in cooperative gaming environments.

The analysis also suggested that competitive interactions between gamers were an additional antecedent of group flow in gaming environments where individuals played against each other. There were also differences in the dynamics of some of the identified antecedents between the examined gaming contexts which reflect differences in the social processes which characterise them. For example, knowledge of the ability of others in cooperative gaming reflects individual awareness of the skills of team members as part of coordination of play, whereas this factor relates to awareness of the abilities of opponents in competitive situations.

These results are consistent with previous research suggesting enhanced levels of social presence in cooperative gaming, particularly in online environments (de Kort, IJsselsteijn, & Gajadhar, 2007). The identified importance of being seen is also in agreement with Sato's (1988) characterisation of group flow. This suggests that the presence of others creates a sense of intrinsic drive which would not necessarily be experienced equivalently in solo gameplay. These observations also support previous experimental evidence that the presence of a co-located player influenced perceived gaming competence (Gajadhar et al., 2008a).

This suggests that different social processes (e.g., collective competency, competition) may have greater relevance for different types of gameplay, and individual or group experiences of flow. This is in line with previous research (e.g., Sato, 1988), and suggests the utility of extending the concept of group flow to examine the social processes by which such experiences occur in different gaming contexts. Being seen in social gaming was associated with more intense and emotional experiences compared to solo play, further suggesting that different gaming types and contexts have differential influences on the affective outcomes of the activity.

These antecedents potentially differentiate group and individual flow experiences, although the determinants of individual optimal experiences must also be satisfied (e.g., high challenge to skill ratio) (Walker, 2010). The distinctiveness of shared flow relates to the group-level unit of performance, in which interdependence and cooperation are key characteristics. These identified dimensions also reflect those specified by previous models of "social flow" (Walker, 2010), and expand current theoretical understandings of the concept to the activity of gaming. Whilst the experiences of individual and group flow appear to be largely equivalent, this study suggests that these experiences are facilitated by specific antecedents in social situations in addition to those which characterise individual flow.

Whilst the results of the study suggest that group flow occurs during gaming, and its dynamics may operate differently in different gaming contexts, the methodological and conceptual challenges of distinguishing between participant descriptions of individual or group flow in their gaming experiences requires further empirical investigation. The extent to which group members were playing co-actively could not be clearly determined from the data. Social gaming can encompass situations in which gamers play highly interdependently, but also in which others are only passively present. The extent to which group flow is experienced under these different conditions requires further investigation. Additionally, this research did not examine how individual and group flow experiences differ according to the type of game played, or the influence of physical proximity to, and relationships with, other gamers (e.g., real versus online friends). Previous research has identified equivalent levels of behavioural involvement in gameplay regardless of co-location or relatedness between players (playing with unknown others, playing with friends) (de Kort, IJsselsteijn, Poels, 2007). This suggests that experiences of individual or group flow may be equivalent under these differing conditions. Future research should conduct a comparative examination of variations in the proposed dimensions of group flow for different gameplay types (competitive versus cooperative) and contexts (online versus offline) to identify potential similarities and differences. This would further develop previous research suggesting that there are minimal differences in experiences of social presence between competitive and cooperative gameplay (de Kort, IJsselsteijn, & Poels, 2007).

*Evaluation*

This study utilised a qualitative approach to enable a comprehensive examination of social gaming processes and experiences which would be otherwise difficult to achieve using other methodologies. The focus groups enabled participants to provide phenomenological reflections on shared social gaming experiences and their affective outcomes. Whilst it could be argued that the use of established friendship groups could lead to the production of socially desirable descriptions of these experiences, participant discussions about the potential for negative and frustrating outcomes to result in these situations do not suggest that this was the case. This approach represents a methodological strength, rather than a potential limitation, as it enabled the development of mutually actualised accounts which are particularly useful given the objective of examining shared social experiences during gaming. The study also demonstrates the value of using qualitative methodologies in this research area.

Although the current findings provide an interesting insight into an under-researched area of gaming, a potential limitation of the study is the largely male participant sample. Whilst this gender imbalance could be viewed as

problematic, it is consistent with the demographics of regular gamer samples used in previous research (e.g., Yee, 2006). It should, therefore, be recognised that the results of the study do not necessarily generalise to all gamers, but provides a representative account of the social experiences and outcomes of the activity for regular, male gamers. These findings might differ in female or mixed gender groups. The increasing popularity of social gaming among females (Information Solutions Group, 2010) highlights the need for equivalent research in both online and offline contexts for this group of gamers in order to identify potential gender differences in the social dynamics and outcomes of the activity.

**Conclusion**

This study suggests the value of developing further understanding of the social processes and associated experiences of gameplay. It provided preliminary findings to suggest that group flow occurs during this activity, and has tentatively identified some of its constituent dimensions. The identified associations between different social processes and the affective experiences facilitated by the activity suggest that enjoyment of gaming is further enhanced in social gaming contexts. The study also demonstrates the limitations of viewing engagement in this activity as individualistic, problematic or purely negative in terms of psychosocial outcomes. Examining gaming within its wider social context enables researchers to develop deeper understanding of the range and diversity of gaming experiences, and can inform further research examining its potential affective and psychological consequences.

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