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The Appeal of Unsuitable Video Games

An Exploratory Study on Video Game Regulations in an International Context and Media Preferences of Children in Germany

Governments all over the world have responded to the offer of violent and sexual-themed video games by inaugurating regulatory bodies. Still, video games with content that is deemed unsuitable for children are played even by young children. With a focus on the situation in Germany the aim of this paper is twofold. On the one hand, the current state of literature on the importance of age ratings for the regulation of video games is scrutinized. Therefore, the focus is on the German rating system by the Entertainment Software Self Control. This scheme is compared in particular to the American Entertainment Software Rating Board scheme and parallels with the Pan-European Game Information-system are drawn. On the other hand, results from an exploratory survey study on the preferences for video games among German 8- to 12-year-olds are presented, arguing that the preference for video games that are not suitable for them, is a widespread phenomenon in particular among boys.

In 1993, Senator Joseph Lieberman initiated a congress hearing on the proliferation of violent video games (Kent 2001:466). Since then, protecting minors from the confrontation with violent or otherwise unsuitable contents in video games has become a re-occurring public debate (Williams 2003). The video game industry and legislators around the world have reacted to this debate by introducing voluntary or state controlled licensing boards, regulating the access to video games to children and adolescents (Hymann 2005). The overall assumption is that minors should be protected from negative video

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game contents that could impair their development. Therefore, the distribution of video games is regulated by age ratings that should account for a child's development. Vendors are encouraged not to sell video games to children who do not fulfil the implied age rating and parents can use age ratings as a guideline for their decision making process (Nikken et al. 2007). Still, research does indicate that not only the usage of video games in general has increased, but also many young children and adolescents are using video games that are not suitable for their age. In the US, the recent PEW-Internet-“Teens, Video Games, and Civics”-study found out that 97% of teens aged between 12 and 17 played at least one form of video game (hand-held, online, computer, console). Among their favorite games, 50% of the boys named at least one game with a “Mature” or “Adult Only” ESRB rating indicated that the game was not suitable for the boys being interviewed (Lenhart et al. 2008). The latest annual KIM-Study “Children and Media” in Germany focused on children aged between 6 and 13. The study indicated that two out of three children who at least rarely use a computer have played a computer based game once a week. Their preference is on games suitable for all ages such as simulations (e.g. THE SIMS series) and sports (e.g. FIFA series). A rivalling German study states that 50% of all fourth graders (aged between 10 and 12) have played games that are restricted for 16 years olds or older (Möble et al. 2007).

With school shootings in Paducah or Littleton in the US and Erfurt or Emsdetten in Germany and their implied relationship with violent video games (Anderson/Bushman 2001, Zimmermann/Scholz 2007) in both countries, the national rating boards, the Entertainment Software Rating Board (ESRB) and the Entertainment Software Self Control (Unterhaltungssoftware Selbstkontrolle/USK) have been criticized by independent organisations such as the National Institute on Media and the Family or The Criminological Research Institute of Lower-Saxony (Kutner/Olson 2008, Höynck et al. 2007).

Despite this public controversy on the importance of age ratings for the protection of minors and some attempts (see following sections) to analyse the role age ratings play for the regulation of video game usage by children, few academic studies have focused on these issues. With a focus on the situation in Germany the overall aim of this paper is twofold. On the one hand, the current state of literature on the importance of age ratings for the regulation of video games is scrutinized. Therefore, the focus is on the German rating system. This scheme is compared in particular to the American ESRB-rating scheme and parallels with the Pan-European PEGI-system (Pan European Game Information) are drawn. On the other hand, results from an exploratory study on the preferences for video games among German 8- to 12-year-olds are presented, arguing that the preference for video games that are – based on the German USK-code – not suitable for them, is a widespread phenomenon in particular among boys. Implications for cross-cultural research are implied.

ESRB and USK schemes in comparison

In general, the regulation of video games in Germany and the U.S. (and in the rest of Europe and the world) follows a similar pattern, with exception in Australia and Germany where regulations could indeed lead to a legal ban on certain video games. The German USK scheme has become notorious among American publishers for this opportunity of legally banning video games (Kreimeier 1999). Banning a video game in Germany requires a cooperation of the independent USK board and federal agencies (Schmidt 2007). However, this is limited to few cases such as the controversial game *MANHUNT* (2003) or games that use Nazi-insignia. Often, slight changes in the representation can get a game rated and made available in Germany.

Hyman (2005) as well as Kutner and Olson (2005) give an overview on rating systems around the world. Questioned on the main differences between the US and Germany with respect to age ratings, Juergen Hilse, Permanent Representative of the Supreme Youth

Authorities of the Lander at the USK, states that “in America, sex and bad language seems to be the focus of discussion”; “here in Germany, violence dominates our concerns, and too much violence can get a video game banned” (Hilse in Hyman 2005). Legally, the regulation process of rating video games in Germany is based on Art. 2. Para. 2 Federal Law (“freedom of speech and the protection of minors”) and its consequences in the German Juvenile Protecting Law [Jugend-schutzgesetz/JuSchG]. The law was slightly changed in 2008, but since 2003 the formulation of the law, Para. 14 and Para. 15 states that video games must receive an age rating before they can be sold. This age rating is given either by a federal institution or a self-regulatory board such as the USK, which is since 2003 responsible for the process. The USK consists of members of social relevant groups, ranging from youth organisations, churches, state and federal institutions, and members of the video game industry. According to Para. 14 JuSchG five ratings can be given: without restriction (no), from age 6 onwards (6+), from age 12 onwards (12+), from age 16 onwards (16+) and adults only (18+) (Schmidt 2007; Hyman 2005).

The American ESRB was set up by the Entertainment Software Association (ESA) after the congress hearings on video game violence (Kent 2001, p. 466f) in 1994, and is considered a self-regulatory board of the video game industry. It uses six age-based ratings: Early Childhood (EC: suitable for children age 3 and older), Everyone (E: suitable for age 6 and older), Everyone older than 10 (E10+), Teen (T: suitable for 13 or older); Mature (M: suitable for ages 17 or older) and Adults Only (only for persons 18 or older) (Kutner/Olson 2008, Hyman 2005).

Three differences between the USK and the ESRB systems are apparent. First, both ESRB and the Pan-European PEGI, which does not apply to Germany, rely on the use of content descriptors that act as guidelines for parents on how the age rating was conceived. Content descriptors for the ESRB include for example “fantasy vio-

lence”, “sexual violence”, “violence”, or “lyrics” and “strong language” (Kutner/Olson 2008:166). The German scheme does not provide comparable content descriptors. Second, whereas ESRB and PEGI decide on age ratings, depending on self-report of publishers through questionnaires, the USK has employed full-time play-testers that present crucial scenes to the rating board. The third difference can be seen in the handling of “+Adults Only” content. As Hyman (2005) states: “Unlike in the U.S., adult games (with M and A ratings) seem to have no stigma attached to them since they are readily available for purchase by adults at German retailers.”

Indeed, an 18+ rating in Germany means that a game is available at all retail stores whereas in the US, large retailers do not sell AO contents. However, games with extreme violence are denied a USK rating, which means that these games and only these games can be analysed by the federal agency the Federal Control Board for Youth Endangering Texts (Bundesprüfstelle für jugendgefährdende Schriften/BPS). This institution can put a game that is “considered harmful – i.e., prone to cause “confusion or disorientation with respect to social behaviour or ethics” (Kreimeier 1999) – on the “index.” The so called index is a list of media products that cannot be sold in a store that is accessible to minors. This process is often seen as legal “banning” (Hyman 2005). Still, outright legal bans in Germany only occur when a video game is confronted with Criminal Justice Law. Here, sections 130 and 131 indicate that the glorification of violence and the display of Nazi symbols may lead to a media product, including video games, not to be distributed to anybody, regardless of his or her age. Thus, while on the one hand, “adults only” content seems to be treated more liberal in the German regulatory system, for certain games – in particular those that are denied a USK rating – the regulation seems to be stricter than in the US or other European Countries that have opted for the PEGI system.

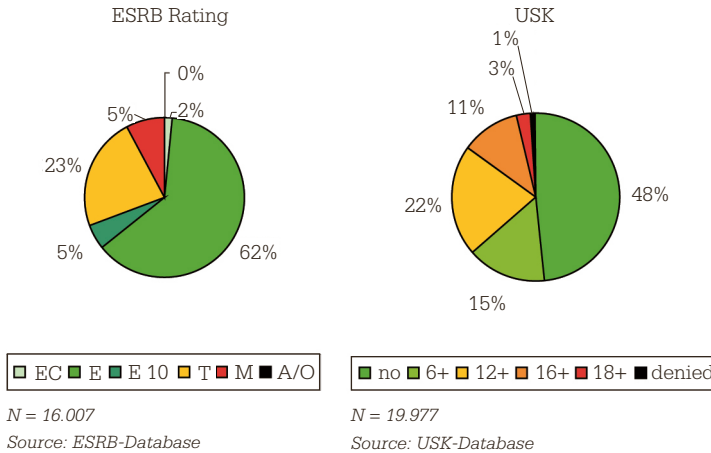


Fig. 1: Age-Rating Distribution ESRB and USK

In effect, the results may vary between individual games, based on the indicated focus on violence in Germany and sexual themes in the US. Overall, in both systems the overwhelming number of titles is accessible for children at the age of six. However, where the USK ratings seem to be taking a much stricter approach is in regulating video game usage of children under 13. 14% of all games in the USK are deemed not suitable for children less than 13 years old, compared to 8% in the ESRB system. This is partly due to the different outline of the age ratings for teenagers in both systems, but this practice also hints at a tendency in the German system, to further regulate the access to video games for adolescents.

Beside this descriptive comparison of the two age rating systems and their outcomes, it needs to be scrutinized how academic research has already addressed the use of age ratings for the regulation of video games.

State of research on the importance of age ratings for video games

The reason, why the regulation of video games is of particular importance compared to other media, lies in the assumption that because of the interactive potential video games offer, positive and negative effects of video games are stronger than those for other media such as TV, movies or books (Dill/Dill 1999, Anderson/Dill 2000, Anderson/Bushman 2001, Anderson 2004). Indeed, video games differ in their characteristics from other entertainment media. They can be viewed as paradigmatic new media (Giddings/Kennedy 2006:129) that due to their interactivity (Grodal 2000) allow for media experiences not possible with linear media. Still, it is arguable that video games not only have different effects on children than traditional media, but also stronger effects. Without repeating the elaborated discourse on violent media effects (Sherry 2001, Goldstein 2005, Lee/Peng 2006), it is a common understanding, that minors should be protected from potential harmful content, regardless if the potential to influence minors is higher, lower, or the same as for traditional media. Starting from a German perspective, the paper moves on to view the international standpoint in academic research, before implications for the research are discussed.

A representative survey on behalf of the German public television service (ZDF) illustrates that the protection of minors looms large within the German population. This is in particular true for parents, as they attribute a higher significance to the protection of minors than for example the assurance of pensions or crime reduction. In particular, video games are affiliated with a higher potential for endangering children than television viewing (Schumacher 2005). Despite the high relevance of the protection of minors in video games – attested as well from the population's perspective as from the political debate – the importance of age ratings has only been margin-

ally investigated. An interview with 6.000 fourth-graders and 17.000 ninth-graders was carried out by researchers from the KfN demonstrating that the usage of age-inappropriate, unsuitable video games is already widespread among fourth-graders. Every second student in this age group had already played video games that were rated 16 plus or adults only (Möble et al. 2007).

By putting the judicial effectiveness into question, an evaluation of the German protection of minors system by the Hans Bredow Institut (an independent non-profit media and communications research institute in Germany) demonstrated, that the system can be described as functional and effective even for video games (Hasebrink/Lampert 2008). In contrast to these findings one can refer to another study conducted by the KfN, where the age ratings of the USK were checked. In total 62 video games and the respective rating decisions were observed. From the researchers' points of view, the age ratings at least of two out of three tested video games were criticized as doubtful and a more severe rating was demanded (Höyneck et al. 2007). However, it is debatable how far the proposed self-developed rating scheme is superior to the USK ensuring for an effective protection of minors. Similar attempts in the US, by the research team around Laurence Kutner and Cheryl K. Olson (2008), to provide an academic rating system were not meant to replace the existing ESRB scheme, but to provide a scheme for future research and additional guidelines for parents.

It seems that the problems of children using unsuitable video games results from the practical application. Laws and schemes seem to work properly, but the consequences are often not carried out thoroughly. In Germany, a qualitative study among adolescents and parents, pointed out that the age rating system is accepted in principle, but the orientation on age ratings declined from the beginning of adolescence (Theunert/Gebel 2007, Theunert/Gebel 2008). These findings turn out to be problematic as with adolescence the

impact of peers on gaming increases while parental control diminishes. Results from the annual “Children and Media” study for example indicate, that 60% of the children receive these games from their parents and half of the children decide together with their parents on what games to buy. Still, even with children aged 6 to 13, an increasing autonomy with regards to the selection process for games and – more important – the actual game playing can be observed. Few parents actually play with their children (KIM 2007:35).

These results mirror comparable scientific evidence from the US: Parents and children decide together which game to buy but often, the children use these games alone. Furthermore, children are keen on persuading their parents to buy games that are not suitable for them (Kutner/Olson 2008, Kutner et al. 2008). Findings of empirical research studies show that the perception of violent content in video games differs between the parent’s, children’s and industry’s perspective. The estimations of age ratings by 201 fourth-graders showed only little differences between the actual age rating label of non-violent games and the children’s estimation. Variations arise only in games that include cartoon violence (Funk et al. 1999). Further, industry evaluations indicate, that in the US the majority of parents agree with the age ratings of the ESRB (Nikken et al. 2007). Against that, other studies refer to the fact, that only few parents pay attention to age ratings of the games their children play (Gentile/Walsh 2002, Roberts et al. 2005). From the children’s perspective, leadoff studies point out, that a “third-person-effect” can be discovered for children in sixth and seventh grade: they do not see themselves to be at risk through inappropriate video game usage, but other, primarily younger children (Scharrer/Leone 2008).

The most extensive and actual survey dealing with the importance of age ratings in video games was conducted in the Netherlands (Nikken/Jansz 2006, Nikken et al. 2007). Within the study, the authors investigated the importance of the pan-European PEGI system for

parents and children in the Netherlands (Nikken et al. 2007:316-319). In the first part of their study, 535 parent-children dyads were interviewed on different strategies to regulate video game usage within families (Nikken/Jansz 2006). The second part of the study focused on questions on how far parents wanted to receive information on age ratings about potential dangers for their children through video game exposure, for example which content descriptors are of particular importance. Likewise, it was investigated on how far the family background influences the examination and regulation of video game usage (Nikken et al. 2007). Results indicate, that in particular the children's age effects the parent's interest in age ratings, but also the intensity for all of the three identified regulation strategies in the usage of video games (restrictive, active and co-play) (Nikken/Jansz 2006). Parents with younger children show a higher interest in age ratings and regulate the video game usage more severe (Nikken et al. 2007:329-330.). The transfer of these findings to the German situation turns out to be difficult because Germany has not implemented the PEGI system.

Research Implications

Besides summing up the literature on the importance of age ratings for children, a main focus of this paper is to expand the body of literature by an indigenous study, analysing the preferences for video games at a certain age group. The starting point for our research is the finding that a substantial amount of children has actually used or has a preference for games that are not suited for them (Möbke et al. 2007, Lenhart et al. 2008). The focus of this research is on children aged 8 to 12. Several reasons speak in favor of this specialisation. First, development studies argue that at around the age of 11 adolescence sets in (Steinberg 1993, von Salisch 2001). This is mirrored by the rating system both of the USK and the ESRB as with an age group of 12 or 13 more mature contents are made available. As for

Germany, another reason makes the age group of 8 to 12 an interesting research area. Germany uses a tiered schooling system. After the fourth grade of elementary school, pupils either go to the Gymnasium to qualify for a degree at around the age of 18 allowing them to pass on to college and university, or they opt for other school forms (mid-level or basic-level school), letting them leave school earlier at the age of around 16. The transition from one type of school (elementary school) to another type (Gymnasium, mid- or basic-level school) takes place when children are aged 10. The age group we are covering allows accounting exactly for this transformation period.

As other studies have analysed parent's mediation with regard to video game usage (Nikken/Jansz 2006, Nikken et al. 2007, Mößle et al. 2007), this study focuses on gaming preferences. It builds upon the evaluation by Kutner and Olson (2008) and the PEW study (Lenhart et al. 2008) but further integrates questions on preferences for traditional media and media usage. Central research questions are:

What is the relationship between the preference for unsuitable video games and the usage of other media? Is there a relationship between the choice of school type and a preference for unsuitable video games? Is there a difference in gender and age with respect to the preference for unsuitable video games?

Based on the literature review and existing studies it is expected that there is a relationship between a preference of unsuitable video games and other media preferences. It is expected that children that prefer unsuitable video games also prefer content that is not explicitly produced for children such as action TV series. Furthermore it is assumed that a preference for unsuitable video games goes hand in hand with a preference for other electronic media. This is partly due to an assumed lower level of parental mediation if children show a preference for unsuitable video games. According to other studies (Mößle et al. 2007) in a German context, it is expected that the difference in the preference for unsuitable video games will occur between

different types of schools, with children pursuing an academic career (A-Level, college) showing a weaker preference for unsuitable video games. All in all, the outline of the empirical study is explorative. Previous studies have given some hints for this research design, but these assumptions have not yet been thoroughly explored in a German context.

Method

Sample characteristics: The empirical study was based on a paper-pen survey of children participating at a “kids college” at a German university in 2007 (N=1.703). The children aged 8 to 12 attended predominantly as a group with their teachers (78%, N=1.659). About one out of five came alone or accompanied by a parent. As a result, children with different social and educational background took part in the survey. The sample is no representative evaluation of the segment of children aged 8 to 12, but (due to the large sample size) it can be seen as allowing for generalizing arguments for a rather diverse group of children. With reference to gender, boys (52%) and girls (48%) were approximately equally distributed (N=1.693). All of the three examined school types – elementary school (38%), mid and basic level school (15%) and Gymnasium (46%) (N=1.649) were represented within the sample. Average age of the participants was 10,5 years (S.D.=1,2; N=1.703).

Measures: The preference for the use of age-inappropriate and therefore unsuitable video games was evaluated by asking the children for their favorite video game. The same procedure was used by Kutner and Olson (2008). However, this does not indicate if the participants use unsuitable video games in general. Nevertheless, it can be seen as a strong indicator for a distinctive preference for unsuitable video games. Video games that are not appropriate for the age of the children are henceforth on labelled “unsuitable” video games. If the children have stated the name of their favourite game, this title

was ex post assigned to one of 12 possible genre classifications and the USK rating of this game was listed. For games where several age-ratings existed as well as the often cited video game series, an age label was chosen that makes the game accessible also to the younger children or adolescents. This approach can be characterized as a conservative estimation (Kutner & Olson 2008).

To account for relationships with other media, additional variables measuring the intensity of further media usage (book, television, internet, video games) were evaluated on an ordinal four point scale that was re-grouped into a dichotomous high vs. low variable.

Comparable to the preferences for video games, the children's favourite media product in case of television, books, and internet was requested. Relationships between the preference for unsuitable video games and the educational level were tested using the type of school the children attended.

Results

Descriptive findings: A favorite video game was indicated by half of the children (50%, N=1.703). Overall, the findings show some parallels with other studies focusing on favorite games for children and adolescence. Comparable to the German "Children and Media" study, games from THE SIMS series (since 2000) are the most often cited games (KIM 2007:36). In what our study differs is that the often criticized game series starting with GRAND THEFT AUTO III (since 2001) (Goodale 2005) has the third place based on the number of mentionings. This preference for GRAND THEFT AUTO III and its sequels seems to be universal. In the recent American PEW-Internet Study that focus on adolescents aged 12 to 17, the game ranked on eighth place in terms of most often mentioned favorite games. Furthermore, the preference for racing and sport is similar in the US and our study with game series such as NEED FOR SPEED (since 1994), FIFA (since 1994) and MADDEN NFL (since 1993) (Lenhart et al. 2008:33).

What seems to be typically German is the preference for (real-time) strategy titles such as the STRONGHOLD (since 2001) and THE SETTLERS series (since 1993). Another controversial game that is among the ten most often mentioned favorite games in our sample is HALF-LIFE: COUNTER-STRIKE (2000). This game is – particular in a German debate (Beckstein 2007) – often cited as the paradigmatic “Killerspiel” that should be banned. However, the game is extremely popular as it allows for team play and does not require state of the art technology. Still, the game is – in a censored German version – only available for teenagers aged 16 and beyond. The international version is considered “Adults Only” (18+) in Germany.

Title	Number of mentionings	USK-Rating
The Sims (1, 2)	146	No restriction
Need for Speed (Most Wanted, Underground)*	48	No restriction
Grand Theft Auto (III, Vice City, San Andreas)*	40	16+
Stronghold (Crusader, Legend)	25	12+
FIFA (03-06)	23	No restriction
The Settlers (I-VI)	15	6+
Half-Life: Counter-Strike*	14	16+
Harry Potter (div. subtitles)	14	6+
Moorhuhn	14	6+
Age of Empires (I-III)	12	12+
Mentionings total	850	
No favourite game	853	

Fig. 2: Top 10 mentionings of favorite game(s) (series) – Please note that mostly the series was mentioned without a specific game, some indications for specific titles are given in brackets as indicated by the participants.

**For these games, stricter USK ratings could have been applied.*

The preference for games such as COUNTER-STRIKE and the GRAND THEFT AUTO-series indicates that even if the games are mentioned only by a limited number of children, they range amongst the most popular games. Compared to other games suitable for children at the age of our sample, they enjoy at least a similar level of popularity.

For a further analysis the mentioned titles were grouped into different popular genres. We did not rely on the children's self-report, but categorized each mentioned game into a list of popular genres. The dominance of titles and series such as THE SIMS or THE SETTLERS leads to the genre of simulation achieving the top rank with respect to genre preferences based on the mentioned titles. Simple casual and party games follow on second position with racing games on third. More violent genres such as shooter or action games take the fourth place. These games that are potentially not suitable for the children interviewed, are mentioned more often than explicit children's games and educational games. As mentioned before, particularly the GRAND THEFT AUTO-series and the first-person-shooter COUNTER-STRIKE are examples for these violent action games, but we also found games such as STAR WARS BATTLEFRONT I and II (2004, 2005) (USK: 16+, 5 mentionings), or the shooter series CALL OF DUTY (since 2003) (USK: 18+, 4 mentionings) and FAR CRY (2004) (USK: 16+, 3 mentionings).

Genre	Number of mentionings	Total mentionings [%]
Simulation	205	24
Casual / Party-Game	90	11
Racing	87	10
Action / Shooter	81	10
Strategy	71	8
Games based on popular media licences for children	61	7
Horse- and Animal Games	55	7
Sports Games	52	6
Others	43	5
Educational Games	38	4
Games based on popular media licences	35	4
Role Play	26	3
Adventure	2	0,5
Total	846	100

Fig. 3: Mentioned favorite games and genres

As a last descriptive analysis, the mentioned favorite games were categorized according to their age rating by the USK. If we compare these figures with the overall distribution of games rated by the USK, both distributions are rather similar. Significant difference occur with respect to games without restriction that are mentioned more often as favorite games than are rated by the USK in general, whereas games with 12+ rating are rated more often by the USK than are found in the sample. For all the other age ratings – including 16+ and 18+ games – the same number of favorite games were mentioned by the children as were rated by the USK and are therefore available in Germany. Even if this comparison is not fully applicable as the overall

usage figures of available games in Germany haven't been compared, but only the mentioned titles, these results give some hints that it is rather likely that the preferences of the 8- to 12-year-olds reflect the current offer of games in Germany on a general level. This also means that games not suitable for this age group range high in the preference order of the children analysed.

USK-Ratings	Number of mention-ings	Mention-ings [%]	USK total [%] (see Fig. 1)	Level of Significance [sample vs. USK].
Without	460	60	48	p < 0,01
6+	125	16	15	p > 0,05
12+	100	13	22	p < 0,01
16+	72	9	11	p > 0,05
18+	15	2	2	p > 0,05
Denied	-	-	1	-
Total	772	100	100	-

Fig. 4: USK ratings of favorite games and comparison with USK data base

Preference for unsuitable games: Because of the structure of our sample, every game with a rating of 16+ or 18+ is an indicator for a preference of an unsuitable video game. But it could also be the case, that an 8-year-old states a game with a 12+ rating as his or her favorite game. Therefore, the games were re-categorized by comparing their age rating with the respective age of the child that had mentioned it. 77% of the children (N=772) had mentioned a game suitable for their age. These games were categorized as “suitable.” Another 40 children (50%) had indicated a game for which their age laid one year below the associated rating, namely a 12+ game at the age of 11. 18% chose favorite games that they would not be allowed to use in two years time. All these games were categorized as “unsuitable.”

Gender: As other studies indicate (Fromme 2003, KIM 2007, Lenhart et al. 2008) it can be expected that gender differences in the preference for games will be found even with children. These differences are confirmed in our study. The top three favorite games for boys are action oriented games such as NEED FOR SPEED (40 mentionings), GRAND THEFT AUTO (25) or STRONGHOLD (24). For girls, THE SIMS series (133) takes an uncontested lead. This list alone gives some hints that the preference for “unsuitable” video games is stronger with boys than with girls. In general, there is a significant relationship between gender and the preference for “unsuitable” games (2x2 cross-tab, exact Fischer-Test: $p < 0,001$, $N=769$). Only 6% of girls ($N=333$) but 36% of boys ($N=435$) have mentioned games that are not appropriate for their age.

Age: If compared by different age groups, the overall preference level of unsuitable video games remains rather stable (effects of gender were accounted for). Only the 8-year-olds show a lower preference in unsuitable video games (6%, $N=36$) but from then on the preference increases to 23% of 9-year-olds ($N=118$), 26% of 10-year-olds ($N=138$) and 28% of 11-year-olds ($N=278$). For the 12-year-olds new games become available as they can choose among the 12+ rated games. Therefore, it is expected that the percentage of children with a preference for unsuitable video games will decrease. However, the findings illustrate that this is indeed true, but the drop is rather modest to 18% ($N=202$). So it is not the 12+ games that these children play, but for roughly one out of five children over 8 but under 13 games that are rated 16+ or 18+ are among their most favorite games.

School-type: With respect to school-type only significant differences on the $p < .1$ level could be found ($X^2= 4,83$ D.F.=2, $p=0.090$, $N=754$). Interestingly, the differences are against the presumed direction. The highest level of children with a preference for unsuitable video games was found among the Gymnasium (26%, $N=394$). Elementary (20%, $N=258$) and mid- and basic-level schools (19%, $N=102$) show lower levels.

Media usage – Focus on boys: It is expected that the preferences for unsuitable video games is an indicator of lower levels of media usage regulation by their parents. Therefore, it is assumed that children with a preference for unsuitable video games are also more likely to spend more time playing video games or using other entertainment media such as television.

At first sight, this assumption is confirmed with respect to the usage of video games. There is a significant relationship between the usage of computer games (high/low) and the preference for unsuitable video games (2x2 cross-tab, exact Fischer-Test: $p=0.003$, $N=751$). 25% of children with high levels of computer game usage ($N=577$) show a preference for unsuitable video games, compared to 14% ($N=174$) for children with low levels. However, this relationship is overshadowed by gender as both computer game usage and preference for unsuitable video games is considerable higher with boys. Thus, if only boys are regarded the statistical relationship disappears (2X2 cross-tab, exact Fischer-Test, $p=0.666$, $N=420$).

As media preferences in general are influenced by gender, the focus of this study is exclusively on boys. They account for the majority of children with a preference for unsuitable video games and the numbers of girls with a preference for unsuitable video games soon becomes too small for a detailed analysis. For example, there are only 19 girls with a preference for unsuitable video games in the sample and 14 of them are older than 10 years, each of them attending a Gymnasium.

Looking at the relationship between media usage patterns and a preference for unsuitable video games for boys, only one statistically significant relationship on the $p > .1$ level can be identified. Boys that use the internet more frequently also have a higher probability of having a preference for unsuitable video games (Fig. 5). The assumption that the preference for unsuitable video games goes hand in hand with lower levels of parental mediation and therefore also higher levels of usage for electronic, entertainment media such as TV and internet, cannot be confirmed.

Media	Usage frequency	Preference for unsuitable video games [boys, %]	Exact Fischer-Test (two-sided)
Book	At least weekly (n=257)	34	0.123
	Less than monthly (n=168)	41	
Internet	At least weekly (n=234)	41	0.055
	Less than monthly (n=191)	31	
Television	At least weekly (n=389)	37	> 0.999
	Less than monthly (n=37)	35	

Fig. 5: Media Usage and Preference for Video Games

Even on a qualitative level, few differences between boys that have a preference for unsuitable video games and boys that mentioned suitable games can be found. Both groups have similar preferences with respect to television and books and no statistically significant differences could be found. With regards to television shows, both groups enjoy cartoon series such as *Spongebob*, *Yu-Gi-Oh!*, *Naruto* and *The Simpsons*. As for books, in particular the fantasy books *Harry Potter* and *Eragon* and the German sports story *Die Wilden Fussballkerle* (“the wild soccer boys”) are very popular among both groups (all mentionings by the participants).

Rank	Title	Unsuitable favorite video game [boys, N=158]	Title	Suitable favorite video game [boys, N=287]
1	Harry Potter	20	Harry Potter	25
2	Eragon	7	Die Wilden Fussballkerle	13
3	Die Wilden Fussballkerle	6	Eragon	12
4	Gänsehaut (Goose Pimples)	2	Die drei ??? (The Three Investigators)	7
5	Lord of the Rings	2	Lord of the Rings	4
	No Title	75	No Title	95

Fig. 6: Comparison Favorite Books. These are all mentionings as indicated by the participants

Rank	TV show	Unsuitable favorite video game [boys, N=158]	TV show	Suitable favorite video game [boys, N=278]
1	Spongebob	16	Spongebob	24
2	Yu-Gi-Oh!	11	Galileo	21
3	Naruto	8	Yu-Gi-Oh!	15
4	Simpsons	8	Simpsons	13
5	Galileo	5	Naruto	13
	No Title	33	No Title	47

Fig. 7: Comparison Favorite TV Show. These are all mentionings as indicated by the participants

However, significant differences on the $p < .01$ level occur when questioned, if the boys could name a favourite book. 52% (N=158) of the boys with a preference for unsuitable video games could name a favorite book, compared to 66% of all the other boys (N=278). With regards to internet usage, here the relationship is also significant on the $p < .01$ level, but reversed. 58% (N=158) of boys with a preference for unsuitable video games could name a favorite page compared to only 43% (N=278) of all the others. These findings are rather small hints for an overall preference and more intensive use of electronic media by boys with a preference for unsuitable video games. Overall, the differences between the groups are rather similar.

What is also interesting to see, is that the preferences both for books and television fewer age inappropriate titles were given. Here the focus is not so much on adult content, but on content made for children. Even if cartoon series such as *The Simpsons* (since 1989) or science magazines such as *Galileo* (since 1998) touch more mature themes, they seem to be more appropriate for children as video games such as COUNTER-STRIKE or the GRAND THEFT AUTO series. What our study did not control, however, was if differences occur with respect to preference in movies, as these – at least in the home entertainment sector – face the same problems in media usage regulation as video games.

The preference of unsuitable video games seems to be a phenomenon that is rather widespread among boys aged 8 to 12. Few differences between those boys that had a preference for unsuitable video games and other boys concerning their media usage patterns (frequency and preference) could be identified. Still, our research is only exploratory and more detailed analysis becomes necessary.

Conclusion and Discussion

The present study focused on the German situation for the regulation of video games for children. With the USK a system has been installed that can be compared to the ESRB scheme in the US. The German system is notorious for its rather strict approach with respect to violence and political (Nazi-)symbols, but a more relaxed approach towards sexual themes. Overall, both ESRB and USK allow for a similar offer of games for children age 12 or younger, with a slight tendency by the German system to restrict the usage more, particularly for teenagers 16 or younger.

The empirical study could reveal that the preference for unsuitable video games is already a widespread phenomenon among 8 to 12 year old children in Germany. Even if the conservative age rating valuation of the stated favorite video games is taken as a basis, the results show that about one out of four children that quoted a favourite game named a title which is not adequate for their age. They even state games whose age rating differs up to 8 years from the children's own age. Furthermore, it could be confirmed that analogue to the general preference for video games by boys, a clear gender related difference in the preference for unsuitable video games exists. The influence of gender on the preference for unsuitable video games corresponds to the results of other studies (Möble et al. 2007, KIM 2007). If talking about a "problematic" media usage or media preference among children aged 8 to 12, this is particularly the case for boys. Examining boys that indicated a preference for unsuitable video games with those that had not, it turns out that they do not differ regarding their further media usage as well as the attended school. Due to the broad distribution of video games with age ratings "16+" or "no age rating" among children up to 12 years and the high significance, the protection of minors holds (Schumacher 2005), an increased need for further research can be deduced.

In an explorative perspective, the present study could reveal lead-off indicators to relationships between socio-demographic variables and the usage and preference for further media offerings. The conclusions deduced are limited to the named favourite video games of children aged 8 to 12 years. The study could not account for predictions of the usage intensity of unsuitable video games in general. Not every child who labels an unsuitable, age-inappropriate video game as his or her favorite game can be seen as an evidence for a “problematic” media usage. It nevertheless contains an indication of missing or marginal regulation of the media usage.

A further research gap affects the question of influencing factors on the regulation of video game usage by children (Nikken/Jansz 2006). In particular, the familial situation and the parental control on the general media usage of children need further examination. One can assume that the limited usage and preference for books by children with a favor for unsuitable video games hints at a lower level of parental regulation and mediation. Relationships between the preference for unsuitable video games and the usage of other electronic media devices could be identified but require further research. With regards to the supplier dimension – the publisher’s and developer’s of video games side of the argument – the question arises how video games for children aged 12 years should be designed that fulfil the legal requirements and are attractive for the target group at the same time. It seems that in particular the preferences of boys from 9 years on cannot be met by age-appropriate video games. Unsuitable video games, thus, become a “forbidden fruit” (Funk et al. 1999, Bijvank et al. 2008) and strict age ratings could also work as increasing the attraction for a game (Kutner/Olson 2008).

Thus, the usage and preference for age-inappropriate video games is a problem that cannot be solved solely through an efficient protection of minors, but poses a challenge to the parental regulation capability as well as the supplier side. Research approaches that not

only focus on the legal dimension, but integrate this dimension in a social science perspective, become necessary. The comparisons with the American situation illustrate that the problem both parents and researchers are facing – the use of unsuitable video games by children – is a cross-cultural phenomenon that requires multi-disciplinary approaches for explanation and regulation. Research should not be limited to questions on the possible effects of unsuitable video games, but should also focus on the question why such a preference for these games exists around the world.

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