Buy and Share! Social Network Games and Ludic Shopping

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ABSTRACT

By developing the concept of *ludic shopping*, this paper explores how the centring of gameplay around the (symbolic) purchase of virtual goods has transformed social network games into a blending of consumerism and playfulness. Although *ludic shopping* points out the capitalistic logic of consumption embedded on social network games, this concept brings also a positive view about consumption as part of players' identity construction. I drawn on the player types defined by game theorists Richard Bartle and Espen Aarseth to examine the main forms of enjoyment offered by social network games, and to present a new conceptual dimension linked to consumerism. Through a critical analysis of both game mechanics and players' motivations, I argue that symbolic consumerism is a central experience for players of social network games.

Keywords

Social network games, consumerism, player types, free-to-play, playful identity

INTRODUCTION

Social networking sites have attracted high percentages of Internet users in the last few years. Sharing personal information and keeping in contact with friends, co-workers and acquaintances are not, however, the only affordances that draw people's attention to these applications. An increasing portion of users in social networking sites seek more than social interaction on-line: they look for gameplay (Madden and Zickuhr, 2011, Macchiarella, 2011).

Social Network Games (SNGs) – the games available on social networking sites – have transformed ordinary internet users into enthusiastic game players, giving form to a new game phenomenon. By combining simplicity, availability and affordability, those games have provided a fertile ground for entertainment and pastime. Moreover, they have facilitated the introduction of ludic activities into people's routine, popularising game play and changing the conventional stereotype attributed to gamers (Rao, 2008, Juul, 2010).

Among several options of enjoyment found in this form of gameplay, one is of special attention: consumption. The (symbolic) purchase of virtual goods is a core element in the most popular SNGs currently played, and consumerism seems to be intrinsically related to playfulness in such games. This particularity has created space for the emergence of a new type of player: the *ludic shopper*.

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By developing the concept of *ludic shopping*, this paper explains how SNGs have blended consumerism and playfulness. I drawn on the player types defined by game theorists Richard Bartle (1996) and Espen Aarseth (2003) to examine the main forms of enjoyment offered by SNGs, and to present a new dimension linked to consumerism.

The development of this idea starts with a definition of SNGs, through which the key characteristics of my object of study are summarised. Then, I proceed by revisiting the five styles of play described by Bartle (1996) and Aarseth (2003) in the context of SNGs. In the last section, I develop the concept of *ludic shopping* as the sixth approach to play experience.

SOCIAL NETWORK GAMES

Social Network Games (SNGs) are commonly defined as the games played within social networking sites, such as Facebook and MySpace. This simple description, however, has been largely debated, and several attempts have been made to better distinguish SNGs from other games. Nonetheless, a close look at some characteristics concerning gameplay and game design can help to better specify what SNGs are.

First, as Järvinen (2011) explains, SNGs are online games that appropriate people's friendship ties for play purposes, without substantially changing their everyday routine. Along the same line, Meurs (2011) claims that individuals' profiles in a social networking site are essential for accessing SNGs, and that gameplay is mainly possible by using the social interactions enabled by those websites. Both definitions stress how gameplay in SNGs is intrinsically related to on-line sociability.

Second, and in terms of game design, Kuittinen et al. (2007) argue that SNGs are essentially easy to learn, single-tasking, and without violent content. In addition, those games give fast rewards, require simple controls, and have almost no punishments for players' mistakes. Furthermore, they are free-to-play, with optional purchase of advantageous supplies.

In addition to game design and gameplay, players' engagement with SNGs must also be underlined. Those games are usually played by casual gamers – who alternate short sessions of playful interaction with the other activities in their daily routine – and, in some cases, players show a hardcore time commitment, i.e. spending several hours of play per day distributed among those various sessions (Juul, 2010).

Under the category of SNGs, there are several game genres, ranging from puzzle - like Bejeweled Blitz (PopCap Games, 2005) - to cards, such as Texas HoldEm Poker (Zynga, 2007), and including platform, board and arcade, among others. However, the most popular SNGs are of the management simulation type, or simply simulation, in which players are invited to build in and take care of different environments such as farms, cities, houses and restaurants (Wolf, 2001). The Facebook games CityVille (Zynga, 2010), The Sims Social (Playfish, 2011) and FarmVille (Zynga, 2009) rank in the top five most popular SNGs currently played, and clearly exemplify the simulation genre¹.

In simulation SNGs, players must invite their Facebook 'friends' to join their game network, creating a group of 'neighbours' – or co-players – that will help in completing tasks required by the game². This rule is used not only to stimulate sociability among players but mainly to increase game virality, consequently raising producers' revenue (Whitson and Dormann, 2011).

Another distinctive characteristic of those games can be seen in their core gameplay, which involves performing various activities and completing several quests that will render different forms of in-game currency. That cash can be used in the purchasing of new utilities, decorations, and land that will increase game levels.

Differently from other types of on-line social gaming, like MMORPGs³, SNGs offer ordinary people the opportunity to play compelling games for free, without requiring much time and effort⁴. Moreover, despite the simple mechanics and limited visual resources, those games foster different styles of play, enabling multiple forms of gaming experience. These multiple experiences are analysed in the following section.

PLAYERS WHO SUIT SNGS

In his seminal article "Heats, Clubs, Diamonds, Spades: Players who suit MUDs", Bartle (1996) identified and described four core approaches to playing massively multiplayer computer games. Those approaches explain how players act on, or interact with, both game world and other players, in the search of achievements, exploration, social interaction, and reputation. Even though one's playing style might change over time, Bartle (1996) argues that "many (if not most) players do have a primary style, and will only switch to other styles as a (deliberate or subconscious) means to advance their main interest".

Bartle's players model has been reworked and extended in numerous ways since its publication⁵. However, his original four-type model is still promising for the approach proposed in this paper. Since his model is useful for analysing players' motivations not only in MUDs but also on other virtual environments, it offers the most fruitful framework for analysing gameplay in SNGs.

The first player type define by Bartle (1996), "explorers", includes players who enjoy finding out about the virtual environment, interacting with the game world. Those players are driven mainly by both curiosity about the environment and desire to manipulate it. In the context of SNGs, explorers have opportunity to translate the plain graphics of the game into richly constructed and decorated environments. By acquiring more land, explorer players can expand their working area, increasing possibilities for exploration and manipulation. In addition, the wide range of building and customising items available offers almost limitless forms of transforming game scenario.

The second player group interested in the game environment was named "achievers". According to Bartle (1996), achievers prefer acting on - rather than interacting with - the game world. By acting on the environment, achievers strive for both the accumulation of points and the mastering of the game. In this sense, SNGs offer achievers not only the level system, but also different types of points to accumulate. In both FarmVille and CityVille, for example, players can accumulate two different forms of in-game currency, while in The Sims Social they have also social and lifetime points to collect. Moreover, the fast reward system - one of the most distinctive characteristic of SNGs - ensures achievers a continuous source of prizes (Rao, 2008).

On the other side of Bartle's model are the players who prefer to act upon other players. They fall into the "killer" category, aiming primarily on both distressing fellow players and restricting their advancements (Bartle, 1996). A clarification offered by Zichermann and Cunningham (2011, p. 23) helps to understand killers: "[they] are similar to achievers in their desire to win; unlike achievers, however, winning isn't enough. They must win

and someone else must lose". Examples of killing behaviour can be easily seen in Role-Playing and Strategy/Combat games, such as Mafia Wars (Zynga, 2008), Kingdoms of Camelot (Watercooler, 2009), and Empires & Allies (Zynga, 2011).

Finally, there are the "socialiser" players: those who use gameplay as a background for building social relationships through interaction with other players (Bartle, 1996). Despite being strongly criticised for its lack of meaningful social purposes (Bogost, 2010; Bartle, 2011), SNGs have proved to be effectively used as a social resource. Wohn et al. (2011) provide, for instance, an empirical analysis of how socialisers fulfil their expectations through SNGs, offering clear examples of sociability within and through SNGs. They show that most players start playing SNGs for social reasons, and keep playing those games as a way of maintaining and even enhancing social relationships.

Besides the four styles of play previously described – explorers, achievers, killers and socialisers –, another category is also important when analysing SNGs. Proposed by Aarseth (2003), the "cheaters" category comprises players who enjoy acting on the rules of the game, either modifying or breaking them. The numerous sources of cheating tools available for SNGs demonstrate that cheaters are also playing those games. Additionally, the fact that cheating is not necessarily a fixed characteristic assumed by players, but rather a way of achieving other purposes (mastering and socialisation, as examples), indicates that cheating is more related to a metagaming – in which game rules are transcended – than to a static player type (Glas, 2011).

From this analysis, it becomes clearer how SNGs can perfectly suit players with the most varied motivations. Through exploring, achieving, killing, socialising and cheating, players can have various ways of enjoying SNGs. However, a distinctive characteristic of SNGs has created a sixth dimension of experience in SNG play, which requires a specific approach. The centring of gameplay around the (symbolic) purchase of virtual goods creates opportunity for the emergence of a different play style: the *ludic shopping*, a concept that is further developed in the next section.

SNGS AND LUDIC SHOPPING

The simulation SNGs discussed in this paper share a game design built around a specific virtual economy. All tasks performed during a play session render different amounts of in-game currency that, in turn, are employed in the purchase of numerous virtual goods offered by the game, and required throughout gameplay. Those games are entirely based on that economic cycle, which lead to a blending playfulness and (symbolic) consumerism.

Symbolic consumerism means the purchase of virtual goods without involving real money. Although players real cash can be used within gameplay - and such use is strongly stimulated by the game in itself - the vast majority of SNG players keep playing for free and are very unwilling to pay for that (Hamari and Lehdonvirta, 2010, Mashable, 2010).

The emergence (and popularity) of free-to-play games that revolve around consumerism brings another style of play into light: the *ludic shopping*. Players who perform as ludic shoppers seek to make real their consumer fantasies through ludic means, by symbolically purchasing items they might not afford in physical world. An empirical study conducted by game researcher Rebeca Rebs (2011) illustrates this idea. She reports that 54% of respondents in an online survey said they preferred to buy in-game items that

are directly related to some personal desire. She further explains that players acquire certain in-game items neither to complete quests, nor to maintain prestige among their peers, but rather because the item is something the player would like to have. She quotes a player's statement as an example: "Player 4: '(...) I have always wanted a white horse and now I try to have it in the game"." (Rebs, 2011, p. 9).

Similarly, Molesworth and Denegri-Knott (2007, 123) address how virtual consumption is related to emotional fulfilment arguing, "individuals have long enjoyed consumption not as the rational acquisition of material goods but as a resource for speculation and imagination and the pleasures these can bring". Therefore, it can be argued that, like explorers, ludic shoppers enjoy interacting with the game world. However, such interaction serves to a very specific purpose: the fulfilment of their most expensive or eccentric desires.

The distinction between SNGs and other games that also involve the purchase of virtual goods can be clearly illustrated by the game The Sims Social. Consalvo (2003) and Paulk (2006) have already demonstrated that, in the PC and console versions of that game, consumerism is also strongly stimulated. They explain, for example, how the purchase of in-game items is intrinsically related to Sim's happiness and to players' advancement: the more expensive the object, the more benefits it brings to the owner. However, *ludic shopping* as a form of play seems to be far more popular on the social free-to-play option, even though players can also experience ludic consumption on other platforms.

This popularity can be explained not only for the very nature of social network games - casual, easy to play, and appealing to a wider audience (Deterding, 2010) -, but also for this version requires neither proprietary software nor powerful (and expensive) hardware to be played. The embedding of SNGs on social networking websites makes them significantly more accessible to ordinary people, which enables a higher number of players to engage in *ludic shopping*⁷.

The stimuli to consumerism promoted by SNGs can be observed on both game mechanics and play experiences. On the one side, game mechanics drive desirability for virtual goods by employing several of the marketing strategies described by economic sociologists Juho Hamari and Vili Lehdonvirta (2010). On the other side, symbolic consumerism affords positive experiences like integration, classification and involvement, as identified by marketing professor Douglas Holt (1995).

A close look at the mechanics of SNGs reveals how consumerism is central in those games. First, the degradation of some essential items, such as fertilisers and seeds in FarmVille and supply goods on CityVille, creates a continuous purchase cycle in which players are forced to buy new degradable products again and again. Although such items do not relate directly to player's desires, they compose the basic ground from which other fantasies - like a nice garden, for example - can emerge. Second, customisation of both game environment and players' avatars relies heavily on the amount of available virtual cash. It means that all object required to compose players' virtual space have a certain cost. In addition, changing avatar appearance - from clothes to body features - also involves spending in-game cash.

Last, seasonal items are employed as a powerful marketing strategy. According to Hamari and Lehdonvirta (2010, p. 23), "occasions that traditionally provoke buying behaviour [like Christmas and Halloween] are simulated and referenced so that the same effect may

be achieved in the virtual setting". In that sense, a wide range of seasonal goods is continuously offered in SNGs. Furthermore, limitations in time and availability collaborate to transform those items into a highly desirable object, increasing players' willingness for spending large amounts of game currency on them.

Those marketing strategies are not restricted to SNGs. According to Hamari and Lehdonvirta (2010), degradable items, payable customisation and seasonal goods work in similar way in other virtual gaming worlds. Such similarity highlights how videogames in general — and social games in particular — can reproduce the capitalistic logic of consumption through their design.

The employment of marketing strategies within game mechanics is just one dimension of linking consumerism and playfulness. The other dimension of this practice is seen in the positive experiences that such mechanics render through *ludic shopping*. The categories of consumption proposed by Douglas Holt (1995) compose a fruitful framework for analysing those experiences. Holt's categories points out how the symbolic purchase of virtual goods provides specific forms of enjoyment: integration, classification, and involvement.

Consuming as integration refers to consumer practises in which individuals integrate consumer objects to their own identity. By purchasing objects that express their identity, consumers can better deal with self-consciousness and, at the same time, increase self-worth (Holt, 1995). Fashion styles perfectly illustrate how individuals extend their sense of identity through consumer habits.

In the case of SNGs, players have multiple options of shaping their identity within game world. For example, players can purchase the flag of their home country as a form of self-expression. As other examples, they can acquire special outfits for their avatars, plant trees of their favourite fruits, and even own monuments to customise their cities.

Classification, on the other hand, explains the consumer practices by which individuals classify themselves in relation to relevant others. Consuming as classification explains how the possession and social display of an object can either build affiliation or enhance distinction among consumers (Holt, 1995). This dimension of consumerism can be illustrated by consumer goods that represent status, social class and group affiliation, such as expensive clothes, powerful cars and vegan products.

SNGs offer few options in this sense, since there is a limited range of different products. Nevertheless, the expenditure of huge amounts of game cash on decorative and collectable objects might be used as classificatory consumer practises.

Involvement, in turn, describes the strong personal emotions aroused through consumption. In this sense, consumers might experience positive emotions by acquiring and displaying a specific good that is imbued with personal memories or feelings (Holt, 1995). This is the case, for example, when one purchases an old clock that reminds one's grandparents, or acquires a rare disc collection of one's favourite band.

Such pleasurable feelings can be experienced in SNGs through the acquisition of collectable items and special decorative objects, and even by keeping pets. The customisation of players' avatars is also a way to enhance their involvement with SNGs.

From this analysis, it becomes clear why integration, classification and involvement are forms of enjoyment derived from consumerism. Those principles show the reasons why players engage with the symbolic consumer activities created by SNGs. By playing those games as ludic shoppers, players can have the same pleasant feelings as those derived from shopping in real (physical) world. Moreover, the fact that such pleasing experiences can be enjoyed without spending players' real money reinforces the idea that SNGs are distinct from other games that stimulate consumption.

The social aspect of SNGs is essential for *ludic shopping*, since integration, classification and involvement are essentially forms of sociability. By purchasing and displaying certain in-game goods, players are not only constructing an online playful identity, but also strengthening their social ties. Unlikely in other games in which social interactions are less (or not at all) stimulated, in SNGs playfulness and sociability are in continual interplay with consumption.

It can be concluded, therefore, that not only game design but also player experiences on SNGs can be strongly linked to consumerism, even in a symbolic level. By returning to Bartle's Cartesian model, we can identify ludic shoppers both acting on and interacting with not only game environment but also other players as a means of satisfying consumer fantasies, hence creating another form of metagaming. By playing SNGs, multiple subjectivities can be constructed, performed and shared, no matter how much (virtual) money they might require.

CONCLUSION

The widespread availability of free-to-play SNGs has lead to a huge increase in the number of social and casual players. Among those players, there are those who see in SNGs a way of fulfilling consumer fantasies that would otherwise be unfeasible: the ludic shoppers.

This paper has argued that the revolving of gameplay around consumer practices has transformed SNGs into a source of positive experiences through *ludic shopping*, by which players can have numerous options to actualise their consumer imagination. Although this practice clearly reinforces the capitalist dynamics of consumption, and might therefore be the target of criticism, I have suggested that *ludic shopping* is intrinsically positive, for it allows a wide range of player to engage in playful identity construction, regardless of their (real) economic conditions. Moreover, the beneficial aspects of *ludic shopping* are highlighted by the fulfilment of players' desires in a risk- and cost-free environment.

Bartle and Aarseth's archetypes have helped us to see how players interact with game environment and other players in search of achievement, exploration, and socialization. However, the blending of game play and consumer practices has added a new layer of meaning to play experience, creating a new dimension of enjoyment: symbolic consumption.

Not only the analysis of game mechanics through the marketing strategies explained by Hamari and Lehdonvirta (2010), but also the understanding of player experiences through categories of consumption proposed by Holt (1995) has shown how SNGs combine sociability, playfulness and consumerism, indulging ludic shoppers in symbolic consumption. Although the link between identity construction and consumer practices is not new in game studies, I have argued that the deepness and strength of such link in

SNGs makes them different from other (conventional) videogames, and requires a new look into that interplay.

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ENDNOTES

- 1 Those games were played by around 75, 67 and 35 million people in September 2011, respectively (Inside Social Games, 2011).
- 2 Facebook 'friends' are those people included in a player's social network on Facebook.
- 3 Massively multiplayer online role-playing games.
- 4 The term 'ordinary people' is used here in the sense of individuals who are not used to play videogames or computer games.
- 5 As examples: Bartle (2003), Yee (2006), Bartle (2009), Lazzaro (2009), Bateman and Boon (2010).
- 6 In the original: "Jogador 4: (...) Sempre quis ter um cavalo branco e aí tento ter no jogo".
- 7 This fact is also reflected in figures. Whereas *The Sims* series has sold over 150 million games in 10 years, in just six months, 70 million players have already played *The Sims Social* (Mazza, 2012).

BIBLIOGRAPHY

Aarseth, E. (2003). "Playing research: Methodological approaches to game analysis". In Proceedings of the 2003 DiGRA Conference Level Up in Utrecht.

Bartle, R. (1996). "Hearts, clubs, diamonds, spades: Players who suit MUDs". In Journal of MUD research 1(1). Available at http://www.mud.co.ukrichardhcds.htm.

Bartle, R. (2003). "A self of sense". Available at

http://www.mud.co.uk/richard/selfware.htm. Last accessed October 13 2011.

Bartle, R. (2009). "Understand the limits of theory". In C. Bateman (Ed.), Beyond Game Design: Nine Steps Toward Creating Better Videogames, pp. 117–133. Boston: Course Technology.

Bartle, R. (2011). "Current social games are not fun". Talk at Gamelab Conference 2011, Available at http://www.gamasutra.com. Last accessed October 13 2011.

Bateman, C. and R. Boon (2010). 21st Century Game Design. Hingham, Mass.: Charles River Media.

Bogost, I. (2010, July). "Cow Clicker: The Making of Obsession". Available at http://bogo.st/fb. Last accessed October 19 2011.

Consalvo, M. (2003). "It's a Queer World After All: Studying The Sims and Sexuality." GLAAD Center for the Study of Media & Society. Available at http://archive.glaad.org/documents/csms/The Sims.pdf

Deterding, S. (2010): Social Game Studies: A Workshop Report. With contributions by S. Björk, S. Dreyer, A. Järvinen, B. Kirman, J. Kücklich, J. Paavilainen, V. Rao &

J. Schmidt. Hamburg: Hans Bredow Institute for Media Research. Available at: http://socialgamestudies.org/report. Last accessed April 30 2012.

Glas, R. (2011): "Breaking Reality: Exploring Pervasive Cheating in Foursquare". In: Think Design Play: DiGRA 2011 Conference Proceedings.

Hamari, J. and V. Lehdonvirta (2010). "Game design as marketing: How game mechanics create demand for virtual goods". Int. Journal of Business Science and Applied Management 5(1), 14–29.

Holt, D. B. (1995). "How consumers consume: a typology of consumption practices". The Journal of Consumer Research 22(1), 1–16.

Inside Social Games (2011). "Top 25 Facebook Games for September 2011". Available at http://www.insidesocialgames.com. Last accessed October 13 2011.

Juul, J. (2010). A casual revolution: Reinventing Video Games and Their Players. USA: The MIT Press.

Järvinen, A. (2011, March). "State of Social in Social Games". Talk at Casual Connect Conference 2011, Available at http://casualconnect.org/lectures/community-social. Last accessed October 19 2011.

Kuittinen, J., A. Kultima, J. Niemelä, and J. Paavilainen (2007). "Casual games discussion". In Proceedings of the 2007 conference on Future Play, pp. 105–112.

Lazzaro, N. (2009). "Understand emotions". In C. Bateman (Ed.), Beyond Game Design: Nine Steps Toward Creating Better Videogames, pp. 117–133. Boston: Course Technology.

Macchiarella, P. (2011, March). "Social Gaming: Market Updates". Technical report, Parks Associates.

Madden, M. and K. Zickuhr (2011, August). "65% of online adults use social networking sites". Technical report, Pew Research Center.

Mashable (2010). "Who's Spending the Most Money on Social Games?". Available at http://mashable.com/2010/06/18/social-gaming-monetization. Last accessed October 13 2011

Mazza, R. (2012). "Life is a Social Game: Lessons Learned Bringing The Sims to Facebook". Presentation at GDC 2012 (San Francisco, CA, U.S., March 5-9, 2012).

Meurs, R. v. (2011). "Playing Along Your Friends: Asynchronity and the Social in Social Network Games". Master's thesis, Utrecht University, Netherlands.

Molesworth, M. and J. Denegri-Knott (2007). "Digital play and the actualization of the consumer imagination". Games and Culture 2(2), 114–133.

Paulk, C. (2006). "Signifying play: the Sims and the sociology of interior design",

Game Studies, vol. 6, no. 1, Available at http://www.gamestudies.org/0601/articles/paulk. Last accessed April 30 2011.

Playfish (2011). The Sims Social. EA Games. [Online Game]. Played 13 October 2011.

PopCap Games (2005). Bejeweled Blitz. Facebook. [Online Game]. Played 13 October 2011.

Rao, V. (2008). "Facebook Applications and playful mood: the construction of Facebook as a third place". In Proceedings of the 12th International Conference on Entertainment and Media in the Ubiquitous Era, pp. 8–12.

Rebs, R. R. (2011). "Bens Virtuais em Social Games" [Virtual Goods in Social Games]. In Proceedings of the XX COMPÓS. Associação Nacional dos Programas de Pós-Graduação em Comunicação, Porto Alegre, Brazil. pp.1-17.

Watercooler (2009). Kingdoms of Camelot. Facebook. [Online Game].

Whitson, J. R. and C. Dormann (2011). "Social gaming for change: Facebook unleashed". First Monday 16(10). Available at http://firstmonday.org. Last accessed October 19 2011.

Wohn, D., C. Lampe, R. Wash, N. Ellison, and J. Vitak (2011). "The S in Social Network Games: Initiating, Maintaining, and Enhancing Relationships". In Proceedings of the 2011 44th Hawaii International Conference on System Sciences, pp. 1–10. IEEE Computer Society.

Wolf, M. (2001). The medium of the video game. Austin: University of Texas Press. Yee, N. (2006). "Motivations for play in online games". CyberPsychology & Behavior 9(6), 772–775.

Zichermann, G. and C. Cunningham (2011). Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps. Sebastopol, Calif: O'Reilly Media, Inc.

Zynga (2007). Texas HoldEm Poker. Facebook. [Online Game].

Zynga (2008). Mafia Wars. Facebook. [Online Game].

Zynga (2009). FarmVille. Facebook. [Online Game].

Zynga (2010). CityVille. Facebook. [Online Game].

Zynga (2011). Empires & Allies. Facebook. [Online Game].