

Parental Mediation of Digital Gaming and Internet Use

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ABSTRACT

In this study the focus is set on parental rules for digital gaming and Internet use. First a review of the field is presented followed by analyses of adolescents' media use and parental strategies for regulation. Data was derived from a Swedish survey of parents—predominantly mothers—of adolescents aged 9-16 complemented with data from a separate survey of adolescents aged 9-16. Analyses are presented using gamma coefficients for bivariate correlations and linear regression models for multivariate analyses.

We conclude that parents in this study are involved in their adolescents' gaming and Internet by restricting access to these media. Boys and young adolescents are controlled more than girls and older adolescents. Mothers made use of restrictive mediation more than fathers. Parents harbour quite negative views on gaming which might interfere with a more active role of parents in mediating their children's gaming.

Keywords: game reception, parents, adolescents, mediation, restriction(s), co-playing

1. INTRODUCTION

Digital gaming and the Internet form important arenas for contemporary life and have big impact on the developments of our social worlds [1]. The home is one of the prime places where we use these technologies and with the introduction of the personal computer and easy-to-use operating systems, gaming consoles and (later) the Internet, the media landscape 'at home' has gone through extensive changes [2]. Today many engage in digital games [3] and especially households with children more often than others have access to these types of new technology [4]. Providing access to the Internet and computers for children is often considered valuable for children's future [5], in a world heavily reliant on these technologies for both our work and social lives [6]. In parallel, parents are often concerned about the mediation of their children's gaming [7]; what to forbid and what to encourage? Most often studies focus on children's and adolescents' use of media and more seldom on how parents perceive these technologies in a family context [4].

Understanding how parent mediate and think about digital gaming is important if we are to understand the role and reception of gaming. Gaming today is certainly transforming into a mainstream pastime, yet, gaming as an activity is still confronted with serious concern from media and NGOs. Looking at parental mediation offers a window into this conflict that still surrounds digital gaming. Aiming to understand the role of digital gaming today our study focuses on parents' mediation of digital gaming and Internet use in the home and their views about these media. The study uses the definitions and categorization of mediation strategies from Nikken and Jansz [8], including restrictive and active mediation plus co-playing/using. Restrictive mediation includes setting time limits and vetting the content of media. Active mediation includes discussing media as well as evaluative and instructive guidance. Co-playing/using consists of engaging with technologies together.

We focus on digital gaming but have also considered Internet use, as the Internet is often used for gaming. Games or digital games here refer to all types of computer/console/handheld digital games.

1.1 Sweden

Sweden is often considered a forerunner when it comes to digital technology. Digital games have a strong position and the country has one of the world's most widespread home-based Internet use—nationwide 89 percent; in the ages 12-64 over 95 percent [9]. Digital games have a large penetration in Sweden which is one of the top countries in E-sports and also hosts the world's largest LAN (local area network), *Dreamhack*, with over 13 000 visitors in 2010. The Swedish context could therefore inform us about a situation with an extensive use of these technologies.

2. BACKGROUND

Early digital games like *Pong* [10] were not aimed at a specific market, after a backlash for digital games at the beginning of the 1980's, the release of the Nintendo Entertainment System by Nintendo in Japan revitalised the stagnant game market. They made games truly popular, this time aiming at a younger target group than before in an attempt at finding a stable market. Later, the arrival of the CD-ROM and the coming of the Internet introduced many new ways of gaming [11]. Even though digital games today are aimed at both adults and children and there exists many genres and play styles digital games are still often perceived as an activity for children, foremost boys.

In the last few years, gaming has become part of many people's everyday media use. Interview data report that in the UK 37% of

those between 16 and 49 were active gamers, defined as playing a game at that moment on either a console (stationary or portable) or a computer. The medium age for gamers was 33 [12] and in the U.S it was 30 [13]. Of active gamers 47% are women and 53% men [13]. In Finland, 36% of the young group (16-29 year olds) and 23% of the middle aged (30-49 year olds) were active gamers. In Sweden, survey data has shown that almost half of all Swedes engage in some form of digital games and of gamers, more than 50% game together with others [14]. In the U.S., 49% of households own a dedicated gaming console [13]. Digital gaming has since the 1990's gone through several changes—from subculture interest to mainstream culture [15]. Games today are aimed at a wider audience than ever before [3] and constitute a widespread media with games played on consoles, computer and mobile phones.

Online gaming often involves social interaction between gamers in these online spaces. This aspect of online gaming and Internet use separates these activities from 'older' activities that parents had to mediate for their children, even though these activities build on 'older' media [16]. There are, however, new conditions linked to the specifics of online gaming that affect the users and at the same time have altered our social landscape [1]. Changed our access to information and through its aspects of person to person connectivity has deeply impacted on many aspects in our lives [17].

The debate about the dangers of the Internet and of gaming has, for many years, been ongoing and discrepancies between parents' and children's perception of dangers attached to the new media have been pointed out [16]. What parents think and how they attempt to handle new media is important to consider in understanding the role of digital gaming today. The role of the family is changing and so are gaming and Internet use [18]; parents cannot as easily as before safeguard their children's experiences and negotiate their social encounters [19]. When children play online with people from all over the world and in different time zones while sitting in their own bedroom, some basic conditions for social interaction are altered.

Giddens [20] introduces three concepts of relevance for contemporary life: the separation of time-space, disembedding, and social reflexivity. The separation of time and space is the prime condition for disembedding which lifts out social relations from local contexts. Digital media form part of a now global nature of social interaction; what Giddens call time-space distanciation [21]. Meaning the 'stretching' of social systems across time and space, i.e. "the expansion of interaction over space and its contraction over time" [21: 40]. Today we can read or watch news from the entire world online or play online games in real time with someone residing on the other side of the globe. In disembedding, various mechanisms such as the Internet help to lift out activities, such as playing a game, in an abstract or online form that once were embedded in particular material or physical contexts. Lastly, social reflexivity implies that people today must filter available information in order to choose the information that is relevant for them.

Disembedding mechanisms lift out social relations from their specific arenas and create new space-time constellations; re-embedding [20]. The family is just one arena in society where these processes are at work, but an important one. Many gamers develop—in parallel—contacts all over the world or reconnect

and strengthen existing social ties. In the face of these new challenges and the complements to an 'earlier' social life that gaming allow, how parents mediate and handle this activity in the home will tell us much about the state of gaming today. Moreover, how the activity is received in a mainstream setting and the state of domestication—how a technology becomes 'tamed' and integrated into everyday life [23].

3. PREVIOUS RESEARCH

3.1 Restrictions and Control

One way for parents to put restriction on digital gaming is to decide on where in the home the media console is placed [2]. When consoles/computers are placed in common areas parents can more easily impose restrictions [24]. Parents sometimes argue that computers and game consoles keep children safe indoors [3, 25]. Providing them with such entertainment, therefore, is considered a good parental strategy.

Parents in a European study of 12 countries [4] tended to moderately control their children's activities; more parents limited time spent on gaming (48%), or who their children played with (44%), compared to those who controlled type of games (28%). In the UK, one youth out of two said that their parents let them play games as long as they wanted; even more claimed that they were allowed to play any kind of game. Fewer (39.3%) said that their parents forbade them to play online with people they did not know. Young people did report that they encountered people whom they did not know within games spaces, often when seeking tips related to the game in hand. Internet based gaming seemed to be seen by the parents as a marginal activity, and this was the reason for ignoring it [4].

Another study comparing Flemish, French, Italian and Swedish children [5] focused on children's gaming as 'a bedroom culture', where children gamed on their own, in the privacy of their own room. The authors compare children's gaming in the four European countries vis-à-vis parental rules and parental attitudes. The computer was for these children much less controlled than consoles. Parents shared the belief that computers were important to the children's future also when used for gaming. The authors claim that "The same game might be controlled when played on a video console, and not controlled when played on a computer." [5: 515]. Also, the more a child was using a medium the more that medium was controlled. Girls were more controlled on the phone than boys, who were more controlled when using other media. Control also decreased with the age of the child for TV use, but for other media such as gaming there was no such age difference. However, in a qualitative interview study more control over Internet use was issued for younger children [18].

Fromme [26] discusses the role of parents in relation to gaming from reports by German children where it was made clear that they did not expect their parents to be sources of information in relation to their gaming—mothers even less than fathers. Parents in this study were mainly involved in their children's gaming to the extent that they paid for the game and set limits for usage, especially with regard to time spent and limiting violent games. Fromme emphasises the negative involvement of parents in contrast to a possible positive role, which would involve e.g. co-playing. In another study talking to children about their media

use was the parenting technique that showed the most fruitful in reducing the risk for cyberbullying [19].

3.2 Gaming Parents

Some studies differentiate between parents who are gamers and parents who are not. Yee [27] surveyed 314 parents with at least one child under 18, who themselves played online games. The survey comprised questions on considered risks from the parent's point of view, considered benefits from the parent's point of view, and advice to children gaming online and narratives of parental reactions. Overall, these parents were most concerned with content and less with time spent. They also saw more benefits than risks and emphasised that playing together improved the benefits and reduced the risks. Yee summarised the third dimension as setting limits and expectations, keeping an eye open, learning about the game, keeping computers in public areas, maintaining a balance of activities, and last but not least, the importance of parental involvement—akin to reports in the study by Fromme [26].

In a Dutch study by Nikken and Jansz [8], gaming parents were more apt to co-play and use other mediation strategies that the authors identify; restrictive mediation and active mediation. Among all the parents researched, restrictive mediation was the most widely used and co-playing the least. In another publication [7] the authors describe how parents who played games themselves had no interest in the PEGI-ratings (suggested age-limit for games; Pan-European-Game-Info: www.pegi.eu) and familiarity with videogames was related to a more positive view of the effects of gaming. Gaming parents were also more likely to apply all of the three mediation strategies, restrictive/active/co-play, regardless of their views on gaming effects. Parents with limited experience of gaming held stronger views on the negative impact of videogames and showed more interest in PEGI-ratings. This was also associated with restrictive mediation, less with active mediation and not at all with co-play. The same study showed that the child's age in particular determined the parents' degree of mediation. Parents of younger children more often used all mediation strategies.

Generally, parents have the disadvantage of age, not having grown up with digital games. Most parents encountered computer technology first via work situations [28] and do not always understand the technologies that their children use [18]. This does not mean that all parents are unfamiliar with gaming and other digital technology. Many parents (and also grandparents) learn from their children [29]. Even if parents and adults today are avid users of digital technology there seems to be a difference in what they use it for. While adolescents foremost see the computer as a tool for entertainment, adults mostly use it for instrumental purposes [25].

3.3 Mothers, Fathers and Gaming

Gaming technology is often considered to be a male interest [30], based on negotiation within the family that give or decline access to gaming time [30]. Men tend to have greater access to gaming at home as well as being considered to be the family experts. Women adjust their gaming time after household tasks—men do not [31]. In some studies, e.g. Casa's [32] study of Spanish families, mothers proved to be less involved in children's gaming, compared with fathers. In the study by Nikken et al. [7], however, mothers co-played as much with their children as the fathers did.

Another study [33] investigating parental mediating strategies as well as congruence of attitudes within the family to the strategies concluded that parents are indeed involved in children's media use. Younger children and girls were more subjected to mediation and mothers exerted mediation more often than fathers. Pasquier et al. [5] also focused on differences between mothers and fathers and here mothers utilised more control than fathers—except over computer usage. Fathers were also seen as the family member with computer skills. Differences in knowledge and understanding between parents and children have been seen elsewhere [23] and children are sometimes seen as the experts in regard to digital technology—in comparison with parents—even in other contexts [34]. In a study about children playing the online game *World of Warcraft* [35] the children told of conflicts with parents based on what the children perceived as parents' ignorance about games and their meaning. One example was a girl whose father thought she and her sister wasted their time playing while the daughter argued that his online activities were 'as useless'; in this case buying and selling on auction sites [36].

A UK based survey [4] reports that 31% of both parents and children responded that in the family the father knew most about computers, while 29% of the children and 27% of the parents named a child, and 16% of the children and 12% of the parents the mother. The view of children as being the knowledgeable ones most often reflected households where computer literacy was generally low and there was no computer in the home. In a Swedish study men in general ranked themselves higher than women did on perceived computer proficiency [9].

4. DATA AND METHODS

Previous research leads us to the following hypotheses:

- H1: Frequency of use will increase parental mediation*
- H2: Media literate parents will use more mediation*
- H3: Positive views on media use will decrease mediation*
- H4: Active and restrictive mediation will be negatively correlated*

In spring 2008, a survey was posted to 2000 parents of adolescents in Sweden. The sample, representative for the age group of children, was divided into two and the survey sent to guardians of 9-12 year olds and guardians of 12-16 year olds. The survey aimed at mapping of adolescents' media use and experiences. It was initiated by the Swedish Media Council [37] and carried through by ARS Research AB. The dropout rate was comparatively low; 31% [37]. The survey was addressed to 'the guardians' of the child, but in most cases (77.7%, see Appendix, Table 1) it was the mother of the child that filled in the questionnaire. There is also a gendered tendency so that fathers significantly more often filled in boys' questionnaires while mothers more often did so for girls. Parental gender has therefore been controlled for in all analyses. Most parents were in their early 40's and native Swedes (85%). There is only scarce information on the socio-demographics of this group of respondents but from the information available (Swede/non-Swede by birth, age, sex) the group does not deviate severely from the general group of parents of adolescents, with the exception of ethnicity, where Swedish-born are over-represented. In parallel to the survey of parents, a similar survey was directed to adolescents. As with the parental group, this respondent group was divided into two; 9-12 year olds and 12-16 year olds. The

surveys were sent out to ‘the guardians’ of the adolescents but the questionnaire was directed solely towards the adolescents. The dropout rate was similar to the rate for the parental survey (30%). The socio-demographic information is as scarce for the adolescents (age, sex, parents’ age, sex and Swede/non-Swede by birth) as for the parents; but the sample of adolescents does not, from the information at hand, deviate severely from the general group of adolescents, with the same exception as for the parental group—under-representation of non-Swedes by birth. Data from the adolescent survey groups has been used for some comparisons in this paper. Note however that the adolescents in the sample are not the children of the parents in the complementary survey. Both samples were drawn independently.

The aim of this study was to analyse data from the parents, covering aspects of their adolescents’ media use and parental control over such use. The main question is how control, or mediation, can be explained, i.e. which parents practice control and develop rules in this area? What kinds of regulations are used? When it comes to gaming and Internet use; what is the relationship between active and restrictive mediation? Are parents with more negative ideas more control oriented than other parents? Do parents’ own experiences matter for how they exercise control?

The dependent variable in the regression analyses was ‘restrictive mediation’. Six questions (see Table 1) from the survey, measuring the practice of control regarding use of the Internet and computer/console gaming in length of time allowed, how late in the evening, and the nature of activities (what sites, kinds of games, etc.) were used to build an index of low to high degree of restrictive mediation (Cronbach’s alpha=0,567).

As independent variables we chose to include parental media habits (‘What do you do yourself on the Internet?’), a scale of items measuring attitudes to adolescents’ gaming (‘makes the child passive’, ‘is a way to socialise’, ‘is addictive’, etc.; see Table 5), and two questions on parental interaction in the adolescents’ media use (‘How often do you talk about...’, ‘How often are you with the child when he/she is gaming/on the Internet’).

As control variables for the analyses the following were used: parental gender, adolescents’ gender and adolescents’ age. We expect gender related differences among parents in the practice of mediation and we expect (even though previous research is inconclusive) parents of older adolescents to practice less control. Descriptive analyses were made using gamma coefficients for bivariate correlations and linear regression models for multivariate analyses.

5. RESULTS

Most parents who answered the survey were mothers, as presented in Table 7. Most parents were in their early 40’s and 85% of them were born in Sweden. Almost all parental respondents used the Internet. Only one out of ten fathers and even fewer mothers played games; i.e. had own experiences from digital gaming. The group of parents active on Facebook or other online social arenas was only slightly larger.

Like most Swedes, the adolescents were highly experienced in modern media use. According to the parents, most (86.4%; see Table 7) had their own mobile phone and almost all older

children regularly used the Internet. In their free time, more boys than girls were engaged in sports as well as computer based activities, except for chatting, which was more usual among (young) girls. Not surprisingly, almost all watched TV at least weekly (see Appendix, Table 8). The use of the Internet increased with age for both sexes, while computer gaming was less usual for older girls and console gaming was unusual among all girls.

Table 1: Parental mediation of media use (%)

Restrictions on Age	boys		girls	
	9-12	12-16	9-12	12-16
Time length Internet	76.9	64.9	74.6	58.9
Time length gaming	79.8	67.1	71.5	52.3
Latest time Internet	94.1	91.9	90.4	85.8
Latest time gaming	96.3	92.9	91.0	85.8
Accepted sites Internet	92.3	82.1	92.9	87.0
Accepted games	91.7	64.0	86.5	60.8

In most families, gaming and Internet use among children was regulated to the extent that a maximum time length, a latest time in the evening and/or a specified scope of allowed programmes/games/sites was defined by the parents (Table 1). One out of two parents used all three instruments for media use control. Mothers were more inclined to use restrictive mediation tools, compared with fathers. Boys and young adolescents were controlled more than girls and older adolescents, in contrast to previous research where this was true for TV but not for Internet and gaming.

Table 2: Linear regression model: parental mediation (index) and adolescents’ media use

Model	B (un-stand.)	Std. Error	Sign.
(Constant)	5.151	.255	.329
Respondent’s sex (woman)	.479	.110	.000
Adolescent’s age	-.174	.029	.000
Adolescent’s sex (girl)	-.258	.111	.020
Frequency computer gaming (daily–never)	-.062	.034	.067
Frequency console gaming (daily–never)	-.036	.034	.290
Frequency watching TV (daily–never)	.027	.085	.746
Frequency watching video/DVD (daily–never)	.042	.045	.355
Frequency on Internet (daily–never)	.177	.044	.007

Adj. R² = 8,3%

We wanted to see whether our indicators could explain the level of parental regulation. In the linear regression analysis (Table 2), level of parental control was related to the sex of the parent (mothers exercise more control), the sex of the child (boys are more controlled) and age (the younger are more controlled), but not to the children's level of use (e.g. gaming), with one exception. The more an adolescent used the Internet the more this use appeared to be controlled; only partly confirming *H1*, which stated that frequency of use would increase mediation.

Parents who were themselves active Internet users (downloaded information, played games or gambled online) exercised more control over their adolescents' use of the Internet compared with other parents (Not presented in tables). We interpret this as support for *H2* (stating that media literate parents would use more mediation), that parents actively involved with gaming and the Internet and hence more media literate, mediate Internet use more compared with other parents.

We assumed that parents holding a positive opinion of gaming would be less inclined to set limits for their children's gaming. But when tested in a linear regression analysis (Table 3, control for respondent's sex, adolescent's sex and age) only one of the negative attitudes related to degree of control, again only partly confirming our hypothesis *H3*, which stated that positive views on media use would decrease mediation. Parents who considered gaming addictive exercised more restrictive mediation than other parents.

Table 3: Linear regression model: parental mediation (index) and parental opinions related to computer/console gaming

Model	B (un-stand.)	Std. Error	Sign.
(Constant)	5.523	.870	.000
Respondent's sex (woman)	.619	.257	.017
Adolescent's age	-.169	.054	.002
Adolescent's sex (girl)	-.409	.201	.043
Computer/console gaming: (agree, partly, do not agree)			
-is a source for learning	-.243	.245	.321
-makes child passive	-.054	.263	.838
-is a way to socialise	.384	.292	.191
-is addictive	-.487	.208	.020
-stimulates child's imagination	-.137	.292	.640
-is a waste of time	-.001	.311	.997
-leads to bad health	.316	.277	.255
-is fun and relaxing for child	-.012	.255	.963

Adj. R²= 7,3%

Because of the above results we decided to test for different internet activities to see whether the choice of activities on the

Internet related to the degree of parental restrictive mediation (Table 4, control for respondent's sex, adolescent's sex and age).

Table 4: Linear regression model: parental mediation(index) and adolescents' activities on Internet

Model	B(Un-stand.)	Std. Error	Sign.
(Constant)	5.704	.182	.000
Respondent's sex (woman)	.409	.107	.000
Adolescent's age	-.203	.029	.000
Adolescent's sex (girl)	-.354	.096	.000
Preferred activities on the Internet by adolescent (max. 5 choices):			
-chat	-.104	.109	.341
-uploading own texts and pictures	-.494	.166	.003
-e-mailing	.167	.106	.116
-gaming	-.262	.098	.007
-Lunarstorm, Playahead, etc.	-.035	.102	.732

Adj. R²=8.3%

Uploading texts and pictures to the Internet was more controlled than other activities. Somewhat unexpectedly and contradictory to this, adolescents' chatting and activities on community sites such as *Lunarstorm* or *Playahead* (Swedish/Nordic Internet communities where some of the main features are uploading texts and pictures and making contacts) was not related to degree of control. Communities are online spaces that are very prominent in adolescents' Internet use [16]. Some, like *Bilddagboken*, focus solely on uploading pictures and most have functions for this. It does seem contradictory that these communities, where the activity of uploading texts and pictures is one of the main features, would be less focused upon as objects for control than the activities themselves.

We performed a simple bivariate correlation analysis using gamma to test the relationship between active and restrictive mediation. Degree of parental control, i.e. using restrictive mediation tools, was related to both co-play and media use discussions (Table 5) confirming *H4*, which stated that active and restrictive mediation would be negatively correlated.

Table 5: Correlation coefficients: Active/restrictive mediation strategies

Parents and adolescents:	gamma	Sign
talk about computer gaming ¹ *parental control of media use	-.358	.000
talk about Internet use/experiences ¹ *parental control of media use	-.325	.000
Play comp./console games together ² *parental control of media use	-.256	.000
On Internet together ² *parental control of media use	-.231	.000

¹: No, never, occasionally, sometimes, often

²: Never, seldom, once a month, once a week, 3-4 times a week, every day

Parents who often talked to their adolescent about gaming or Internet use practiced less control compared with other parents. Likewise, parents who co-played or used the Internet together with their adolescent less often exercised control compared with parents who did not. We interpret this as indicating significance in parental media-use literacy. The need for control, or restrictions, of adolescents' media use seems to be less prevalent among parents taking part of the children's gaming, i.e. practising active mediation.

A closer look at how parents and adolescents talk about media reveals that parents to a larger extent than adolescents feel that they talk about gaming and Internet use (Table 6). The question was posed in both surveys; the parental and the adolescent. The dissimilarity is obvious. It is possible that the discrepancy can be explained by lack of perception on the part of the adolescents. It may also be that both parent and adolescent responses are coloured by social desirability, that is, parents aiming at presenting a more 'firm' parental role than is really the case and adolescents aiming at presenting a more mature and independent role.

Table 6: Talking about, adolescent & parental survey (%)

'Do you talk with your child/parent about'	According to:	
	Adolescents	Parents
Internet (yes: yes, sometimes)	47	73
Gaming (yes: yes, sometimes)	43	72

Further, from the survey data we see that while parents use the Internet for instrumental purposes (find information/buy goods/e-mail), young people use the Internet foremost for social purposes and least of all for instrumental reasons (not in the tables). Even though both groups, parents and adolescents, use digital technology in their everyday life, they spend their time on quite separate activities.

In data from the adolescent survey we see (not in the tables) that while 16% of the respondents most often use the Internet with friends, the rate for Internet use 'most often with parents' is only 3%. Turning to computer gaming, one out of four (25.5%) play most often with friends while only 0.5% play games first hand with parents. For video games almost half the group of adolescents (42.5%) play most often with friends and only 1.5% with parents. Adolescents game firstly with friends and not parents, although the most common place to use these media is in the home. Almost all the adolescents in the survey, 98%, played digital games in their own homes.

6. DISCUSSION

The main focus of this study was to understand how parents mediate digital gaming and Internet use in the home and their views about these activities. The practice of restrictive mediation was widespread; one out of two parents used all forms of restrictive mediation included in the survey. When digital technology enters the home, as is the case in most Swedish families with children, issues of control over and access to these technologies becomes an important area of negotiation in the

family [e.g. 34]. The embedment of these activities and the access to social interaction they offer in the space of the home has the opportunity to disrupt the roles and practises of the family. The many perceived hazards of gaming are apparently very much present for the parents in this study and they answer by restricting use in different ways. In contrast to this, previous research has shown that most of these restrictive mediation strategies have little or no effect on e.g. preventing cyberbullying [19] which constitutes one of these online dangers perceived by parents. The high levels of restriction might in part reflect the fact that this was a survey in Sweden where gaming and Internet use among adolescents has been publicly problematised and debated. Most parents in Sweden are repeatedly informed, by schools or NGOs, about the many hazards youths are apt to be confronted with when gaming or being online.

High Internet usage was the only activity that prompted an increase in parental control. Previous studies have indicated a positive relation, so that parents with own experiences from e.g. gaming were more control oriented than others. This was confirmed in the present study, where parents who had more experience and used the Internet more also controlled their adolescent's use to a larger extent. In line with previous research [33], restrictive mediation of Internet use and gaming was related to age; the older the adolescent the less restrictions were applied. The most restricted activity was uploading pictures or texts upon the Internet. In contradiction to this: being active in a community was not controlled to the same extent even though uploading pictures and texts is a main activity in many communities. This inconsistency found in parental views on adolescents' media use can be interpreted as an indicator of parents not being informed about their children's Internet activities; it suggests a knowledge-gap where parents are not aware of what their children are doing online. Parents use digital technologies in a different way from their children; parents had a more instrumental approach whereas the adolescents used these technologies foremost for fun and social reasons. Parents' views about what constitutes useful media use often differ from their children's views, as was shown in a study about youth involvement in *World of Warcraft* [35].

Parents and adolescents had very different ideas about how much family members talk about gaming where children reported much less discussion than parents did. Adding to this, children most often gamed in the company of peers rather than their parents even though gaming was an activity often taking place in the home. The disjunction between parents' and adolescents' reports on whether the family talked about gaming further lead us to question the value in restricting usage rather than talking about or co-playing. Parents who did use active mediation tools, often talked to their children about usage or co-played with them, used less restrictive mediation than other parents; potentially indicating a greater trust of their children's activities.

The frequency of adolescents' computer or console gaming (or TV or video watching) had no impact on parental inclination towards restrictive mediation. Parents who believed that gaming was addictive did, however, use more restrictive strategies. We expected parents with more positive attitudes to adolescents' media use (e.g. online gaming) to be less inclined to restrictive mediation. But parents' positive views on gaming did not affect the level of restrictive mediation. In our data we have no way of distinguishing which types of games were played. It is possible

that those parents with at least basic knowledge of digital games would distinguish between different types of games, e.g. time consuming, violent, social and so on, as needing more/less/different mediation strategies.

In our study, girls were less controlled than boys. Traditionally girls have been more tied to the home, or the private sphere, with a more limited access to social interaction [38]. Digital technology allow for more extensive social interaction to take place *in* the home. Through the processes of dis- and reembedding, Internet use and online gaming break some earlier boundaries that previously made the home a more private, closed environment. Even though everyday life today holds more opportunity of equality for women [20], women still have a more limited access to public spaces [38]. Maybe girls are allowed more freedom to ‘socialize’ in online gaming and Internet use and there reembedded social relations and identities?

7. CONCLUSIONS

In conclusion, Swedish parents are quite involved in their adolescents’ gaming and Internet use, yet, mostly only to the extent of restricting access to these activities. In line with the discussion in the Dutch studies by Nikken and Jansz [7; 32], parents practising active mediation and co-play were less inclined to use restrictive mediation. Rather than being solely related to own experiences or to the children’s degree of use, parental control is also of course related to the relationship between the parent and the adolescent. A greater involvement of the parent is related to more mediation of the type Fromme [26] and Yee [27] call for, namely active and participative involvement. This more positive involvement in children’s gaming and Internet use might give a better mutual understanding of gaming and make misunderstandings—as previously discussed here—less prevalent.

Digital gaming is still a sceptically received activity by parents and even though the concept of addiction to games and Internet use has been criticised [39; 40] it is still something, at least Swedish parents, believe in; which affect how they see their children’s gaming. While gaming certainly is on the way of becoming a mainstream activity, it is not there yet. Not even in a country of such high levels of gaming permeation as Sweden. Parents still harbour quite negative views on gaming which might interfere with a more active role of parents in mediating their children’s gaming. While many young today are engaged in digital gaming, parents still seem to be a group that are less engaged in gaming, even though digital gaming can constitute a family leisure activity [41].

Since this data was collected a significant change has occurred in children’s’ technology use. The rapid spread of touch-based technologies such as smartphones and touchpads has vastly decreased the age at which children can begin to engage in games [9]. While not widespread at the time of this survey it is likely that issues of mediation will be relevant for even younger children and this technology could have an effect on the views and practises of parents in relation to digital gaming.

Moreover, more research is needed on views and experiences among adolescents. As indicated in this study and in previous research [16; 26] children have little confidence in their parents’ media literacy and turn instead to their friends or unknown persons online for learning how to handle e.g. gaming. Do

parents who practice a positive involvement differ, in this respect, from parents who only apply restrictive control? Digital gaming is a prevalent and widespread activity and parents need to understand and take part in their adolescents’ use of these media in order to successfully negotiate their children’s media usage.

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10. APPENDIX

Table 7: Parents, their children, % and Mean values

Respondent's sex (m/f), mean age	22.3 /77.7	43/42 yrs
Respondents; Internet non-users (m/f)	3.7/3.5	
Respondents; Facebook etc. users (m/f)	12.7/10.0	
Respondents; gamers (m/f)	11.4/7.9	
Age of child: 9-12/12-16	48.2/51.8	
Child's sex: male/female	48.3/51.7	
Child has mobile phone (9-12/12-16)	86.4	(75.8/96.1)
Child's most frequent activities outside school: (five choices possible)		(age 9-12/12-16)
-Helping out at home	16.1/20.1	
-On the Internet	32.6 /64.1	
-Practicing sports	55.3/57.0	
-Reading books/ papers/ magazines	24.4/20.3	
-Doing homework	65.3/67.5	
-Playing computer games	39.7/34.0	
-Playing console games	27.5/21.0	
-Musical instrument practice	13.4/12.6	
-Watching TV/DVD/Video	48.1/46.4	
-Seeing friends IRL	70.9/57.2	
-Seeing friends online	5.9/16.7	
-With family	47.3/36.3	

Table 8: Children's media use (%)

Age	boys		girls	
	9-12 daily/daily or weekly	12-16 daily/daily or weekly	9-12 daily/daily or weekly	12-16 daily/daily or weekly
Watching TV	86.2/98.7	81.6/98.3	84.2/98.9	79.1/98.8
Watching video/DVD	3.8/56.6	5.5/55.7	4.7/58.3	4.5/63.0
Computer gaming	26.0/76.4	38.2/78.4	10.9/65.5	4.7/38.7
Console gaming	15.4/73.7	14.3/61.6	1.5/27.0	0.6/16.8
Internet use	25.3/73.0	62.1/91.0	24.3/72.9	62.1/93.3