

# **Power and nerves of steel or thrill of adventure and patience? An empirical study on the use of different video game genres.**

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## **Abstract**

This empirical study focuses on explaining the utilization of three video game genres – first person shooter, strategy games and role-playing games – and on whether different explanatory models can be established for the three genres.

A model comprising the three explanatory components, gratifications sought (GS), gratifications obtained (GO) and subjective restrictions or capacities, operationalized by the skills that players have to have for the specific genres, serves as a theoretical basis.

Data was collected by way of an online survey (N=5,257). The results show that GO and the capacities are particularly suited to explaining the use of video games. While GO generally seem to offer a basis for explaining the use of video games, since the dimensions ‘power and competition’ and ‘thrill of adventure’ do influence the use of all three genres, there were considerable differences between the individual genres in terms of capacities. Gamers who have a high stress threshold and quick reactions, as well as a good sense of direction, tend to prefer first person shooters. The use of strategy games may be explained in terms of skills like logic and strategic thought. On the other hand, patient gamers prefer role-playing games. The explanatory power of GS, however, proves to be extremely low. Based on these results, approaches are discussed for further research in this field.

## **Introduction**

‘There is nothing in the global entertainment industry that could rival the sales success of Grand Theft Auto IV on the day of its release’, announced the German daily newspaper *Sueddeutsche Zeitung* on 9th May 2008 in light of the estimated sales amounting to \$310 million (Graff 2008).

The phenomenal success of the fourth edition of the *Grand Theft Auto (GTA)* series has not only put video games once again in the headlines but also re-sparked the discussion about the media’s power of fascination.

This subject matter has already been the focus of scientific research. For instance, studies have examined, based on perspectives of uses and gratifications, whether it

is possible to explain the use of video games in general (e.g. Fritz 2003a) or individual genres (e.g. Lehmann et al. 2008; Jansz and Tanis 2006; Yee 2006) by taking into account the gamers' motives of use. One approach, however, has for the most part been neglected; that is one which concentrates on comparative perspectives. Consequently, the general focal point of this article is to examine whether various motives can explain the use of different genres of video games.

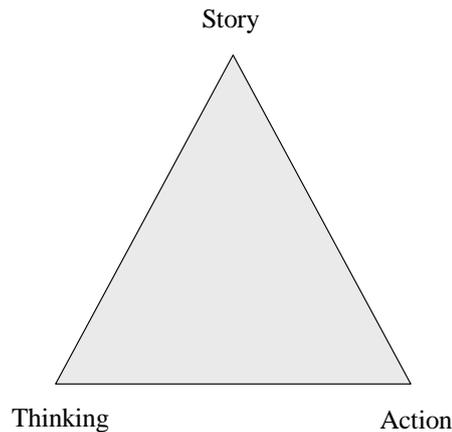
It is also possible to presume that the use of different genres is not only influenced by the motives of the players, but is also linked to underlying external conditions. Due to the high degree of interactivity of video games, players must possess specific skills to have success in playing these games. For instance, the German gamers' magazine *Gamestar* wrote in its review of *Modern Warfare*, the fourth edition of the *Call of Duty* series, that speed, accuracy and communication between gamers were decisive factors on the modern battlefields (Gamestar.de 2008). As a result, this study focuses on the question of whether the use of different genres may also be explained by specific skills that gamers have.

### **Popular genres of video games**

As a cover-all term, 'video games'<sup>1</sup> encompasses a wide variety of different genres that cannot be examined within the framework of a single article. A careful selection of genres is therefore important. On the one hand, this selection should focus on genres that are as different as can be, since it can be presumed that similar factors are also responsible for the use of similar genres. Furthermore, it is necessary to ensure that the selected genres enjoy maximum popularity.

The *Jugend, Information, (Multi-) Media* (JIM) study, which was conducted in 2005 by the *Medienpädagogischer Forschungsverband Südwest* (MPFS: South-west German Research Association for Media Education), and information published by *Verband Unterhaltungssoftware Deutschland* (VUD)<sup>2</sup> – the German entertainment software association – (VUD 2003) provide insight into the popularity of the individual genres. We selected our genres on the basis of the 'map of virtual games' classification schema by Jürgen Fritz (2003b) because it offers a more straightforward way of systematically selecting diverse genres than other models for classifying video games do (e.g. Klimmt 2001).

Fritz takes the construction principles of video games as a starting point for his schema. Based on three central elements – action, thinking and story – he proposes a three-pole map, which can be used as a basis for differentiating between individual genres. The more a specific genre is aligned with one of the construction principles, the closer it is located to the respective pole.



*Figure 1: Map of virtual games (Fritz 2003b).*

Action-oriented games are primarily characterized by suspense, immediacy and liveliness. Due to continually recurring dangerous situations, such games require players to be able to concentrate and react instantly if they want to survive. Skills like the ability to react quickly, a good sense of direction and high stress thresholds are essential for being successful in action-oriented games (Fritz 2003b). According to Manuel Ladas (2002), the genres first person shooters (FPS), beat'em ups, military simulations, racing games and jump-and-runs are prototypical of this pole. Based on the findings of the JIM study (MPFS 2004) and VUD (VUD 2003), with regard to the popularity of the individual genres, it is advisable to make a selection in favour of FPS.

Cognitive games, on the other hand, require players to act primarily in a tactical and well-thought-out manner. In most cases, players do not have an avatar in the virtual world and thus watch complex actions taking place from the outside, acting for the most part like a 'deity' or a commander. Players control the events by changing individual elements, e.g. by sending combat troops to a different location, enlarging settlements or doing business (Fritz 2003b). Ladas (2002) emphasizes that (war) strategy games, economic and development simulations as well as cognitive and skill games may be assigned to the thinking pole. In terms of popularity, strategy games are most important in this genre list.

Game storylines are primarily characterized by a set course of events with a broad level of suspense. These games frequently have their own, often fantasy, world with its own set of laws and rules. Much as in *Entwicklungsroman* plots, avatars go through different situations, which help them to further evolve, e.g. by acquiring new skills. These developments are merged into an independent virtual biography with time. To master such games, players have to be patient while exploring new worlds, pass practical tests, solve puzzles and deal with dangerous situations (Fritz 2003b). Consequently, elements of action and cognitive games are anchored within the storylines of the games. Since adventures and role-playing

games focus on a story, they may be considered representative of this pole (Ladas 2002). In terms of popularity, role-playing games enjoy great importance especially with respect to their online variation, massively multiplayer online role-playing games (MMORPGs). Given these considerations, this study examines three specific genres: FPS, strategy games and role-playing games (RPG).

### **Theoretical background**

As was described at the beginning, this article focuses on two components in order to explain the use of the three genres: motives of use, which in turn are divided into gratifications sought (GS) and gratifications obtained (GO), and specific skills of the players.

### **Uses and gratifications approach: gratifications sought and obtained**

The uses and gratifications approach is a central theory employed in communication studies for explaining the use of media. It is based on active recipients who select and use media in accordance with their motives and needs (Rubin 2002; Ruggiero 2000; Katz et al. 1974). Such needs are described in this article as gratifications sought (GS).

These basic assumptions were developed by Philip Palmgreen and J.D. Rayburn within their discrepancy model (1982), where they not only focused on the recipients' specific needs but also asked what needs have actually been satisfied by the media. The result of this use of media is referred to as gratifications obtained (GO).

In contrast to many other studies, which attempt to explain the use of media based on gratifications, the present study does not only focus on GS but also on GO, since it is possible to assume that gratifications obtained offer considerable insight into explaining the research question. If the GS are satisfied while using video games in the form of GO, it may be assumed that the GO have a positive impact on use. Based on existing studies, this article will examine possible gratifications obtained from video games.

### **Gratifications of video games**

Fritz (2003b) as well as Jürgen Fritz and Wolfgang Fehr (2003) argue that video games are frequently used as a pastime to fight boredom, which points to a need for amusement. The desire to counter frustration, anger and stress has also been examined repeatedly. Fritz (2003c) concludes that relaxation is another gratification dimension while playing video games. Furthermore, there are findings that suggest a converse dimension: a need for suspense (Witting and Esser 2003).

Further studies focus on the gratifications that seem to be specific to the use of video games in addition to these very general dimensions: an important reason to play video games is gratification in the form of power and control (e.g. Lehmann et al. 2008; Fritz 2003c), since interactivity and success in games give users the feeling that they have power and can control events.

Another important dimension is competition and challenge (e.g. Jansz and Martens 2005; Vorderer et al. 2003), since video games are frequently geared towards competition and challenge, as players strive to reach the next level or outplay other gamers.

Community (e.g. Schultheiss 2007; Jansz and Tanis 2006) is another important gratification factor. Consequently, playing video games may be motivated by a shared experience that arises when playing with friends or other gamers.

Another dimension that should be considered is fantasy (e.g. Jansz 2005; Lucas and Sherry 2004). In this case, the point is to attempt things that are just not possible in real life (e.g. magic), to assume a different identity or simply to run away from everyday life (Fritz 2003c). The latter aspect illustrates that the fantasy dimension definitely encompasses elements of escapism.

There is one further dimension that has not been covered by existing studies but should be taken into account all the same: the dimension of overcoming loneliness, which is cited in the popular and widely used gratification scale developed by Bradley Greenberg (1974).<sup>3</sup> This is an important dimension in light of the popular belief that video game players are lonely.

In summary, it is possible to infer the following gratification factors for playing video games: amusement, relaxation, suspense, power and control, challenge and competition, community, fantasy, and overcoming loneliness. In the empirical section, we aim to evaluate whether different dimensions of gratification are responsible for the use of different genres.

### **General conditions: subjective restrictions and capacities**

Player skills should serve as a second explanatory component for the use of different video game genres. This aspect has been ignored in the past in video games reception research. Since it is not possible to draw on existing literature, the question is what dimensions of players' skills could play a role?

The argument offered by Michael Jäckel (1992) provides a systematic answer to this question. He suggests looking at general underlying conditions to explain the use of media. These are manifested in restrictions that can limit an individual's freedom to act in a specific situation when decisions are required (Kirchgässner 1991). Hartmut Esser (1999: 308) describes these circumstances colourfully in terms of 'limits of desire'. According to Gerhard Vowe and Jens Wolling (2001,

2002), restrictions must be broken down into objective restrictions (e.g. monetary or time-based costs) and subjective restrictions. When it comes to the use of video games, subjective restrictions, which may be understood as the limits of one's own perceived abilities, are of particular interest. Compared to other media, the skills and abilities required to play video games may be regarded as an important factor, due to high interactivity. Unlike TV or film viewers, video game players are physically active and have to employ specific skills in order to be able to play in the first place and be successful.

As Wolling (2004) emphasizes, it is reasonable to mention both the negative restrictions and the positive effects that may arise: thus, it can be assumed that gamers who have the skills that are essential for success in a particular video game will use that specific genre more frequently. These skills are called capacities.

What skills and abilities do gamers have to have in order to be successful in the three selected genres? A group of skills and abilities, on the basis of which it is possible to determine probable subjective restrictions or capacities, has been established for each pole on the map of virtual games (Fritz 2003b): for instance, FPS games require in particular quick reactions, a high stress threshold and a good sense of direction; strategy games call for players to keep an eye on everything that is happening and to solve problems by using logic; while RPG are distinguished by a sophisticated character system and a complex gaming universe, so players must be able to familiarize themselves with complex topics quickly and exercise lots of patience. Based on these considerations, it is possible to assume, in light of the use of different video game genres, that gamers do not use a specific genre in which their subjective restrictions are very distinctive, or that they turn to a particular genre when they have especially good skills and abilities.

In summary, we are able to cite the following dimensions of subjective restrictions or capacities: quick reactions, high stress threshold, good sense of direction, ability to keep an eye on complex occurrences, logical thinking, familiarization with complex topics and patience.

### **Model development**

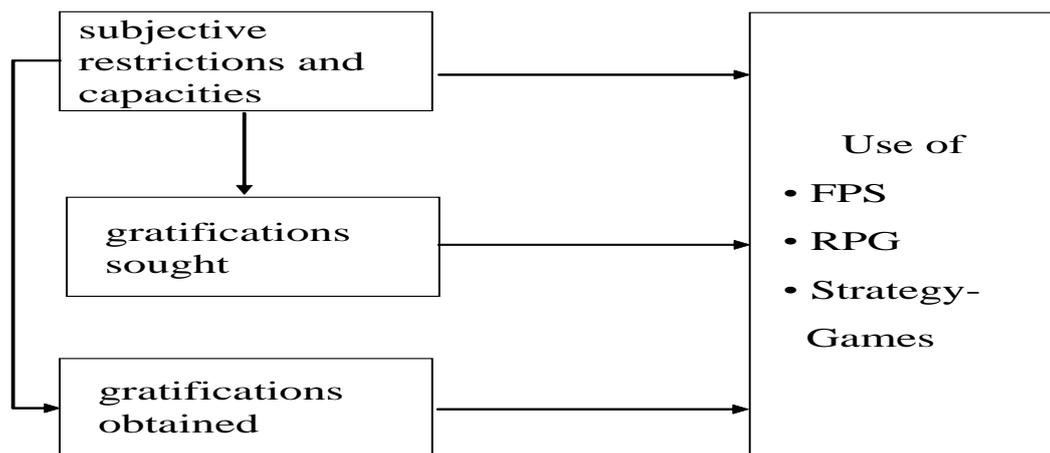
In line with the theoretical statements, three explanatory components can be drawn on for examining the research question: GS, GO and subjective restrictions or capacities. It is assumed that each of these three components has a direct impact on the use of the different genres such that the components result in differences between the genres regarding the importance of the individual dimensions.

Moreover, it can be presumed that the individual explanatory components influence each other. When it comes to subjective restrictions or capacities, an impact can be expected for both GS and GO: presumably, the knowledge that one

is not able to do certain things results in the fact that specific gratifications are not sought out at all. For example, if players are not patient enough to acquaint themselves thoroughly with a game, they presumably do not have the desire to immerse themselves in a specific world in the first place, since they would not have the time or leisure to get properly involved with that world.

Likewise, a connection seems probable between subjective restrictions and GO: if players do not have the skills that are crucial for success in a game, e.g. high stress threshold as required for FPS, the sense of success is replaced by a sense of failure, thus reducing or preventing the obtainment of possible gratifications.

These assumptions may be summarized in a model, as follows:<sup>4</sup>



*Figure 2: Theoretical model for explaining the use of different video game genres.*

Based on this model, the research focus presented at the beginning of this article can be divided into the following sub-questions, which are answered in the empirical section:

- RQ1: What impact do GS, GO and subjective restrictions or capacities have on the use of different genres? What differences are there between the genres?
- RQ2: What impact do subjective restrictions have on sought and obtained gratifications? Are there differences between genres here as well?

## **Method**

Data was collected by way of an online survey. The invitation to participate in the survey was posted in the news section of eleven topic-oriented websites together with a link pointing to the survey. These websites were primarily online German magazines<sup>5</sup> dealing with video games. Participation was anonymous and not promoted by a raffle. Instead, participants were motivated through their own personal interest in this topic.

The survey was conducted between 27 January and 14 February 2006. Of the total 7,612 surveys completed, only 5,257 were suited for analysis after data cleansing due to the fact that some were either incomplete or filled out incorrectly.

As a result of self selection (participation in the survey was open rather than limited to a selected group of people) it is not possible to depict a basic population. For this reason, the following evaluation of data obtained does not focus for the most part on a descriptive presentation of the percentages and mean values. Instead, attention is placed primarily on analysing the relationships between variables, because such relationships are relatively stable compared to a sample selection bias. The following descriptive data alone are used to describe the sample:

The majority of the participants were male (97 per cent) and proportionally young: 86 per cent were between 12 and 29 years old. The predominance of male gamers can presumably be attributed to the method by which the participants were recruited: the majority of readers of video game magazines in Germany are male. In light of the 'youthful' sample, it is not surprising that 54 per cent of the participants still go to school or are attending a university. The average time spent playing video games per week is 16 hours. The genre of video games that is played the most is FPS, followed by strategy games in second place. RPG ranked fifth behind action games and action adventures.<sup>6</sup>

The data were prepared as follows to facilitate further analysis: to calculate dependent variables it is not a good idea to directly apply the frequency of use of the individual genres, since it can be assumed that part of the use of a specific genre may be explained by the generally high amount of time spent playing video games (so called heavy players). Consequently, the dependent variables were calculated from the residuals that were determined during a regression analysis of the general period of use over the frequency of use of the individual genres. This ensured that the dependent variables used included a high frequency of use of the interesting genres that is independent of the general time of use.

## **Results**

### **Empirical dimensions of GS**

The item set regarding the GS was introduced as follows: 'Now I am interested in knowing what expectations you have of video games. It is not important if your expectations are met or not. I am more interested in finding out what is important to you in general. What do you wish for?' This was followed by a list of 25 items that could be evaluated on the basis of a five-point Likert scale, ranging from 'I do not want at all' to 'I really want' and a residual category 'Do not know'. The number of items per dimension was between two (e.g. suspense dimension) and

five (e.g. power and control dimension). This number corresponded to the theoretically supposed significance of the respective dimensions.

Factor analysis was used to check what empirical dimensions of GS could be determined.

### **Insert Figure 3 here**

The results show that the theoretically presumed dimensions could be modified at several points:

The first factor includes items that should cover primarily the dimensions suspense (items 1+3) and fantasy (items 2, 4, 5, 6). Accordingly, it seems important to flee the real world and leave everyday life behind, to try things that are otherwise impossible, to assume a different identity (role) but also to experience excitement and suspense through the game. Based on this factor, the presumption can be made that there is a desire to personally experience the adventures of heroic figures like Indiana Jones or Harry Potter and prove oneself by attempting to master the exciting challenges that these heroes face. Consequently, this factor was referred to as the ‘thrill of adventure’.

Factor two also encompassed several of these theoretically presumed dimensions (power and control: items 1, 2, 4, 5; challenge and competition: item 3). This combination is easy to comprehend. It may be assumed that the feeling of having power and control is accompanied by a pleasant sensation. Moreover, it is possible to assume that this feeling becomes more intensive when gamers are able to demonstrate their skills by competing with other gamers or the computer, and thus gain recognition for their success. This dimension has been described as ‘power and competition’.

The third factor includes two items that were originally assigned to the fantasy dimension and has gained, due to the third item (originally: relaxation), a different emphasis. A common element of all these items is the desire to dispel one’s negative mood. This factor has been called ‘mood management’ in line with the mood management concept (e.g. Zillmann 1988).

Factor four combines items that have been attributed to the operationalization of the dimensions ‘overcoming loneliness’ (items 1 and 2) and ‘community’ (item 3). In this empirical formation, these can be combined to form a comprehensive concept that is mainly dominated by a social component. Here the use of video games seems to be characterized primarily by a need to share one’s hobby with others. For instance, people look for like-minded individuals with whom they may become friends and pursue their hobbies together. Based on that, this factor is referred to as ‘social contacts.’

The combination of the items belonging to the fifth factor (both items originally shared experience) points to a need for opinion leadership within a peer group. Here it seems that there is a desire to have a say in important discussions and to present oneself at the same time as an opinion leader who knows about the latest developments unfolding in the video game world. As a result, this factor has been called ‘opinion leadership’.

Factor six combines two items, which can be used to operationalize the dimension ‘amusement’.

### **Empirical dimensions of GO**

The items relating to GO were introduced as follows: ‘Before, I asked about wishes that individuals may have with respect to video games. I am now interested in knowing how you would rate the individual genres in this regard. Please rate whether the following statements in your opinion correspond to the mentioned genres.’ The respective items were designated accordingly; the genres served as response options with the sequence rotated. The following example for the power and control dimension illustrates this process:

It is easy to prove oneself in  
... Role-playing games  
... First person shooters  
... Strategy games.

To keep the list of questions regarding GO short, we decided to exclude the dimensions that were described as very general in the theoretical section above. As a result, the following dimensions were operationalized: overcoming loneliness, shared experience, fantasy, challenge and competition, and power and control. Furthermore, the operationalization was limited to one item for each gratification dimension such that there were a total of six items, which were queried by the cited structure.

With the aid of the factor analyses for GO, it was possible to determine three or two factors depending on the genre. Based on the factor analysis of GO, the results for role-playing games were:<sup>7</sup>

### **Insert Figure 4 here**

The first factor includes the items that describe the ‘thrill of adventure’ in GS and thus was called ‘thrill of adventure’ (GO RPGs).

Factor two may be regarded as the equivalent of the GS factor ‘power and competition’ and is referred to here as ‘power and competition’ (GO RPGs).

The third factor is not yet known in this constellation in GS. Although the social component is inherent, it has a different nuance here due to the second item: when playing RPG, gamers also have the opportunity to play together with friends and thus have the feeling that they are less alone. That's why we named this factor 'sense of belonging' (GO RPGs).

### **Empirical dimensions of subjective restrictions and capacities**

The item set regarding the subjective restrictions and capacities was introduced with the following: 'Individuals must be able to do different things when playing different video game genres. What are your personal strengths as a gamer? How good are you at ...?'

The results of the factor analysis for the subjective restrictions indicate a three-factor structure:

#### **Insert Figure 5 here**

Factor one combines items that can be collectively described as warlike, martial skills. They are reminiscent of talents that are typical of elite lone warriors such as those we know from movies like *Rambo*. Quick reactions, nerves of steel and a good sense of direction help such heroes overcome many opponents, even in impassable and dark settings. This factor sums up the skills that have been described as important for the success in action-oriented video games. The predominant warlike element of these items is reflected in how we decided to refer to this factor – 'e-warrior talent'. The 'e' indicates that the talent has a virtual reference level.

The second factor is characterized by cognitive elements like logical thinking skills, the ability to recognize connections and act in a tactical, well-thought-out and foresighted manner. Consequently, the items that were originally prepared to operationalize the requirements in video games that are based mainly on a cognitive construction principle fall into place. Since these abilities call to mind the skills that a commander must have, this factor has been summarized under 'commander skills'.

Factor three encompasses items that describe abilities like patience and leisure, abilities gamers need for example to develop their characters gradually. That's why this factor has been called 'patience'.

With this factor analysis, the theoretically presumed dimensions could be confirmed almost completely.

## **Model test**

### **Research question 1**

What impact do GS, GO and subjective restrictions or capacities have on the use of different genres?

### **Insert Figure 6 here**

The GO proved to be especially influential, with the exception of the ‘sense of belonging’ dimension. It is noticeable that very similar explanatory models could be established for all three genres: the ‘power and competition’ dimension plays a significant role especially when it comes to the use of strategy games and FPS. In the case of FPS, the assumption can be made that the relatively high proportion of violence results in the fact that games have considerable power-oriented gratifications, which in turn lead to an increased use of this genre.

In the case of strategy games, particular attention was directed repeatedly to the all-powerful and almighty authority that gamers have. Thus, it is not surprising that when playing strategy games individuals experience the intense feeling of ‘power and competition’ that in turn results in an increased use. It is also noticeable that this dimension has an impact on the use of RPG. The results suggest that ‘power and competition’ represents one of the key gratification dimensions of video games.

Another key dimension is the ‘thrill of adventure’, which, like ‘power and competition’, has an impact on the use of all three genres. In the case of RPG, this dimension is even more important than the power-oriented components, which stands in contrast to strategy games and FPS. In light of the complex, well-developed gaming universes, this correlation is easy to understand, since these universes invite gamers to experience suspense and adventure.

Compared to the GO, the explanatory power of the GS is low. With regard to strategy games, none of the dimensions examined is of importance.

The only dimensions that contribute in some way to finding an answer for the research question are ‘social contacts’ and ‘thrill of adventure’. The positive association between the intensity of use of FPS and the ‘social contacts’ dimension is especially interesting, since gamers of this genre have become the focal point of criticism due to the incidents at schools in Columbine, Colorado (BBC 2001; Block 2007) and Erfurt, Germany, and have been described as dangerous loners with violent tempers. The results of this study suggest a necessity to re-evaluate this opinion, since the need to play with and meet others who share the same likes seems to be a reason to play FPS games frequently. The

strong clan and LAN (=Local Area Network) scene that has evolved around this genre emphasizes the significance of this dimension as well.

The relationship between the 'social contacts' dimension and the intensity of use of RPG, on the other hand, is less surprising, since the influence of this dimension can be attributed primarily to the variation of MMORPGs<sup>8</sup> included in this genre; in the case of such social games this dimension may be regarded as a prerequisite for individuals to be able to play at all.

The negative association between the GS 'thrill of adventure' and the intensity of use of FPS is, however, surprising, especially due to the fact that the GO 'thrill of adventure' exhibited a positive association with the use of FPS games.<sup>9</sup> Why would anyone who likes to play FPS not want to experience adventure? A possible explanation could point to the significant escapism component that is inherent in the GS 'thrill of adventure'. Perhaps, it is important for FPS gamers to seek gratification in the real world, which is clearly articulated in the significance of the 'social contacts' factor. Immersing oneself in a different virtual world would likely counter this factor. If the 'thrill of adventure' should become tangible, however, as part of the GO, gamers do seem to rate this as a positive outcome, even if they did not originally seek this dimension.

With respect to the component of subjective restrictions or capacities, each genre has only one dimension of explanatory content. The relationship is positive in each case, which clearly shows that subjective restrictions are not suited for explaining the use of specific genres of video games, since negative association would have to be present as well. For instance, a gamer who has less 'e-warrior talent' is likely to play FPS less frequently. The capacities, on the other hand, demonstrate a considerable impact on the use of specific genres. This means that the absence of specific skills does not lead to the avoidance of a specific genre. Instead, the fact that certain skills are highly developed is important.

As had been assumed in theory, 'patience' is especially important for the use of RPG. Learning and being able to remember complex rules of a game requires patience due to the fact that these games are usually set in extremely complex game worlds that players must first explore gradually.

The use of strategy games can be explained in particular in terms of the 'commander skills' dimension. As was highlighted at the beginning, it is especially important for strategy gamers to be able to act in a logical and foresighted manner while keeping an eye on everything that is occurring. Here it may be assumed that gamers who have considerable cognitive abilities are particularly successful at such games.

The associations that have already been assumed theoretically are also apparent in the use of FPS. Gamers who have well-developed 'e-warrior talents', i.e. are able to react quickly and have a high stress threshold and good sense of direction, play FPS games especially frequently, since these skills in particular are essential for being successful at these games.

In summary, it may be argued that the GO and capacities especially help to explain the use of different genres of video games. Regarding GO, the same dimensions are meaningful for each one of the three genres under examination here. There are, however, differences in terms of capacities, since different components are important for the use of each genre.

## **Research question 2**

### **Insert Figure 7 here**

The analyses show that capacities rather than subjective restrictions are relevant for these relations, since only positive associations can be found. As has already been presumed in the explanatory model, the capacities are not only suited for explaining the use of different genres, but also have an impact on the GS and GO.

As far as GS are concerned, it may be presumed that some GS are strengthened by a sense of possessing specific abilities. In the case of 'e-warrior talents' and 'commander skills', that is the 'social contacts' dimension. The explanation for this relation may presumably be attributed to people's great appreciation of these skills. In the case of 'commander skills' it can be found, for instance, in the reputation that intelligent people have. The skills that warriors have are also important for athletes. Consequently, it is easy to understand that gamers who possess such skills also need to show their skills to others.

The relation between 'patience' and 'thrill of adventure' is also understandable. Gamers who are patient will more likely feel a need to undertake an exciting adventure and spend plenty of time in other worlds than players who are less patient.

It is interesting that these GS did not prove to be relevant for explaining the use of FPS or RPG in the multivariate model, which would have been conclusive in light of the fact that the genre-specific skills seem to evoke these requirements.

In the case of strategy games it can be presumed that the nature of the games counteracts this need. Strategy games are usually played by gamers alone or against an anonymous opponent online. Consequently, these games do not really focus on satisfying the social needs of players. Knowing about this fact could

mean that such a need does not even emerge. In the case of RPG, on the other hand, these missing connections remain unclear.

With regard to the relation of subjective capacities and GO, the following must be emphasized: the better developed the skills that are important for success in a specific genre are, the stronger the gratifications that players receive from this genre. It is interesting that different skills lead to the same GO, depending on the genre: whether the relevant GO are obtained when using a specific genre depends primarily on whether or not gamers have the skills that they need to master the game. If success in a game becomes tangible, the gratifications obtained while playing different genres are the same; the only difference is the 'method taken'. Consequently, the skill 'patience' is responsible for obtaining both 'thrill of adventure' and 'power and competition' gratifications in RPG. For strategy games this is the 'commander skills' and for FPS it is the 'e-warrior talent': when it comes to 'power and competition', the 'commander skills' are also influential for FPS. Considering that FPS games call for lots of tactics, this relation is easy to understand.

### **Summary**

This article has focused on the question of whether it is possible to account for the use of different video game genres. Three genres – role-playing games, strategy games and first person shooters – were selected for closer examination due to the fact that they are popular and distinguishable. A model, comprising the three explanatory components, GS, GO and restrictions or capacities, served as a theoretical basis. Data was collected by way of an online survey.

The results show that GO and capacities in particular contribute to the use of video games. While GO are of little help when explaining the difference in the use of genres and are to be regarded more as general dimensions for being able to explain the use of video games in general, the capacities have a greater impact on understanding the differences in genre use.

The decreased explanatory power of GS was, on the other hand, noticeable. With regard to strategy games, in particular, none of the dimensions under examination were relevant. Two factors are important for further research in this field. On the one hand, it seems inadvisable to only consider GS in empirical studies, as was often the case in the past. The results of this study suggest that particular attention should be placed on GO. On the other hand, the fact that GS offer little insight is surprising for such a central line of research as the uses and gratifications approach. This results in the question of whether this approach is well suited for explaining the use of video games. For future studies it would therefore be important to look at other theories on media use to explain the use of video games

and compare the relevant findings with the results of the uses and gratifications approach.

We also examined whether the restrictions or capacities had an impact on the GS and GO. Only the capacities proved to be relevant. It was especially interesting to note that the same GO were influenced by different capacities for different genres. The reason for this could presumably be that the gamers basically obtained the same gratifications by having success, even though the methods taken to obtain these gratifications in different genres were different.

Although specific GS are influenced by genre-specific skills that gamers have, it is surprising that these GS do not contribute to explaining the use of the genre.

Strategy games were used as an example to show that game characteristics may possibly intervene in this connection. Consequently, future studies should focus more on the characteristics of the game and thus incorporate components that have, for the most part, been ignored in use research thus far. The *Theory of Subjective Quality Assessment* (TSQA) (Wolling 2004, 2006; Vowe and Wolling 2001, 2004), which focuses on content to explain media use, could prove to be a suitable approach here.

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	thrill of adventure	power and competi- tion	mood manage- ment	social contacts	opinion leadership	amuse- ment
... to experience s.th. exciting	.76					
... to immerse in another world	.76					
... to experience s.th. agitating	.75					
... to slip into different roles	.73					
... to be somebody else	.66		.40			
... to try things that are otherwise impossible	.47					
... to master a video game as well as possible		.83				
... to be better than other gamers/the computer		.75				
... to improve my skills by training		.70				
... to control the game		.61				
... to prove myself		.61				
... to distract me from everyday worries			.81			
... to run away from everyday life			.78			
... to counter frustration and anger			.73			
... to meet other gamers				.84		
... to make new friends				.81		
... to play together with my friends				.74		
... to be in the know on the latest games					.85	
... to have a say in talks about video games					.81	
... to kill time						.89
... to fight boredom						.82

Extraction method: principal component analysis (PCA), varimax rotation with Kaiser normalization, Eigenvalue > 1, 63% of variance explained

Figure 3: Factor analysis of GS.<sup>10</sup>

	thrill of adventure (GO RPGs)	power competition (GO RPGs)	and sense of belonging (GO RPGs)
It is easy to immerse into another world in RPGs	.86		
It is easy to slip into other roles in RPGs	.83		
A sportive competition can be easily realized in RPGs <sup>11</sup>		.85	
It is easy to prove oneself in RPGs		.81	
RPGs are well suited for playing with friends			.80
One feels not so alone when playing RPGs			.78
Extraction method: principal component analysis (PCA), varimax rotation with Kaiser normalization, Eigenvalue > 1, 74% of variance explained			

*Figure 4: Factor analysis of GO (RPGs).*

	e-warrior talent	commander skills	patience
... reacting to danger quickly	.78		
... dealing with stress	.68		
... keeping the sense of direction in the game world	.54		
... thinking strategically		.87	
... acting logically and foresightedly		.79	
... keeping an eye on everything that is happening		.52	
... developing a character patiently			.80
... familiarizing myself with complex rules before starting to play			.76
... memorizing complicated gaming rules			.54
Extraction method: principal component analysis (PCA), Varimax rotation with Kaiser normalization, Eigenvalue > 1, 58% of variance explained			

*Figure 5: Factor analysis of subjective restrictions and capacities of video game players.*

	Use of... RPGs	strategy games	FPS
N=	4137	4289	4434
R <sup>2</sup> =	.16	.17	.17
	beta	beta	beta
thrill of adventure			-.14
power and competition			
mood management			
social contacts	.19		.10
opinion leadership			
pastime			
thrill of adventure (GO RPGs/strategy games/FPS)	.14	.16	.20
power and competition (GO RPGs/strategy games/FPS)	.13	.26	.23
sense of belonging (GO only RPGs)			
e-warrior talent			.13
commander skills		.21	
patience	.19		

*Figure 6: Impact of GS, GO and subjective restrictions or capacities on intensity of use of different video game genres – multiple regression.<sup>12</sup>*

	e-warrior talent	commander skills	patience
	N = 4409	N = 4233	N = 4126
	r	R	r
<b>GS</b>			
social contacts	.21	.17	.10
thrill of adventure		n.s.	.21
<b>GO</b>			
thrill of adventure (GO RPG)			.19
power and competition (GO RPG)			.16
thrill of adventure (GO strategy games)		.17	
power and competition (GO strategy games)	.10	.18	
thrill of adventure (GO FPS)	.13		
power and competition (GO FPS)	.22	.14	n.s.

*Figure 7: Relation between subjective restrictions and GS/GO – bivariate correlation.*<sup>13</sup>

## Notes

<sup>1</sup> In this article no differentiation was made between digital games that are made for consoles and computer games that are played on PCs.

<sup>2</sup> The JIM-study is a representative survey of German adolescents; the VUD is the former German entertainment software association that collected market data of digital games. The VUD has now been replaced by the Bundesverband interaktive Unterhaltungssoftware (BIU).

<sup>3</sup> Greenberg calls this dimension ‘sociability’.

<sup>4</sup> Possible influences of the genre use on GO or restrictions and capacities are not considered in this study as it would go beyond the scope of this article.

<sup>5</sup> Names of the websites: 4players.de; demonews.de; game-basis.com; gamecaptain.com; gamesagent.net; gamesaktuell.de; gamestar.de; gametalkzone.de; gamezone.de; justgamers.de; maniac.de.

<sup>6</sup> FPS: 70 per cent ‘frequent or very frequent use’; strategic games: 45 per cent ‘frequent or very frequent use’; action games: 44 per cent ‘frequent or very frequent use’; action adventures: 33 per cent ‘frequent or very frequent use’; RPGs: 31 per cent ‘frequent or very frequent use’.

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<sup>7</sup> Due to the almost identical results, no additional table is presented here because no new findings could be shown. Key data to these factor analyses is: principal component analysis (PCA), varimax rotation with Kaiser normalization, Eigenvalue  $> 1$ , strategic games: 66 per cent of variance explained/FPS: 67 per cent of variance explained.

<sup>8</sup> Indeed, the MMORPG *World of Warcraft* is one of the most popular games in this sample, as it was mentioned 897 times.

<sup>9</sup> The testing on multicollinearity showed that this finding is not due to high correlations of the independent variables, as the tolerance lay between .93 and .84.

<sup>10</sup> Because of high double loading, the items ‘to feel less lonely’ (overcoming loneliness), ‘the sportive competition with other gamers/the computer’ (challenge and competition) and ‘to feel powerful’ (power and control) had to be taken out of analysis.

<sup>11</sup> Both items had to be excluded from factor analysis for GS because of high double loading.

<sup>12</sup> Because of sample size in the table, only findings that were significant by  $p < 0.001$  and for which the beta was  $\geq .1$  are shown.

<sup>13</sup> Findings are shown only for the dimensions that were significant in the formally presented regression analyses. As in a multivariate testing of the influence of restrictions on GS and GO only one variable was significant, no multiple regression analyses are presented here for reasons of easy readability. Because of sample size in the table, only findings are shown that were significant by  $p < 0.001$  and for which  $r \geq .1$ .