

“Let’s sweep some Mines together”: Social Interaction & Competition in Casual Games

B.J. Gajadhar*, H.H. Nap, Y.A.W. de Kort & W.A. IJsselstein

Game Experience Lab, Human-Technology Interaction Group, Eindhoven
University of Technology, the Netherlands

*b.j.gajadhar@tue.nl

Abstract

Casual games distinguish themselves from other digital games in their easy access, simple rules, minimal time commitment and simple interface. These games are known for their quick and short rounds, which make them ideal to play in mini-breaks between other activities. Recently, many social networking sites have started offering opportunities to chat and play multiplayer casual games with other users. Studies on digital games have shown that social characteristics of play settings have a strong impact on players’ in-game experience. As little attention has been given to casual games in literature, in this paper we discuss the important role of social factors in understanding and measuring player experience in casual digital games.

Introduction

Casual games are digital games developed for the mass consumer, even those who do not regard themselves as “gamers” (Casual Games Association, 2007; Kuittinen, Kultima, Niemelä & Paavilainen, 2007; Li & Counts, 2007). These games distinguish themselves from other (complex) games by their easy access, simple rules, and straightforward interface (see Figure 1). They are known for their quick and short rounds, which make them ideal to play in mini-breaks during work, chores at home, or school time. In spite of these short

rounds, many players play casual games for substantial amounts of time in a row.

Figure 1: Print screen of the casual game Minesweeper.



Since the introduction of the Internet, all sorts of games can be accessed easily on one's PC. As they are available in almost any genre topic (e.g., puzzle, strategy), casual games are played by all sorts of players; regardless of their age, gender or nationality (Casual games Association, 2007). Yet, the typical casual gamer is a woman who is in her early 40s and likes to play when she has the house to herself. Her favorite game genre is puzzle games, followed closely by card games (Partridge, 2007). Findings indicate that casual games are mostly played for stress relief and taking a break (Casual Games Association, 2007; Kuittinen et al., 2007; Li & Counts, 2007; Bogost, 2004).

In digital gaming literature, relatively little attention is paid to casual games compared to studies on more complex games (Kuittinen et al., 2007). Studies regarding the motivational pull and the experience of digital play have more often used popular games, such as *Half Life 2* (van den Hoogen, IJsselsteijn & de Kort, 2008), *Super Monkey Ball Jr.* (Ravaja et al., 2006), and *Neverwinter Nights* (Weibel et al., 2008). Developed play-testing metrics have proven useful for these types of games, but have not been used extensively for casual games. As player experience evaluation in (casual) game design cycles becomes more important (Martins et al., 2010), adapting advanced methods for measuring players' feelings and emotions in playing casual games is highly recommended. Despite the successful progress in developing useful

measurement tools, one factor has reached insufficient attention when players' experiences are measured. Especially for the field of casual gaming which recently has suffered an extension in available play styles (Bogost, 2004), the social factor becomes more relevant.

At first sight, social context might seem to play an insignificant role in casual games, since these games are mostly played in solo-settings to pass time and for stress relief (Casual Games Association, 2007; Kuittinen et al., 2007). However, casual games recently have gained popularity on social media such as Facebook, Hyves and MSN Messenger, where they can be played with other players (USA Today, 2010). As a result, existing reasons to engage in playing casual games – i.e., pass time and stress relief – may have been extended with new motivations such as social interaction and competition. In line with research in other multiplayer games (Gajadhar, de Kort, IJsselsteijn & Poels, 2009c), these new factors may also have an impact on players' in-game experience.

(A)-synchronous multi play

Multiplayer casual games can be played in two ways: synchronously and asynchronously. An example of an asynchronous multiplayer casual game is *Mob Wars* hosted on the social networking website Facebook (see Figure 2). This game is played with others in sequence, at different moments in time (Bogost, 2004). In *Mob Wars*, players start out as a thief with the goal to get higher in rank, up to the level of Mafia godfather. The game is mainly text-based and allows players to buy guns and land, do jobs and fight, and most importantly to achieve a higher status. One of the many social features in this type of game is that messages automatically are received/sent from/to related friends on Facebook to inform them of one's achievements. The awareness of each other's scores is then a breeding-ground for social interactions among players that can follow on Facebook's personal message boards.

Figure 2: Print screen of the casual game *Mob Wars* on the social networking site Facebook.



An example of a synchronous multi play casual game is *7 Hand Poker* hosted on the instant messaging application MSN Messenger (see Figure 3). This type of game can be played by inviting friends by chat. In contrast to the *Mob War* example on Facebook, this game is played simultaneously against a friend. In *7 Hand Poker*, players can use a maximum of five cards per round to make the best poker hand. Yet, the co-player decides with which hand is played. A player has won the game with three winning poker hands. By using text messages, microphones, and/or web cams, social interaction in this type of play is more likely to be frequently present (Biocca, Harms & Burgoon, 2003).

Figure 3: Print screen of the casual game *7 Hand Poker* on the instant messaging application MSN Messenger played against a friend.



Social factors in gaming

The rise of available multiplayer games may have an effect on the motivations for people to engage in casual game play. In addition to passing time and finding relief from stress, the social factor – i.e., social interaction and competition – may become important. Recent studies on complex games have shown that social context has a great (and positive) impact on the motivations to engage in digital gaming and on players' in-game experiences.

Social interaction & competition

Many studies reported that people enjoy playing digital games together or watching others play, as players can demonstrate their skills and enjoy the feedback of enthusiastic bystanders (de Kort & IJsselsteijn, 2008). A recent field study (Gajadhar et al., 2009c) revealed that playing together online or in co-located settings provides gamers the feeling of inclusiveness and belonging to a group, i.e. social connectedness. This social function is seen as the key factor that affects the motivation for a player's choice of co-play setting. In line with (Jansz & Martens, 2005), the study furthermore revealed that social interaction and (social) competition are among the main motivations to engage in digital gaming.

A subsequent study (Gajadhar, de Kort & IJsselsteijn, 2008a; 2009a) was conducted to empirically testify the role of social interaction and competition on player experience. An experiment was performed where people played a digital game in three types of co-play configurations: virtual, mediated, and co-located (Gajadhar, de Kort & IJsselsteijn, 2008b). The Game Experience Questionnaire (IJsselsteijn, de Kort & Poels, in preparation) was applied in the study and results indicated that playing side-by-side significantly adds to fun, challenge, perceived competence, flow, boredom and immersion in the game as compared to playing against a distant or virtual opponent. For most components the effect of social context was mediated by the level of social

presence (the feeling of being together, although physically apart; Biocca et al., 2003), which was measured with the Social Presence in Gaming Questionnaire (SPGQ) (de Kort, IJsselsteijn & Poels, 2007). Furthermore, player experience in terms of positive affect, competence, challenge, frustration and flow was significantly influenced by players' in-game scores.

A subsequent study (Gajadhar, de Kort & IJsselsteijn, 2009b) investigated why co-located co-play was more positively experienced than mediated play. Therefore the influence of additional social communication channels – such as webcams and headsets – on player experience and social presence was tested. The data revealed that player experience components were significantly influenced by the availability of social cues, especially by talking and laughing. Analyses revealed that the level of social presence depended on the availability of audio cues in digital game settings. Again, in-game achievements appeared to be highly important for players' in-game experience.

These findings illustrate that social context is an important determinant of player experience in complex games; especially when there is room for conversation. By applying the SPGQ in all studies, differences in most player experience components were explained by the feelings of social presence. Interestingly, many player experience components in both studies revealed highly significant effects on player performance. The latter proves that – next to the opportunity for social interaction – competition is a major factor that influences the player experience.

Age, gender, familiarity

The importance of social interaction and competition has been investigated not only for the stereotypical male adolescent gamer, but also for senior gamers and for female players (e.g., Gajadhar, Nap, de Kort & IJsselsteijn, in press). Percentage-wise, senior gamers (50+) play casual games far more frequently than younger players; and multiplayer casual games have also found their way to the 50+ demographic (Casual Games Association, 2007). Yet, the older segment of the population perceives and experiences multiplayer gaming

differently than younger players. A recent explorative study (Nap, de Kort & IJsselsteijn, 2009) showed that in contrast to young adults (Gajadhar et al., 2009c), senior gamers have negative perceptions about social play over the Internet and prefer to play single or in co-located settings. These findings are supported by an experimental study (Gajadhar et al., in press) in which it was found that senior gamers – in contrast to young adults – experienced online co-play as least enjoyable compared to solo play or co-located co-play. Moreover, seniors' sense of social presence did not increase from solo play to online play; in other words, they felt as alone playing against a computer as playing against a distant, mediated other. The authors concluded that to maximize player enjoyment for seniors, less focus has to be on social competition and opportunities for social interaction should be enabled.

Demographic data also show gender differences in casual game play and how people experience social play. Female gamers report higher liking of casual games (Lucas & Sherry, 2004) compared to male gamers and are typically overrepresented in casual gaming and multiplayer casual gaming (Casual Games Association, 2007). However, motivations to play multiplayer casual games differ between both sexes. A recent study (Vanden Abeele, Gajadhar & Schutter, 2009) quantitatively and qualitatively revealed that females particularly enjoy the social interaction in digital games, while men enjoy the social competition. Similar to seniors, multiplayer casual games for females will therefore be more enjoyable when a game's focus is less on competition and more on social interaction.

The aforementioned studies reveal that – in line with a framework presented by de Kort & IJsselsteijn (de Kort & IJsselsteijn, 2008) – social characteristics of play settings are highly important for players' in-game experience. In particular due to opportunities for social interaction and presence of competition, digital games can be experienced differently by people.

Discussion

Casual games have been played mostly to pass time and to relief stress (Casual Games Association, 2007; Kuittinen et al., 2007). These games can be played satisfactory in a mini-break at school or at work, and have more often been played in solo settings. Recently, social media offer the opportunity to play multiplayer casual games (USA Today, 2010). These multiplayer casual games can be played asynchronous – i.e. in sequence over a substantial amount of time (Bogost, 2004) – and synchronous at the same moment in time while chatting. Due to the possibilities of playing against others, “social interaction” and “social competition” are factors that need to be accounted for in player experience studies of multiplayer casual games.

Since casual games are most popular among seniors and females, who in general dislike competitive digital games (Nap et al., 2009; Gajadhar et al., in press; Vanden Abeele et al., 2009), it is unclear whether social factors will also become important motivators; as is the case for other types of games (Gajadhar et al., 2009c). Moreover, results of studies on complex games have revealed that social context is an important determinant of player experience (Ravaja et al., 2006; Weibel et al., 2008; Gajadhar et al., 2008b; 2009a; 2009b). In addition, studies on interpersonal differences – in terms of age, gender and familiarity – showed the importance of social interaction and social competition in how players experience digital gaming (Gajadhar et al., in press; Vanden Abeele et al., 2009; Gajadhar et al., in preparation). Since social elements have gained popularity in all type of games, these findings may also hold for the player experience in casual games.

Therefore, we emphasize to control for social context effects in measuring player experience in casual games, as has been done in recent studies on complex games (e.g., Gajadhar et al., 2008a; 2009a; 2009b). To do so, we recommend future experimental designs to include the Social Presence in Gaming Questionnaire (de Kort et al., 2007) to control for effects of social interaction between players. These outcomes should be used in the data analyses regardless of the way player experience has been measured; e.g.,

observations (Gajadhar et al., in preparation), questionnaires (e.g., Gajadhar et al., 2008a; 2009a; 2009b), physiological measurements (e.g., Ravaja et al., 2006). Furthermore, to take account of the influence of players' in-game achievements on player experience, we put forward to also include players' performances – i.e., in-game scores, achievements, winning vs. losing – in data analyses as has been done in recent related studies (e.g., Gajadhar et al., 2008a; 2009a; 2009b). In sum, these regulations will give more insight in the understanding of player experience in casual games.

Conclusion

The importance of social context effects has already been testified in player experience measurement in digital play with complex games. Social interaction and competition are factors that have a decisive impact on players' feelings and emotions while playing digital games. Since casual games currently are more frequently played with other players, also social effects have to be considered in player experience metrics for this type of games. These measures will enhance current methods for measuring player experience in casual games, which will result in a more valid and comprehensive understanding of the casual game play experience.

Acknowledgments

Support from the European Games@Large project is gratefully acknowledged.

References

Biocca, F., Harms, C., & Burgoon, J.K. (2003). Toward a more robust theory and measure of social presence: review and suggested criteria. *Presence: Teleoperators & Virtual Environments*, 12(5), 456-480.

Bogost, I. (2004). Asynchronous multiplayer: futures for casual multiplayer experience. *Other Players conference*, December 6-8, Copenhagen, Denmark.

Casual Games Association (2007). *Casual games market report 2007: Business and art of games for everyone*. Retrieved on April 22nd 2010 from:

http://www.casualgamesassociation.org/pdf/2007_CasualGamesMarketReport.pdf

Gajadhar, B.J., de Kort, Y.A.W., & IJsselsteijn, W.A. (2009a). Rules of engagement: Influence of social setting on player enjoyment in digital games. *International Journal of Gaming and Computer-Mediated Simulations*, 1, 14-27.

Gajadhar, B.J., de Kort, Y.A.W., & IJsselsteijn, W.A. (2009b). See no rival, hear no rival: The role of social cues in digital game settings. *Proceedings of CHI Nederland 2009* (June 11, Leiden, the Netherlands), 25-31.

Gajadhar, B.J., de Kort, Y.A.W., IJsselsteijn, W.A., & Poels, K. (2009c). Where everybody knows your game: The appeal and function of game cafés in Western Europe. *Proceedings of ACE 2009* (October 29-31, Athens, Greece), 28-35.

Gajadhar, B.J., de Kort, Y.A.W., & IJsselsteijn, W.A. (2008a). Shared fun is doubled fun: player enjoyment as a function of social setting. In: P. Markopoulos, B. de Ruyter, W. IJsselsteijn and D. Rowland, Eds. *Fun and Games*. New York: Springer, 106-117.

Gajadhar, B.J., de Kort, Y.A.W., & IJsselsteijn, W.A. (2008b). Influence of social setting on player experience of digital games. *Proceedings of CHI 2008 Conference*, April 5-10, Florence, Italy.

Gajadhar, B.J., de Kort, Y.A.W., & IJsselsteijn, W.A. (In preparation). See no rival, hear no rival: The role of audio and visual cues in digital play.

Gajadhar, B.J., Nap, H.H., de Kort, Y.A.W., & IJsselsteijn, W.A. (In press). Out of sight, out of mind: Co-player effects on seniors' player experience. *Fun & Games 2010 Conference*, Leuven.

van den Hoogen, W.M., IJsselsteijn, W.A., & de Kort, Y.A.W. (2008). Exploring behavioral expressions of player experience in digital games. In A. Nijholt, R. Poppe (Eds), *Proceedings of the workshop on Facial and Bodily Expression for Control and Adaptation of Games ECAG 2008* (pp11-19). Amsterdam, the Netherlands.

IJsselsteijn, W.A., de Kort, Y.A.W., & Poels, K. (In preparation). The Game Experience Questionnaire: Development of a self-report measure to assess the psychological impact of digital games.

Jansz, J. & Martens, L. (2005). Gaming at a LAN event: The social context of playing video games. *New Media & Society*, 7, 333-355.

de Kort, Y.A.W., & IJsselsteijn, W.A. (2008). People, places and play: A research framework for digital game experience in a socio-spatial context. *ACM Computers in Entertainment*, 6(2), Article No. 18.

de Kort, Y.A.W., IJsselsteijn, W.A., & Poels, K. (2007). Digital games as social presence technology: Development of the social presence in gaming questionnaire (SPGQ). *Presence 2007 Conference*, October 25-27, Barcelona (2007).

Kuittinen, J., Kultima, A., Niemelä, J., & Paavilainen, J. (2007). Casual games discussion. In B. Kapralos, M. Katchabaw (Eds.), *Proceedings of the 2007 conference on Future Play (FP 2007)* 15-17 November 2007, Toronto, Canada. (pp. 105-112). New York, NY, USA: ACM.

Li, K.A., & Counts, S. (2007). Exploring social interactions and attributes of casual multiplayer mobile gaming. *Proceedings of the 4th International Conference on Mobile Technology Applications and Systems* (pp. 696-703), September 10-12, Singapore.

Lucas, K., & Sherry, J.L. (2004). Sex difference in video game play: A communication - based explanation. *Communication Research*, 31, 499-523.

Martins, M., Nap, H.H., Gajadhar, B.J., Oosting, W., Jurgelionis A., Carmichael, R., Silva, L., Bellotti, F., Milagaia, F., De Gloria, A., Freeman, J., & David, H. (2010). The future of distributed gaming: Technical advantages and user-centred design. *Prisma Special Edition*, 10, 1-19.

Nap, H.H., de Kort, Y.A.W., & IJsselsteijn, W.A. (2009). Senior gamers: Preferences, motivations and needs. *Gerontechnology*, 8, 247-262.

Partridge, A. (2007). *Creating casual games for profit & fun*. Boston, Massachusetts: Charles River Media.

Ravaja, N., Saari, T., Turpeinen, M., Laarni, J., Slamminen, M., & Kivikangas, M. (2006). Spatial presence and emotions during video game playing: Does it matter with whom you play? *Presence: Teleoperators and Virtual Environments*, 15, 381-392.

USA Today (2010). *Social sites help casual games reach the next level*. Retrieved on April 22nd 2010 from:

http://www.usatoday.com/tech/gaming/2008-05-19-download-main_N.htm

Vanden Abeele, V., Gajadhar, B.J., & de Schutter, B. (2009). Gaming naturally is more fun together: The influence of controller type on player experience. *International Conference on Advances in Computer Entertainment Technology 2009* (Athens, Greece, 29-31 October 2009). Abstract in proceedings.

Weibel, D., Wissmath, B., Habegger, S. Steiner, Y., & Groner, R. (2008). Playing online games against computer versus human controlled opponents: effects on presence, flow, and enjoyment. *Computers in Human Behaviour*, 24, 2274–2291.