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GAMING TOGETHER: PATTERNS AND PRACTICES OF ENGAGING IN DIGITAL GAMES WITH OTHERS

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GAMING TOGETHER: PATTERNS AND PRACTICES OF ENGAGING IN DIGITAL GAMES WITH OTHERS

Lina Eklund

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Abstract

Digital gaming is a still expanding activity and many games are engaged in together with others. The study builds on previous research investigating social digital gaming using a representative survey sample. The aim is to investigate who the social gamers and social gaming companions are in order to capture this growing practise. Logistic regression models and descriptive statistics are used to analyse the data.

Using a representative sample of digital game users, the results show support for the importance of separating different social gaming contexts according to the relational status of gaming companions. Furthermore, results show, contrary to expectations that male gamers are more social than female gamers. Also, social gamers were younger, had higher achieved education, were more dedicated and spent more time on gaming. However, different social gaming contexts, gaming with family/frinds/strangers online, were all predicted by different variables.

Introduction

Games are world-building activities, when engaging in games together with others, game worlds are brought alive (Goffman, 1961). Through history people have played games together in various forms and thus brought the specific social situation of gaming to life. Today this is true for the multitude of multiplayer digital games that now exist on consoles, computers, mobile phones and more. Playing these games with others is a significant part of the activity (Williams, 2004; Eklund, 2012) as well as sharing gaming experiences with your fellow gamers (Mäyrä, 2008). Since the early 2000 digital gaming has increasingly opened up for new users, and as gamers grow older and keep up with their hobby, those engaged in digital games today comprise a large and varied group (Juul, 2010). The Wii console released by Nintendo in 2006 was a logical follow-up to the so-called ‘party games’—e.g., Singstar (London Studio, 2004) and Guitar Hero (Harmonix, 2005)—that emphasize the social aspect of gaming, and although gaming has always been engaged in with others (Williams, 2004), the social aspects of digital gaming have never before been so central and in focus. The long-running online game World of Warcraft (Blizzard, 2004) is still popular with millions of users; new digital distribution sites such as Valve’s Steam have social networking functions bridging over different games (Stenros et al. 2009) and few high-end games are released today

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without at least some multiplayer feature. It is clear that the social aspect is central to digital gaming.

The simultaneous changes in game market and audience have altered many expectations about gaming, and have prompted researchers to proclaim that we can no longer speak of a coherent gaming subculture; today gaming is a mainstream activity (Castronova, 2005; Westecott, 2009; Juul, 2010). Digital gaming is spreading and becoming part of everyday life for many (Eklund, 2012), yet we are still in the middle of realizing what a mainstreaming of digital gaming actually imply. Many studies aiming to gain insight into the practice of gaming build on self-selected samples meant to capture the habits of different sub-sets of gamers; rather than gamers in general. However, some exceptions do now exist, e.g. from Finland and Germany (Kallio et al. 2007; SOFOGA, 2011), but the study of digital games still needs to be complemented with more generalizable samples. The aim and contribution of this study is therefore to examine and analyse social digital gaming (henceforth social gaming) using survey data from a national sample. The study builds on previous research investigating social digital gaming and tests expectations on a simple random survey sample from Sweden. The specific research aim is to investigate who the social gamers and social gaming companions are in order to capture this growing practise.

The Swedish context

The data has been collected in Sweden and some background on the Swedish context is therefore presented here. Digital games occupy a marked position in Sweden with over 62 percent of those aged 12-65 being active gamers (Findahl, 2011). The country has a widespread use of the Internet (86 per-cent, over 96 percent in the age group 19-65) and broadband is accessible to almost all users (Findahl, 2011). The country has several known E-sport teams and players and also hosts the world's biggest LAN (local area network) festival, Dreamhack, with over 20 000 visitors in 2011. Sweden was also the first country to create an official embassy in Second Life (Linden Lab, 2003), opened by the State Secretary for Foreign Affairs. The Swedish context share many aspects with other Western countries, with e.g. similar or slightly higher number of users which make it a suitable locale for investigating of digital gaming habits. Results could therefore shed light on the expanding use of this activity.

Contextualizing social gaming

Research on digital gaming often builds on self-selected samples of gamers, picked by posting on websites aimed at gamers and/or by using snowball sampling (e.g. Yee: The Daedalus Project 2002-2012; Griffiths et al. 2003; Pearce 2008; Quandt et al. 2008; Juul, 2010; de Schutter 2011). This is due to a desire to scrutinize specific groups or subsets of gamers and it is argued that these targeted samples are the best way to reach the group in question, which is perceived as small. However, if gaming indeed has become a mainstream activity in the West and as gaming is proliferating as well as diversifying, we have to begin to complement these self-selected samples looking at sub-sets of gamers with more large scale samples looking at gamers in general. Self-selected samples in quantitative research can be a good strategy for mapping an unknown area. For example, today, due in part to large-scale projects like the

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Daedalus (Yee, 2002-2012), we have extensive knowledge of the structure of massive multiplayer online-gaming (MMO). Yet, self-selected samples has a tendency to focus on online gaming or physical locations where gamers gather, such as game cafés and LANs; however, study of social gaming only in MMOs or these physical locations tends to miss the importance of home based, everyday aspects of day-to-day gaming. When we look at the exceptional—the things we perceive to stand out from the normal—we run the risk of forgetting to investigate the everyday aspects, and as Kallio et al. (2011, p.347) have shown, the mainstream of digital gaming is “the fluid continuity of different people who play to relax, socialize, have fun and entertain themselves...”. While some examples exist, e.g. the national survey project SOFOGA in Germany (SOFOGA, 2011), such studies are still uncommon. In order to study the mainstreaming of digital gaming, more general samples capturing the everyday home-based gaming are needed.

In this study, gaming is investigated as a leisure activity situated in everyday life. Everyday life is mostly considered to be all that ‘happens’ outside of work or school, often inside the home (Haddon, 2004). The French philosopher Lefebvre (1958) lifted the concept of the everyday into focus by showing how we can understand the social world by studying day-to-day routines. Everyday life, he says, is constituted of work, family life, and leisure pursuits, and the many interactions between these (Lefebvre, 1958). Here, the focus is on how we integrate and practice gaming as part of the mundane actions and routines of daily life. Leisure is often seen as the reward for productive work—our ‘free time’—yet, as Lefebvre (1958) and more recently Rojek (2010) have shown, leisure and everyday life are far from free. Rojek argues that leisure, especially in the higher social strata, is an investment. “This is because the display of credibility, relevance and competence in our ‘voluntary’ chosen ‘free’ time activities speaks to others about who we are, what we hold to be valuable and how we can make a difference” (2010, p.3). Leisure is a form of investment towards social standing and in everyday life becomes part of defining the ‘good’ life. In pursuing leisure we are positioned actors in a system with scarce resources, where different resources, for example time, money, or knowledge, are necessary to pursue leisure and not everyone possesses the same resources. Thus, leisure activities like digital gaming are embedded in social structures and determined by relationships such as class inequality, gender relations, *et cetera*. Much can therefore be gained for our understanding of digital gaming by considering these aspects in research.

Gaming together—previous research

An important part of playing games has always been that they constitute collective enterprises (Huizinga, 1950); we engage in them with others. Throughout history, games have been part of what people do together and even though a lot of controversy in the early days of digital gaming concerned fears that digital games would make a solitary activity out of something that previously had been social. However, these early fear has been laid to rest as research has shown the many social sides of digital gaming, from co-locative “sofa” playing, massive multiplayer games played by people from all over the world, to the sociability surrounding the activity (Stenros et al. 2009). Digital games might be mediated by and embedded in digital technology yet they are still games and share their basic structure with analogue games. However, some ‘new’ aspects are made possible by e.g. Internet technology which

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particularly impact social gaming. Social gaming today takes many forms and studies have shown that how well known your gaming companions are, family, friends or strangers, are of equal importance to how gaming is mediated, i.e. online or offline (Eklund, 2012).

Through digital technology games can break away from restrictions that earlier limited gaming to certain times and spaces, and so today games tend to break out of earlier definitions of games as tied to specific places, e.g. a football court (Huizinga, 1950). These trends of the disconnection of time and space are of course not specific for digital games and whereas in pre-modern times space and place mostly coincided, Giddens (1990) argues that now, in late modernity, the spatial dimensions of social life have expanded. Through communication technologies we can keep up relationships with others located elsewhere; and so physical place and social space have become separated. What communication technologies can be said to allow is the separation of time and space, where social space no longer is closely connected to a specific locale (Giddens, 1990). How digital games, and especially collaborative online gaming, disrupt time/space barriers has been studied previously (e.g. Steinkuehler & Williams, 2006; Shen & Williams, 2011), research has shown how gamers are connected, via online game-spaces, across the globe. Online gaming is said to produce weak social tiesⁱ and to give access to bridging social capitalⁱⁱ, as it mostly is performed with relative strangers in virtual online communities (Ducheneaut et al. 2007). On the other hand, while participating in online gaming has been shown to lead to new relationships (Griffiths et al. 2003), many people game with family or friends whom they know from outside the game (Taylor, 2006; Cole & Griffiths, 2007; Eklund, 2012). Gaming in general, not only online, has also been argued to contain highly social components (Williams, 2004; Jonsson, 2010; Mäyrä, 2008). From previous research we can therefore begin to form expectations: (1) social gaming is a leisure activity engaged in together with others and, due to Internet technology, that: (2) geographical location will not have an impact on social gaming.

The question of who engages in digital games has been posed many times and resulted in different answers. Juul (2010) argues that in the 'casual revolution' which occurred in the 2000's digital games became more diverse as well as less stigmatized. Dividing gamers into hardcore and casual has been one of the bases for understanding different gaming styles, since of late new games have seen more diverse user groups. Hardcore often implies a heavy time investment in gaming and also taking gaming more seriously as a hobby, while casual gamers are interpreted as users who merely game to pass time. However, these styles are often connected to issues of power, where casual gamers are generally typified as women and hardcore gamers as men (Soderman, 2009). Differences in gaming patterns between casual and hardcore gamers are hard to pin down; for example, both hardcore and casual gamers often spend the same amount of time on gaming (Juul, 2010; de Shutter, 2011). To avoid the negative connotations of hardcore and to move away from the idea of heavy investment of time as a defining factor, the terms dedicated and casual are used here instead, to distinguish between individuals with gaming as a hobby and those gaming to pass time, where dedication indicates involvement in gaming separate from time use. Kallio et al. (2010), in their rigorous investigation of different gaming styles, argue that while social gamers can be both casual and engaged (dedicated), engaged gamers tend to game with others while casual gamers play alone to a larger extent (Kallio et al. 2010). In another study, increased time spent on games was related to increased levels of social gaming (Kallio et al. 2007). Here, game engagement is divided into dedication to gaming culture and time use, and we can therefore assume that:

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(3) social gamers are more likely to be dedicated to gaming and also spend more time on gaming.

The average age of gamers is increasing and is now 37 both in the U.S. (ESA, 2011) and in Finland (Kallio et al. 2007), to give two examples. Yet gaming still seems to be more common among the young (ISFE, 2010). Studies have found that younger gamers are more likely to game with others (Kallio et al. 2007) and that especially young male gamers are more likely to spend time in game cafés, gaming with their friends (Jonsson, 2010), whereas research on older gamers has shown that they tend to game alone (de Shutter, 2011). Eklund and Jonsson (2012) found that gamers often expressed that time to game with friends was reduced as one grew older. We can therefore assume that: (4) social gamers are likely to be younger than non-social gamers.

Female gamers are a growing group that today constitutes almost one-third or more of all game users (ISFE, 2010; ESA, 2011; Findahl, 2011), but as the activity traditionally has been seen as a male province (e.g. Hayes, 2005; Eklund, 2011), men are the ones expected to be dedicated (Yee, 2008; Williams et al. 2009), while women are generally seen as casual gamers (Juul, 2010). Women are often introduced to gaming by male partners (Yee, 2006; Eklund, 2011) and it is frequently assumed that the social aspect of gaming is important for women and that social online gaming is what will bring about, and has caused, female interest in gaming (Taylor, 2006). A study by Hartmann and Klimmt (2006) shows that rich social interaction is indeed important for women's preferences for gaming. Taylor (2006), however, questions the idea that women but not men are interested in the social side of gaming, and argues that both men and women enjoy the social aspects of online gaming. Other studies show that for women gaming can be an important and social leisure activity (Crawford & Gosling, 2005). In a Finnish study, men and women gamed together with others to a similar extent, except in the age span 25-35, where women to a larger extent gamed only with others (Kallio et al. 2007). However, Yee (2008) found no difference between men and women when it came to social preferences in online games. Even if previous research is inconclusive, it seems that the men and women who do game share social gaming patterns to a large extent. It is therefore assumed that: (5) men and women will be equally engaged in social gaming.

In the home, gaming is often based on negotiations within the family that give or restrict access to gaming time (Schott & Horrell, 2000). Men tend to have greater access to gaming at home, while women adjust their gaming time to household tasks, which men do not (*ibid.*). Studies have shown that in the home (e.g. Casas, 2001), mothers were less involved in children's gaming compared with fathers. Pasquier et al. (1998) also focused on differences between mothers and fathers involvement with their children and showed how mothers utilised more control than fathers—except over computer usage, since fathers were seen as the family member with best computer skills (*ibid.*). This has been confirmed in later studies (Livingstone, 2002). However, in a more recent study by Nikken et al. (2007), mothers co-played as much with their children as fathers did. Research has shown that gaming parents are prone to co-play with their children (Nikken & Jansz, 2006); in a study by Kallio et al. (2007) 38 percent of parents gamed with their children. Likely, then, for gaming parents, is that it is common to game with their children. We can therefore assume that: (6) the presence of children in the home will increase the likelihood of social gaming.

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Data and variables

The data used in this study comes from a 2011 survey; 'Swedes and the Internet' (Findahl, 2011), the Swedish contribution to the World Internet Project. In Sweden, these surveys on Internet usage have been conducted almost annually since the year 2000 in the form of a revolving panel study, where respondents are interviewed by telephone or the Web (respondents' choice) in a mix-mode survey (Dillman, 2007). The survey from 2011 included a battery of questions related to social digital gaming, constructed by the author in collaboration with the .SE Trust in charge of the survey. The .SE or *The Internet Infrastructure Foundation* is responsible for developing the Swedish internet as well as the top Swedish domain or .se. The simple random sample is representative of all Swedes from age 12 and up, (oldest respondent 100 years old), and is also representative based on gender, and residence, 2611 people answered the survey. As it is a panel study some individual fall away each year and are replaced with new ones. There is little information on response rates, however, each year approximately 700 individuals are new recruits because of drop-outs from earlier years (Wii, 2010). In this year's sample that would give a hypothetical external drop-out rate of 26%. Of our respondents we could estimate an overrepresentation of individuals interested in the Internet as this is the focus of the survey. Attrition was for most variables not higher than 1 percent except for the attitude variables, which ranged from 2.9 to 4.3 percent. Listwise deletion was used for analysis. Only people engaging in digital games (n=1120) were included in the analyses. All survey questions are here translated into English by the author.

To explore the six expectations posed by previous research, several models were constructed: first comparing social gamers with non-social gamers; then to further delve into and nuance social gaming habits, comparing different social gaming contexts (gaming with friends/family/strangers). Dependent variables are the questions: 'How often do you game with others?' and in subsequent analyses: 'How often do you game with family/friends/strangers online?' Answers range from never, to several times a day on a five-point scale. Only respondents who answered that they did indeed game with others were asked to answer the second question (n=586). The response scales were tailored to match the rest of the survey, to facilitate for respondents and to create coherence in the survey. As the scale steps were not equally distanced, all dependent variables were transformed into binary categorical variables. Respondents gaming with others or, in subsequent analyses, with /family/friends/strangers online, were coded as social gamers, 1, while non-social gamers and non-family/friends/strangers online gamers were coded as 0 (see Figure 1). Family and strangers are more straightforward categories, 'friends' can be ambiguous; not everyone who you would call a friend is someone you know offline and neither is this assumed here. With the Internet, stable relationships are possible without meeting physically (Parks & Floyd, 1996), even though anecdotal evidence suggests that gamers do not value online and offline friends in the same way (Eklund, 2012). However, the category 'friends' in this study includes both categories due to insufficient resolution in the data.

A number of independent variables were included to test the expectations; gender (women=0, men=1), age in years, children living at home (=1, no children=0)ⁱⁱⁱ, urban/rural domicile (urban=1, rural=0)^{iv}, and time spent on games measured in hours per week. Several control

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variables were included: occupation as in: 1) working 2) student 3) at home (unemployed, on parental leave, stay-at-home husband/wife, on sick leave^v) 4) retired; education, as a proxy for class, measured as highest completed education with three levels, low (elementary school only), medium (secondary school), high (university degree), plus three questions on attitudes to gaming: 1) 'Do you perceive gaming as a fun and relaxing hobby?' 2) 'Do you perceive gaming as a way to socialize?' 3) 'Do you perceive gaming as a waste of time?' (0=do not agree/indifferent, 1=agree). As involvement in gaming may vary over life stages, a curvilinear correlation was tested for with a squared age variable, this was not significant in any of the models and has therefore not been included.

To operationalise engagement in gaming culture, genre was used. From the question 'Which of the following game types do you ever engage in?' an index was created of fourteen different genres (ranging from traditional games such as chess and solitaire to first-person-shooters)^{vi}. Cronbach's alpha with traditional games was 0.677 and without 0.722, a large difference in comparison with the other game genres, so traditional games were excluded. As the index was heavily skewed towards the lower numbers (not that many gamers engaged in all listed game genres), the index was transformed into a binary categorical variable; dedicated gamers (1) and casual gamers (0), with the dividing line set at 1-2 game genres engaged in for casual gamers, and 3 and above for dedicated gamers. As traditional games had been excluded, all individuals only engaging in these games were placed in the casual category. Since previous research has shown that time spent on games is highly variable over different game genres and that casual gamers can spend as much time on games as dedicated gamers (Juul, 2010), time spent on games and engagement has been included as two separate variables. Other researchers have shown that the length and intensity of each session rather than the overall time spent on games can measure dedication, but that genre is also a viable measure to divide people simply engaging with games as a pastime from people who have digital gaming as a hobby (Kallio et al. 2011). Moreover, Royse et al. (2007) showed that hardcore gamers engage in many different genres while casuals engage in less. As it seems that time is an unreliable measure of dedication, engaging in several different types of game genres was chosen as the measure instead. In the analyses, both time, measured in hours/week, and dedication are included. Together they offer two different measures of involvement in digital gaming and worth noting is that the two variables do not cause multicollinearity. This supports previous research showing that time spent on games and game involvement do not measure the same thing (Juul, 2010). Including genres separately in the models was tried but did not change the significance or direction of the correlations. Too many variables in a model, moreover, greatly increase the risk for occurrence of false significance (Cohen et al. 2002).

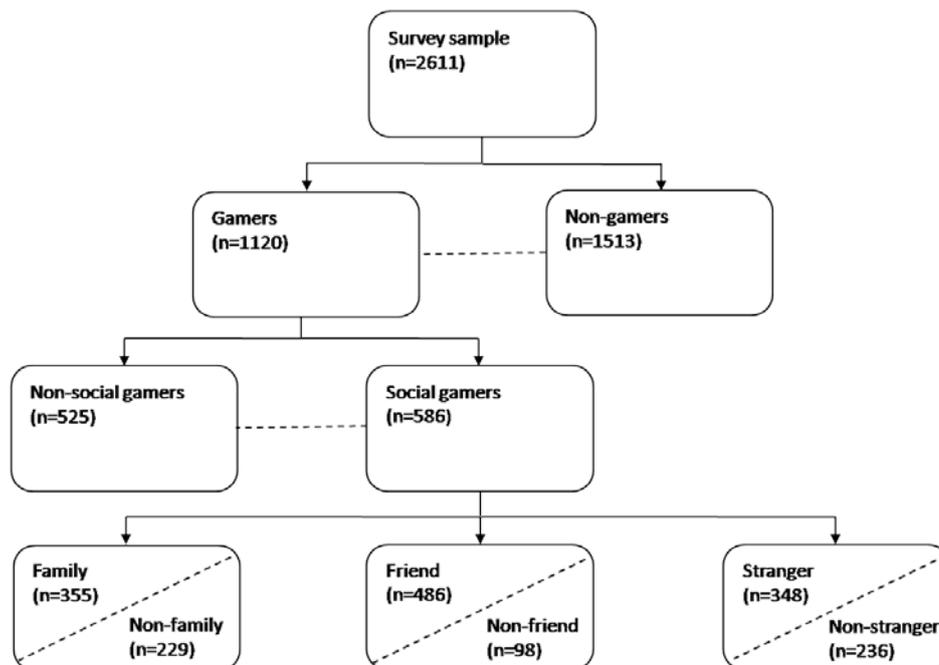
Logistic regression models were computed to explore predictors of social gaming. The first model explores social digital gaming in the entire gaming group. The subsequent analyses, also using logistic regression, explore social gaming with different groups—family/friends/online strangers—and include social gamers only.

RESULTS

Sample characteristics

The study sample and subsequent subsamples used in the different analyses are shown in Figure 1. First, to describe the characteristics of the sub-sample of gamers used in the analyses and to explore expectation 1, that gaming is a leisure activity engaged in with others, some differences between gamers and non-gamers, as well as characteristics of gamers are described in Tables 1 and 2. Thereafter, in Table 3, social gamers are investigated with regression analysis with non-social gamers as the comparison group. In Table 4, several separate regression analyses for different social gaming contexts are presented. Here, who the social gamers game with is investigated. Social gamers not engaging with the relevant group are used as comparison groups in these models.

Figure 1: Total sample and subsamples used for analyses. Comparison groups for analyses are shown by dotted lines



1

Note: Missing values excluded

An initial question asked was: “How often, if ever, do you engage in some form of digital game? To make sure that the question was understood, an introduction made it clear that gambling was not included, but that all sorts of games played on a screen, both on- and off-line, were. Anyone who answered that they engaged in gaming was asked a series of subsequent questions about their gaming habits. Of the entire group, 42.5 percent (n=1120) reported engaging in digital games, with the youngest gamer 12 and the oldest 84 years old. In the age group 12-29 the percentage of gamers was 75.0, in the highest age group, 65-100, 17.5

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percent (not in the tables). Of all gamers, 41.5 percent were women and the mean age was 37.5 (see Table 1).

Of the sub-sample of gamers, 24.4 percent can be called dedicated gamers (see Table 1), engaging in many different game genres. In the age group 12-29 this number increases to 36.9 percent, in the oldest, 65+, age group, we find no dedicated gamers (not included in the tables).

Male gamers were twice as likely to be dedicated gamers as female gamers (not in the tables). In regard to time spent on games, most reported spending up to an hour per week (48.1 percent); 27.8 percent spent up to 5 hours per week, 11.1 percent up to 10 hours per week, and 6.9 percent up to 20 hours per week. Only 4.2 percent spent more than 21 hours per week. Men in general spent more time on games than women (not in the tables). By comparison, the average Swede (age 9-79) spends 11.3 hours per week watching TV and 2.5 hours per week reading books (Nordicom, 2010).

Table 1: Descriptive statistics for gamers and non-gamers showing spread of variables used in models

Respondents	Gamers	Non-Gamers
<i>Percent of total sample</i>	42,5	57,5
<i>Mean age (SD)</i>	37.5 (17.8)	55.1 (18.6)
General %		
Urban living	65.6	59.6
Men	58.5	44.8
Children at home	30.6	21.9
Occupation %		
Work	63.1	53.6
Student	19.2	5.0
At home ⁽¹⁾	7.4	5.7
Retired	10.3	35.9
Education %		
University degree	26.8	26.9
Secondary level	54.0	56.5
Elementary school	19.2	16.6
Gaming, % of gamers		
Dedicated	24.4	
Social gamers	52.8	

¹ unemployed, sick leave, stay-at-home husband/wife, and childcare

Note: missing values excluded

Social gaming is common and over half of gamers engaged in games with others, supporting the first expectation, of which many were friends, followed by family and strangers met online (see Table 2). Of gamers, most were working at the time of the survey, one-fifth were students, while the rest were either unemployed, at home with small children, home makers, on long term sick leave, or retired (see Table 1). Concerning education, 26.8 percent held a

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university degree at the time of the survey, 54.0 percent a secondary school-leaving certificate, and 19.2 percent had only elementary school (see Table 1). However, due to the fact that some respondents were still enrolled in the education system at the time of the survey, these numbers might not fully represent the final educational level of all respondents.

Table 2: Social gaming preferences, % of social gamers

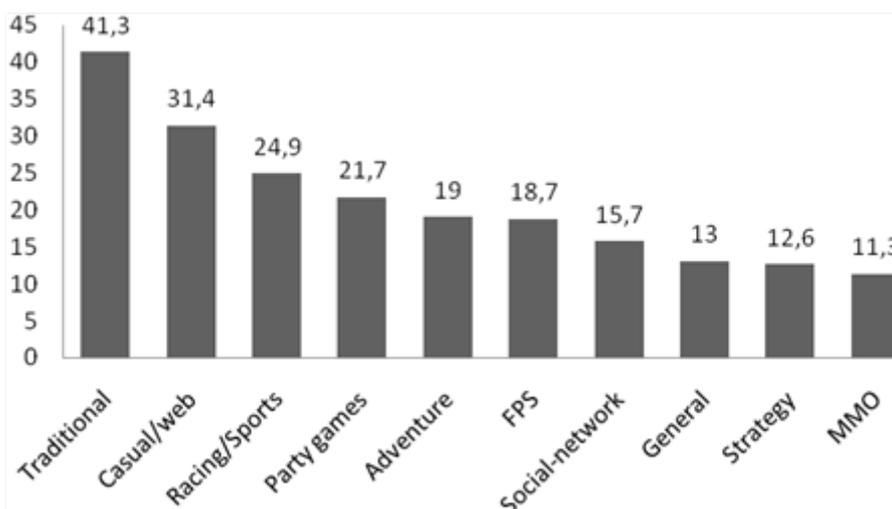
Social gamers	%
Gaming with family	60.1
Gaming with friends	85.2
Gaming with strangers	59.6

Note: missing values excluded

In Table 1 we see that in comparison with non-gamers, gamers were younger. The age difference is likely the root to other observed differences. For example, gamers more often than non-gamers had children living at home, were students or in employment. Moreover, gamers were to a larger degree male than non-gamers.

Other studies and industry statistics from e.g. the American market has indicated a rising interest in digital gaming (ESA, 2011). When it comes to Swedes, it is clear that many today are engaged or interested, here over 40 percent of the total sample. However, most gamers report using traditional games such as solitaire, chess and mah-jong with less engagement in more dedicated game types such as massive online games (MMO's) or adventure games (see Figure 2).

Figure 2: 10 most common game genres among gamers in percent (n=1120)



Note: FPS: First-Person-Shooter, MMO: Massive Multiplayer Online Game

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Regression analyses

Of all gamers, 52.8 percent engaged in games with others at least occasionally. Table 3 shows the results of the step-wise logistic regression exploring differences between social and non-social gamers. No multicollinearity was found.

Table 3: Step-wise logistic regression, dependent variable is social gamer (1) non-social gamers (0). Results displayed in odds ratios.

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
Age	0.95***	0.95***	0.96***	0.96***
Man (<i>ref. woman</i>)	2.23***	2.25***	1.78***	1.49**
Urban living (<i>ref. rural</i>)	1.10	1.07	1.00	0.96
Child/ren at home (<i>ref. no children</i>)	1.17	1.16	1.20	1.17
Education				
<i>Low education (reference)</i>				
Secondary education		1.41	1.63*	1.67*
University education		1.40	1.78*	1.75*
Occupation				
<i>Work (reference)</i>				
Study		1.10	1.11	1.13
At home		1.09	0.80	0.79
Retired		1.15	1.12	1.21
Game style				
Dedication (<i>ref. casual</i>)			3.30***	3.24***
Game time			1.08***	1.07***
Attitudes[#]				
A waste of time				0.76(*)
A fun/relaxing hobby				0.97
A way to socialize				2.60***
<i>N</i>	1013	1013	1013	1013
<i>-2 log likelihood ratio</i>	202.76***	205.94***	294.92***	332.35***
<i>Nagelkerke R-square</i>	0.24	0.25	0.34	0.37

$p \leq .001 = ***$ $p \leq .01 = **$ $p \leq .05 = *$ $p \leq .10 = (*)$

[#]Reference category is, 'Do not agree/Indifferent'

Note: missing not included

In Model 1, younger gamers were more likely to game with others and men more prone to be social gamers than women. In Model 2, education and occupation were added with very little effect. The game style variables dedication and time were added in Model 3. The effect of gender was lessened when taking game style into account, yet men were still more likely to be social gamers. Dedication to gaming and spending more time on games were found to predict more social gamers. When controlling for game style, education was related to social gaming

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and revealed that gamers with a higher education were more prone to game with others. In the last model (4), attitudes towards the activity were added. When game style and attitudes were controlled for, the initial difference between men and women was further reduced, indicating that much of the gender difference is about game style and attitudes towards the activity. However, even the final step suggests that men are more likely than women to game with others disproving expectation five concerning men and women's social gaming patterns. Age had a steady effect across the models; social gaming decreases with age lending credibility to expectation four. As could be expected, gamers who agreed that "gaming is a way to socialize" were more prone to game together with others. In parallel, gamers who agreed that "gaming is a waste of time" were less likely to be social gamers. Expectation 3 was also supported, that social gamers would be dedicated and spend more time on gaming.

Who games with whom?

Table 4 gives the results of the logistic regression models exploring different game contexts. Separate models were computed for gaming with family members, with friends, and online with strangers as it was believed that different social gaming contexts would operate under different conditions. The last group, strangers, has a subsequent model including an interaction effect between gender and age. Only social gamers were included in the analyses. No multicollinearity was found.

The first model explored gaming with family members. Here few variables tested for had any significant effect. Age had no effect, and neither was adding a squared age variable significant. This was true for all four models. Women were more prone to game with family members than men, making this model an exception and partly supporting expectation five. Having children living at home had different effects in the different models; this was related to more family gaming and less gaming with friends and strangers online and therefore only partially supporting the expectation (6) that having children living at home would increase social gaming. Interestingly, urban gamers were less likely than rural gamers to game with family members, yet urban dwelling had no effect on gaming with friends and strangers online which partially disproves expectation two.

Gaming with friends was explored in the second model, which showed that men were more likely than women to game with friends, but that increased age predicted less gaming with friends. Dedication to games was shown to predict gaming with friends, yet time spent on games was not related. Believing that digital gaming is a way to socialize increased the probability of gaming with friends and, to a lesser extent, also seeing gaming as a hobby.

Table 4: Logistic regression predicting gaming with family, friends, or strangers online. Odds ratios.

	<i>Family</i>	<i>Friends</i>	<i>Strangers online 1</i>	<i>Strangers online 2</i>
Age	1.01	0.94***	1.01	1.03*
Man (<i>ref. woman</i>)	0.69(*)	1.92*	3.50***	11.29***
Urban living (<i>ref. rural</i>)	0.58**	0.65	0.73	0.70
Child/ren at home (<i>ref. no children</i>)	2.89***	0.41**	0.53*	0.58*
Education				
<i>Low education (reference)</i>				
Secondary education	1.33	0.66	1.10	1.13
University education	1.43	0.54	1.74	1.75
Occupation				
<i>Working (reference)</i>				
Student	1.39	2.17	1.84*	1.89*
At home	1.20	1.27	1.93	1.88
Retired	1.63	0.85	0.99	0.88
Game variables				
Dedication (<i>ref. casual</i>)	1.32	4.59***	2.61***	2.71***
Game time	0.99	0.99	1.12***	1.12***
Attitudes[#]				
A waste of time	0.95	0.74	0.84	0.82
A fun/relaxing hobby	0.76	1.68(*)	1.54(*)	1.61(*)
A way to socialize	1.24	3.01***	0.83	0.81
Interaction term, age*gender				0.96**
<i>N</i>	559	559	559	559
<i>-2 log likelihood ratio</i>	50.08	170.39	165.85	172.61
<i>Nagelkerke R-Square</i>	0.12	0.44	0.35	0.36

$p \leq .001 = ***$ $p \leq .01 = **$ $p \leq .05 = *$ $p \leq .10 = (*)$

[#] Reference category is, 'Do not agree/Indifferent'

Note: missing not included

Lastly, gaming with strangers online further differed from the first two social contexts. First, an interaction effect was discovered between gender and age. In none of the other models was this effect found. In the original model (Strangers online 1), age was not significant. When the interaction effect was added (Strangers online 2), age becomes significant. Results show that with age, men *reduce* their gaming with strangers, while women *increase* their gaming with strangers. In contrast to the other two models, occupation had an impact; students were more likely to game with strangers online than working individuals. Considering game style, both dedication and time spent on gaming was found to predict gaming with strangers online. Of the different attitudes, agreeing that gaming is a fun and relaxing hobby was related to more gaming with strangers.

To sum up, the results showed that social digital gaming is a shifting activity that varies in shape and form and across a diverse set of social variables. Several expectations posed by

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previous research were explored in this study. Expectation 1, that digital gaming is a social leisure activity, was supported, as digital gaming in general as well as social gaming was a prevalent part of respondents' gaming habits (Table 2). Expectation 2 stated that geography would not matter for social gaming habits, yet this was only partially true. Gaming with family members was more prevalent for social gamers living in rural areas than for social gamers in urban areas, with significant correlations (see Table 4). Also in exploring expectation 3, both support and contradiction were found, where the effect of dedication to games as well as time spent on games varied heavily between different social gaming contexts. Both dedication and time use correlated significantly with social gaming in general and with stranger gaming, only dedication correlated significantly with gaming with friends and neither correlated significantly with gaming with family (see Tables 3 and 4). Expectation 4, concerning age and social gaming, was supported; younger gamers were more likely to be social gamers. One exception was found, however. Increasing age for female gamers had a positive significant correlation with the likelihood of gaming with strangers. The fifth expectation dealt with gendered preferences for social gaming. Contrary to previous research, which either describes women as more social or states that social gaming preferences are equal for women and men, the correlation patterns showed that male gamers were more likely to be social gamers than female gamers. One exception was that female social gamers were more prone to game with family. The last expectation (6) was that children would increase the likelihood for social gaming. Like most other results, the correlations displayed varying patterns. It was not significant for social gaming in general, but for social gamers increased gaming with family, while reducing gaming with strangers and friends.

Discussion

The Swedish data used here offer a view of the development of digital gaming as gaming technology and habits spread and gaming becomes a more established activity. Moreover, the percentage of gamers in the total sample (42.5), the medium age of gamers (37.5), and gender ratios (58.5 percent men) are similar to results from surveys conducted in other European countries (ISFE, 2010) and in the US (ESA, 2011).

Higher education was significantly correlated with increased propensity with social gaming in general (Table 3). This poses interesting questions concerning the importance of social class for digital gaming. Class, being a relatively understudied subject in games research, is here shown to affect the likelihood of gaming with others. The measurement used here for education is not ideal however—some respondents being still enrolled in the education system—yet the results demonstrate that class should not be disregarded when studying digital gaming. Digital gaming, as a relatively new pastime, though on a path towards social acceptance still has low standing as a leisure activity (Juul, 2010). An enduring moral panic still clings to the medium, even though potential negative effects have been shown to be exaggerated (Ferguson, 2010). Engaging in leisure activities is important for our personal identities and, as Rojek (2010) argues, an investment, particularly for the upper social classes. In pursuing the 'good life' and practising quality leisure, social and identity aspects are highly valued (Kelly, 1983). Social regulation and values concerning the proper spending of 'free time' are important factors for engagement in digital gaming as a part of the range of activities

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available to us today. Gaming with others sidesteps the worst stereotypes of digital games and becomes part of practising ‘good’ gaming. Thornham (2009) shows in an interview study how adult gamers, in an attempt to legitimize their own gaming, constructed social gaming as the desirable form of gaming and non-social gaming as abnormal.

As expected, dedication to games predicted social gaming, as did increased time spent on games (Table 3). However, in the secondary models presented in Table 4, gaming with family members was not predicted by either dedication or time spent on games and gaming with friends was only predicted by dedication. Lastly, gaming with strangers online was predicted by both dedication and increased time. That time spent on games increased the likelihood of gaming with strangers could be a consequence of the types of games engaged in online, MMO’s often demand heavy time investment (Yee, 2004; Linderoth & Bennerstedt, 2007). In a previous study it was also suggested that gaming with strangers takes little planning and is accessible at all times (Eklund, 2012). Spending more time on gaming would require seeking game partners online when friends and family are not available. This is strengthened by the fact that increased time spent on games was not related to gaming with family or friends. Moreover, the difference in attitudes to gaming with friends and with strangers online suggests that these social contexts operate under different conditions. While seeing gaming as a social activity was related to increased gaming with friends, it was not so for gaming with strangers. Seeing gaming as a fun and relaxing hobby was connected to gaming with strangers online, however. This suggests that gamers do not view gaming online with strangers as a social activity on par with gaming with friends. Gaming with strangers has indeed been shown to constitute—on occasion—quite un-social gaming encounters (Eklund & Johansson, 2013). The indicated preference for significant others as social gaming companions is interesting and was not predicted in advance. It seems that in understanding social gaming we are required also to understand the beforehand social status of individuals engaging in games together. Further studies should moreover consider what ‘friends’ entail in a gaming context, as it is likely that in this study both online and offline friends are captured in the same category.

Regression analyses showed, against given expectation, that men are more prone than women to game with others. However, women gamed more with family members (Table 4). This should make us wary of lumping together different social gaming contexts. That women game less with others in general most likely reflects underlying structures of gendered expectations where women still are expected to focus on family life over themselves, with leisure in the home tending to be more atomized by family responsibilities (SCB, 1992). Having less ‘own’ time for leisure (Sayer, 2005; Fuehrer, 2010) makes it more difficult to organize activities together with others. Ideas of the proper spending of leisure time are also connected to social expectations, which vary for men and for women. For both young and older women, gaming—still largely considered a male domain (see e.g. Enevold & Hagström, 2009; Eklund, 2011)—is not an activity that complies with ideas of femininity, and the gaming community can be harsh on female gamers. Also due to gendered expectations, women often lack a sense of entitlement to leisure, as well as opportunities to engage in leisure as they wish (Hendersson & Dialeschki, 1991). It becomes clear that we are positioned creatures when it comes to leisure, and for women and men opportunities to participate in digital gaming is limited not only by the games or by gaming culture, but also by gendered norm structures. This discussion is not an attempt to subtract importance from the often misogynist gaming culture that hinders women’s equal participating in gaming (Taylor, 2012), but simply to add

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the observation that digital gaming as a mainstream activity is connected to and affected by the pervasive structures and norms that govern our leisure time. On an additional note, the result that women are more prone to game with family members indicates that mothers' now mediate gaming with children, possibly refuting previous research indicating that fathers are the mediators of children's gaming in the home (Casas, 2001; Pasquier et al. 1998).

In the family gaming model (Table 4), rural gamers were more likely to game with family members than urban gamers. This was the only context in which territory correlated significantly social gaming. While it is often argued that differences between urban and rural living have disappeared today, we should be careful to completely disregard any lingering differences (Albrecht & Albrecht, 1996). Research on family structures has shown that families in rural areas in North America are more likely than families in urban areas to exchange goods and help exclusively with kin, whilst urban individuals are more prone to receive from and give help to friends (Hofferth & Iceland, 1998). The urban-rural difference observed here could be related to the fact that families living in rural areas are more dependent on each other for leisure activities and spend more time on common activities due to spatial distance to friends, while urban gamers are likely to have easier access to friends and larger friend networks in addition to family members. It seems, in this case, that digital technology does not eradicate the importance of territory even when the Internet allows for gaming regardless of physical distance. It is often argued that digital communication is breaking certain earlier restrictions between time and space (Giddens, 1990). Recently, however, researchers have argued that too much has been made of these processes of de-territorialisation and that the disappearance of place is exaggerated. Online spaces are linked to offline everyday life in many ways and different media contain different affordances to uphold these borders, as Christensen et al. (2011) have put forward. Digital gaming is clearly affected by offline social contexts.

The fact that dedication and time spent on games had no effect on family gaming (Table 4) further strengthens the results posing that digital gaming is clearly based in offline social contexts, as family gaming seems to bridge over different usage patterns. Gaming is clearly an established family activity. In a study of 16-year olds by Durkin and Barber (2002), it was reported that computer gamers had stronger family bonds than non-gamers, and even though they do not report on gaming companions, the results indicate that gaming can be a family leisure activity; something shared. Worth noting, however, is that of the group reporting gaming with family members, 62 percent had children of their own living at home. Due to limitations in the data we cannot know which family members respondents gamed with, but based on previous research we suggest that children living elsewhere, romantic partners, siblings, and parents are other potential groups (Taylor, 2006).

The expectation that social gamers would be younger was true for all social gaming except family gaming, which was not correlated with age, and gaming with strangers, where an interaction effect was discovered between gender and age. The results indicated that women are more prone to game with strangers as they grow older, whilst men are less likely to do so, although men gamed more with strangers overall. Previous studies have shown that women start gaming online later in life and so tend to be older than men (e.g. Yee, 2006). The different recruitment processes (Yee, 2008) to online gaming, where women are often introduced by romantic partners, could be a cause of this. There may also be less social stigma

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attached to the activity for women once they pass into a certain stage of adulthood. However, it is also possible that women involved in online gaming prefer gaming with friends and family rather than strangers due to the social climate of gaming culture. Certainly more detailed studies on the subject are needed.

With these results it is plausible that we are observing a combination of a life-stage and a generation effect on social gaming in general, although we would need a longitudinal sample to fully test this. Social gaming changes over life stages at the same time as it is still progressing to older age groups. The fact that having children decreased gaming with both friends and strangers but increased gaming with family supports this. This is probably also the reason that having children, contrary to expectations, did not affect social gaming in general. It is likely that having children both has a positive and a negative effect on social gaming dependent on social context, and that these effects mediate each other, giving the appearance of no effect in the model (Table 3). Though the average age of digital gamers is rising it is still significantly lower than for non-gamers, while the average age for social gamers in the sample is even lower, at 30 years old (Table 1). Younger and older gamers still express very different gaming patterns even if this is likely to change, and the decrease in social gaming with age will probably plateau eventually as gamers continue to grow older.

The results present results from a simple random survey sample and tested expectations from previous research. The results therefore offers new insights into social digital gaming and offers many conclusions which could be explored further with in-depth qualitative sampling, i.e. how does gaming change in character as gamers get children of their own or how come women are perceived as being more social gamers while this empirical data rather the displays the opposite. With the representative sample used in the present study, 42.5 percent of respondents engaged in digital games, and of these many gamed together with others. However, it should be remembered that this sample looked at those from age 12 and up, had we measured only those up to 65 years old the number would have been much higher. This study suggests that when gaming is this prevalent, using simple random samples are an effective way of studying gamers.

Conclusions

Using a representative sample, this study has explored social gaming habits and structures. Results both support and refute knowledge from previous research. Social gaming in general was first investigated and thereafter divided up into three social contexts for gaming, gaming with friends, with family, and with strangers online. The different gaming contexts were shown to be predicted by different variables and so representing quite different social gaming situations. Family gaming remained steady over different ages and was not affected by either time spent on games or dedication to gaming. Previously, gaming was an activity for children and adolescents (Griffiths, 1991) and acquiring games into the home were mostly driven by children (Hall et al. 1995). Many gamers of today have grown up with the activity and are now passing it on to their children. Children as young as three are now being introduced to digital games and the Internet by their parents (Findahl, 2011). The study shows that digital gaming is an established leisure activity engaged in by a substantial part of the sample and also an established everyday family activity. Still, social gaming was more common among

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younger gamers and both a generation effect as well as a life-stage effect could be seen, indicating that social gaming still has to become established as an activity among the older generations. Social digital gaming here takes different forms and, as is clear with other leisure activities, meaning is shaped in the context of use (Kelly, 1983). We should not forget, moreover, that much social interaction around games take place outside actual gaming, e.g. talking about gaming (Kallio et al. 2011), and so were not measurable in this study.

More importantly, this study raises questions of the 'proper' ways of spending leisure time where issues of class and gender function as structuring mechanisms. Contrary to expectations, male gamers are shown to engage more in social gaming than female gamers and higher social class was shown to predict social gaming among gamers. A complex picture of gendered relations and gaming is shown with an interweaving of fragmentation of leisure time as well as cultural boundaries surrounding not only gaming but leisure as a whole. This structures how gaming is practised by men and women as well as across class lines. Without a representative sample these results would not have been possible and this study calls for more such studies investigating digital gaming.

This study shows that we need to separate different social gaming contexts. Not only according to number of participants or game platforms used, as has been in focus so far, but moreover according to the relational status of gaming companions. Social gaming is not a united a category anymore, if it ever was, and more fine grained analyse are necessary. Furthermore, this study demonstrates how digital gaming adapts to life rather than the other way around. As gamers grow older and have children of their own the family becomes more important as a social gaming context and gaming with friends less so. Investigating social digital gaming shows us how digital technology is being appropriated and integrated into everyday routines; gaming becomes what we make of it. Even though technology has often been seen as an intruder into the sanctity of the home (Lie & Sørensen, 1996), this study rather shows how gaming becomes part of everyday life as gamers shape usage to fit their lifestyles.

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Endnotes

ⁱ Weak social ties provide links between acquaintances and connect more tightly knit groups to others.

ⁱⁱ Bridging social capital largely corresponds to weak social ties and are said to connect relative strangers and to widen individuals' social network.

ⁱⁱⁱ Assuming that respondents of a certain age are more likely than others to have children living at home, interaction between age and children living at home was tested for. No interaction was discovered, however.

^{iv} The question asked of the respondent is, "*Do you consider yourself to be living in a town or in the countryside?*"

^v The individual categories were so small that it was decided to pool them. E.g., in Sweden the dual-earner system (both partners in employment) dominates and therefore very few men and women are full-time home makers (Korpi, 2000).

^{vi} It is notoriously difficult to categorize games by genre and there are no accepted standards (Mortensen, 2009). The fifteen chosen genres were aimed at capturing as many types of games as possible so there is some overlap. To make up for any potential genres left out, an alternative for 'other' was added with a free text option. These were manually coded into a corresponding genre where applicable. The rest were excluded due to their unclear nature. The genres were chosen from the ones most commonly used today (Classical games; Social network games; Casual games; Web-browser games; Massive Online games; Strategy games; First-Person Shooters; Point and Click and Puzzle games; Role-Playing games; Simulation games; Party Games; Learning games; Racing and sports games; Adventure games).