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Profiling Video Gamers - An Exploratory Study

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Abstract

In the last decade, gaming has become a multi-billion dollar industry and is getting more and more important (PricewaterhouseCoopers, 2008). Nevertheless, little is known about different types or groups of Video Gamers so far. Research and media is currently focused on online gaming, addiction to and violence in Video Games. This study's intention is to classify Video Gamers, to get to know what makes them different among each other and to profile them. First, expert interviews were conducted to define the right questions, to profile Video Gamers. Then, to reach Video Gamers from all over the world, an online questionnaire was created. A first version was conducted to test the questionnaires quality (N = 173). Considering the feedback and item analysis of the first version, a second version of the questionnaire was developed. With this second version an online survey was conducted (N = 1059). A cluster analysis was used to define different profiles of Video Gamers. This way 4 clusters of Video Gamers were found: the *"Gamer for a Living"*, the *"Traditional Video Gamer"*, the *"Casual Gamer"* and the *"Show-Off Gamer"*. These profiles can be used not only for a better description of the Video Game industry's target group, but also in research for a better understanding of Video Gamers in particular.

1 Introduction

In recent years, the market for Video Games has been constantly growing. This has been especially true since the current generation of game consoles came up with Microsoft's Xbox 360, Nintendo's Wii and Sony's Playstation 3 (PricewaterhouseCoopers, 2008). The growth of the game market was not only interesting to industry economists, but also to researchers of social-, media-, and neurosciences. Consequently there is a vast body of research on Video Gamers. A few examples are mentioned here.

A study in the field of neuro- and cognitive science has been conducted by Green et al. (2003). They discovered an enhanced allocation of spatial attention over the visual field for Video Gamers, while performing tasks on a screen compared to non-gamers. In another test participants had to count as many quickly presented items in a picture as possible. They found that gamers were able to remember more items, and even had a larger field of view than non-gamers. Green et al. could show that non-gamers were able to achieve the same results after training: Game genres like Ego Shooters (shooting games in a first person view) caused better training effects than Skill Play games (games that need special reactivity and fine motor skills), like Tetris.

Another study from the domain of communication and media research was conducted by Vorderer et al. (2003). The authors assent that the role of competition has a certain presence in all people, as it is part of human nature. They argue that in any type of Video Game it is necessary for the players to compete with others or a virtual competitor. In their study, Video Gamers were asked to express their opinion regarding the importance of competition in Video Games. The results showed a high relevance of this factor for Video Games. The competition aspect should be the most important factor when defining how fun a Video Game is.

Clarke & Duimering's (2006) behavioural study gives insight into Ego Shooter Gamers' mental models. Representative for the domain of Human Computer Interaction (HCI) is for instance the study from Sabri et al. (2007), where the authors explore different aspects of gaming on large, high-resolution displays, motivated by the advances in technology and display hardware which improved over the past, to evaluate the benefits of these displays for gaming, and to identify potential user interfaces and hardware issues that can arise.

The great majority of research about Video Gamers comes from psychologists, and is mostly about online gamers. For instance, there are many studies about Video Gamers who play Role-Playing Games (RPG's, games where people play online with and/or against others to achieve improvements of their gaming character) on the Internet, like the study from Griffiths

et al. (2004). They found that the younger the players are, the more time they spent each week playing, and the more likely it was for them to neglect their education or work. RPG's, which can only be played online, are called Massively Multiplayer Online Role-Playing Games (MMORPG). These games are those, which are cited the most when the topic of the research is "gaming addiction".

For example, Smahel et al. (2007) found out, that the more MMORPG players score high in their addiction questionnaire, the more they think about the Video Game when being offline. They argue that daydreaming and thinking about the Video Game is only a part of addiction.

In interviews, conducted by Blinka (2007), he found that addiction is one of the most important game aspects, and is even mentioned by them to be a part of their gamer-identity. As another result, younger gamers who tend to feel more positively emotionally engaged, felt also more addicted but denied negative impact of it. Older gamers only felt threatened by potential addiction but not as addicted as the younger gamers.

But addiction is not the only issue for studies about MMORPG's. Psychological and social researchers have focussed on the lifestyle of these gamers. For example, Whang and Chang (2003) argued that Korean players of the online game Lineage think of the online game world not as a virtual world, but as a part of the real world in which one carries out activities as a part of one's daily life.

In short, a lot of research has been done on specific topics of Video Gamers or of a Video Game. Also problems and lifestyle issues have been treated. But, from a psychological point of view, an important question hasn't been answered so far. Who are these Video Gamers?

Unfortunately there is little research about what kind of people play Video Games, if they are all the same or different. And, if they are different, how many different groups of Video Gamers are there? What does one group like more than others and what is it that defines these groups? These questions were the motivation for this study.

To find some answers to these questions, we conducted an exploratory study that resulted in different profiles of Video Gamers with descriptions of what distinguishes them from each other.

2 Theoretical Background

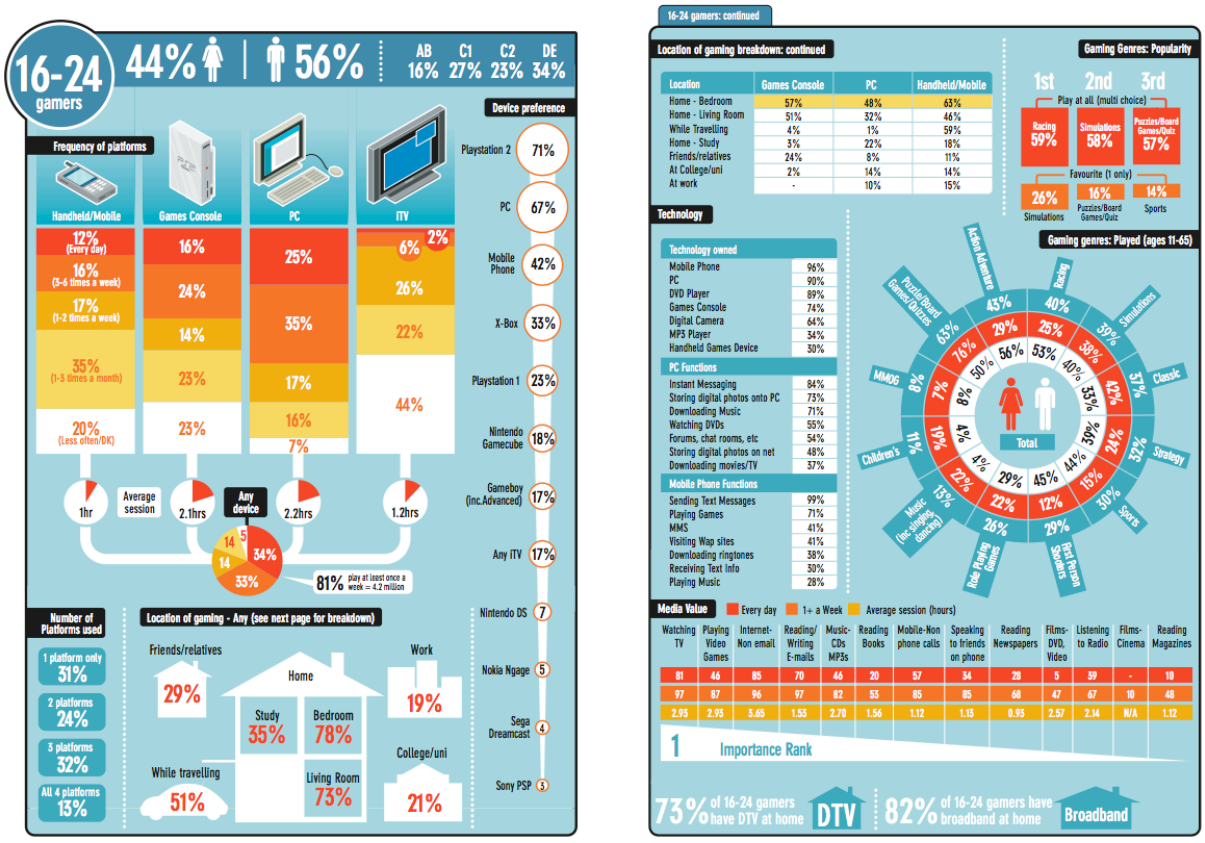
As "profiling" is a key term of this study, a definition will be given first: A consumer profile is *"a detailed analysis of a group of like consumers, covering influences on their purchasing habits such as age, gender, education, occupation, income, and personal and psychological characteristics. Consumer profiles are built up from extensive market research and are used for market segmentation purposes"* (BNET, 2008, p. 1). For this study, the profile is not a consumer profile, but a Video Gamer profile, and is defined as "a detailed analysis of Video Gamers, covering influences on their gaming habits such as age, gender, education, occupation, income, and other characteristics".

An actual study from the UK (Pratchett, 2005) shows how Video Gamer profiles can be found and analysed. Unfortunately, this is also the only known empirical study with more than only one or two different profiles of Video Gamers.

Pratchett conducted a survey among 3442 Britons between the age of 6 and 65 years. The goal of the study was to define the size of the Video Game market in the UK and to profile British Video Gamers. Fourteen groups, each consisting of 3 people, were interviewed for qualitative research. The definition of a gamer was: *"We defined a "gamer" as someone who had played a game on a mobile, handheld, console, PC, Internet or interactive TV at least once in the last 6 months: a broad definition designed to capture any "light" gamers as well as medium or heavier gamers."* (Pratchett, 2005, p. 2).

After collecting the data, they profiled the UK Video Gamers by age in six groups (6-10, 11-15, 16-24, 25-35, 36-50 and 51-65 years old). With the interviews, a specific example of each group was shown, which should make the group more comprehensible. The results were shown group wise, as can be seen in figure 1. Not all of the results will be shown here, only the ones for the 16-24 year olds in order to give an impression of the study's findings.

Fig. 1. Results from gamers in the UK for the group of 16-24 aged Britons (Pratchett, 2005)



The findings show a lot about the group of 16-24 year old Britons: their preferred gaming device, gaming location, the gender break-up, if they prefer watching TV or gaming, and much more.

This study can be regarded a first step in the direction to profile Video Gamers. However, the participants are all British. Therefore these findings can't be generalised to a broader population. Further, Video Gamers are not profiled by what characterizes them in particular, but by their age. Also, the definition of Video Gamers as used in this study may be acceptable considering the original intentions of the study, but is not suitable for defining different profiles of Video Gamers. There is a difference between a gamer as defined in Pratchett's study (2005) and a Video Gamer: a gamer could play when he has the opportunity, but the Video Gamer will play as soon as the opportunity comes up, and is also interested in creating these opportunities. For example, playing a Java application once in six months on a mobile doesn't necessarily mean this person is a Video Gamer, rather, he or she was probably just bored once while waiting for the bus. A Video Gamer probably wouldn't even regard this mobile game for a real Video Game. In this study Video Gamers who are playing games at least once a month or more are of interest. Nevertheless, no explicit definition of what qualifies a Video Gamer was used, because the intention of this exploratory study was to find

new profiles and definitions of Video Gamers, and therefore a definition would probably influence the results.

In short, and in contrast to the study of Pratchett, this survey will collect data to form different profiles of Video Gamers using a cluster analysis, and not the participants' age. Also, the data was collected from around the world to be as representative as possible.

3 Qualitative Interviews – Creating the instrument

To define the right questions, interviews with experts were conducted. At this point, it has to be mentioned that there is a lot of prejudice in the gaming scene about interviews concerning Video Games. The underlying problem seems to be the Video Games' presence in today's media. Most of the articles handle about negative aspects of Video Gaming, and Video Game experts are interviewed over and over again regarding these topics. One of these negative aspects is violence in Video Games. Many experts refused to be interviewed, because they didn't want to talk about violence in Video Games anymore. Another topic people don't want to talk about is addiction. Nearly all of the experts recruited for this study mentioned, that they were asked about these two themes too many times in the past. But, when they were told that these two themes are not the topic of the interview for this study, they agreed to be interviewed.

To generate the items for the questionnaire, some interviews were conducted with people who were knowledgeable about Video Gamers, their language, their (daily) environment and their habits. The interviewees had to be gamers themselves to understand the meaning of the questions they were asked. Even better would be if they also possessed knowledge about the Video Game industry. People with this kind of knowledge are some gamers, vendors and probably other scientists with experience in the field. Video Game reviewers or journalists were not a possible expert group for gathering the needed information. They certainly have a large knowledge about Video Games, but may not be in contact with the gamers in their daily life or work, so they know the games, but not the gamers. Unfortunately no scientists could be reached. Gamers and vendors seem to have the most contact with different Video Gamers and both talk to them about the Video Games, their favourites, how much they are willing to pay and all the things a good vendor would know about his clients. Therefore, we chose to interview gamers and vendors.

Finally, four experts could be recruited for an interview. These four interviewed people were all male and their mean age was 24 years. Two of them were vendors, one owned a Video Game store and the last one was a student who sold Video Games in a store. They all played Video Games in their spare time and therefore spoke the adequate language Video Gamers use. They had national and international experience either selling games or organizing or playing in Video Game tournaments. The interviews were held in a meeting room in a neutral office to minimize any disturbance or influence (the questions are included in the appendix). They were conducted in a 2-month period and had a mean length of 60 minutes. The whole

interview was written down and recorded on audiotape, after the interviewees were informed and gave their consent. The used language was German.

The answers were then categorized into several topics for qualitative analysis: “money”, “motivation”, “genre”, “time”, “addiction” (although the interviewees didn’t wish to be asked about addiction, they talked about it), “identification”, “compensation”, “competition” and “others”. The items (for the following online survey) generated using this data were sorted using these categories for a better overview.

The analysis showed that all of the interviewees used similar groups of Video Gamers. These were the *“Pro or Hardcore Gamer”*, the *“Avatar Gamer”*, the *“Casual Gamer”* and *“Kids”*. The names of these groups are freely chosen only to make it easier to remember the content of each group.

The *“Pro or Hardcore Gamer”* was mainly described by spending up to 8 hours of gaming per day and having the most effective equipment to play their favourite Video Games. Competition seemed to be an important factor for them when choosing a Video Game. The genre can be different; they mostly play for success and the respect. What differs the *“Pro Gamer”* from the *“Hardcore Gamer”* is the fact, that the *“Pro Gamer”* earns money with gaming, for example in competitions or as a tester.

The *“Avatar Gamer”* seems to be this kind of gamer who is close to addiction. This group is described to play because they want to escape reality and to feel the success they don’t have in real life. They mostly show a lack of self-confidence and play over days or even weeks without rest. Many times they play RPG’s.

The *“Casual Gamer”* is not easy to describe. This group was described to consist of Video Gamers with no difference in gender and to be mainly interested in playing with others. Also they don’t spend much time playing Video Games and can do so without expensive equipment.

The *“Kids”* were also mentioned by all of the interviewees. They are characterized by having less money to spend on Video Games and that they mostly have a “real life” besides gaming.

The interviewees mentioned also three smaller groups. Two of them were subgroups of the *"Casual Gamer"*. The first one is identical to the main group, but was additionally described as being an uninformed and spontaneous buyer of Video Games. The second subgroup was described to buy all kind of consoles, games and the additional equipment for the optimal gaming experience. But, they were also mentioned not to play these Video Games, but to be proud of how many of them they own. The last, rarely mentioned group was the *"Wannabe Gamer"*. These group members were described with nearly the same characteristics as the main group "Pro or Hardcore Gamer", but without success in gaming. They play as long as the main group, but never reach their gameplay skills and respect in the Video Game community.

4 First study – Testing the instrument

A first online survey was conducted to validate the quality of the questionnaire. The first qualitative analysis from the interviews led to 99 items. This number was too high and had the danger to lead to many dropouts (Knapp & Heidingsfelder, 1999). Therefore, the number was reduced by summarizing similar items, and by minimizing the amount of questions generated for the same category (see section 3). Nevertheless, the first questionnaire had 88 items, and 11 open text commentary fields to gather as much feedback as possible.

4.1 Methodology

Most items (70) of the survey used Likert scales. In this method respondents specify their level of agreement or disagreement with a statement on a scale. A six-point scale was used with all points labelled on top of the scale (1 = positive, 6 = negative). A lower number expresses a higher level of agreement, thus more identification with the question. For the analysis the polarity of the scale was reversed, a higher value expressed a higher level of agreement. To ensure high reliability and validity, between five and seven categories for a Likert scale are recommended (Borg, 2001). With the six-point scale, participants have three options for a positive and three for a negative opinion. Thus the respondent is "forced" to choose a direction (no neutral option is provided). For this instrument an even number of options was chosen, because research shows that a neutral/middle option has several disadvantages (Rost, 2004): "totally agree", "agree", "rather agree", "rather disagree", "disagree", and "totally disagree". The questionnaire contained no items that needed special knowledge to the answer, as long as the respondent is playing Video Games. Nevertheless in an online study, and especially in this first one, it can't be excluded that people without gaming background participate. That's why an additional seventh option was used: "No answer".

Unlike Likert scales, non-Likert scale questions ask mainly about demographic data from the participants, like gender, education, experience in years in gaming, and more.

Some of these non-Likert scale questions had to be answered with a drop down menu (only one answer was possible). There were questions, which could be answered with multiple answers, for example the question about what additional equipment the participant owns ("LCD or Plasma TV", "LCD or Plasma TV HD Ready", "LCD or Plasma TV Full HD", "Surround System", "None of the above" and "No answer"). And, there was one question

where participants had to fill in the number of years they are already playing Video Games. Only one or two digit numbers could be written in the field. The last kind of answer type was the open text field. Beside the commentary fields, there was also the question about the top 3 Video Games the participants are playing at the moment (and on what system/console).

The time to complete the questionnaire was intended not to be longer than 15 to 20 minutes.
The online survey was sent to possible participants using the data pool from the Faculty of Psychology, University of Basel, Switzerland. Members of this pool agreed to be informed about studies where they can participate. Also, the link to the online survey was posted on the homepage of the Faculty with the option for students to receive experimental credit for their participation. The survey started with a short introductory text that highlighted the importance of the participants' feedback, the length of the survey and the anonymity of the enquiry. The language of this first online survey was German only and it was online for two weeks. When finished, participants had the option to take part in a raffle for an iPod and/or receive the results of this study.

In total 290 responses were registered, but only 173 were valid. 113 participants didn't finish the questionnaire, 2 participants had to be excluded, because they commented to have no understanding for Video Games at all, and 2 had to be excluded because they answered all items exclusively with the best or the worst item score. The sample size for the item analysis therefore consisted of 173 participants.

4.2 Validation of the first online survey

First, only the answers for the Likert scales were analysed. In total there were 70 Likert scale items, but only 59 were considered, because 11 questions ask about the preferred genre of Video Games. These items can't be used to define clusters in a first step (but will be integrated in the found clusters later). All "No answer" options were treated as missing values. For 13 items the polarity of the scale was reversed because the questions were asked negatively.
To avoid sample size reduction with the Listwise and Pairwise Deletion, the Expectation-Maximization Algorithm (EM) was used to replace missing values. The replacement of missing values with EM has been proven to be a valid and reliable method and outclasses the Listwise and Pairwise Deletion in many aspects (Schafer and Graham, 2002; Allison, 2001).

For interval-scaled item responses it is advisable to calculate the discrimination power with a product-moment correlation of the item score with the test score (Fisseni, 1997). Here, the discriminatory coefficients range between -.21 (item 41) and .69 (item 8). According to Borg and Groenen (1997) the lowest acceptable discriminatory power is .30. 14 items showed values below this range and will be discussed later. The rest of the items were in an acceptable to good range (see table 1).

The homogeneity examines whether the items measure the same construct and whether there are items that overlap (measure similar aspects of the construct). If the items of a test correlate with each other, it can be assumed that they measure similar aspects of the construct. In order to find different clusters with questions regarding different aspects of Video Gamers, not all of the items should be homogenous. This circumstance requires the items to be heterogeneous to cover the whole spectrum. This topic can be explored in the intercorrelation matrix (see table 17 in the appendix). Most of the correlations and the overall correlation (r = .18) are very low, but not an issue to the intention of this study. Nevertheless, problematic items will be discussed later.

Cronbach α for the first version of the questionnaire is high (α = .931), indicating a good reliability for this instrument.

Beside the statistics, the participants' comments (81 comments of different participants about different items) were taken into account for the item validation and discussion. Especially for the non-Likert scale answers the comments were a worthy input. First, the comments from each page of the survey showed which questions seemed to be understandable, or not. Then, the items were screened for missing values and/or only best or worst item scores again, but no additional questions had to be deleted. The problematic items found will be discussed later.

The validation of the first version of the questionnaire reveals that there are several problematic items that need to be modified or deleted (see next section).

Table 1. Statistical parameters of the first validation (for item description see table 16 in the appendix)

	N	*M*	*SD*	*Corrected Item-Total Correlation*	*Alpha if Item Deleted*
Item 1	173	5,16	,773	,319	,930
Item 2	173	5,43	,701	,328	,930
Item 3	172	4,59	1,301	,189	,931
Item 4	171	4,65	1,097	,626	,928
Item 5	173	4,17	1,338	,334	,930
Item 6	173	3,81	1,637	,627	,928
Item 7	173	1,15	,495	,189	,931
Item 8	173	3,45	1,675	,684	,927
Item 9	173	3,86	1,669	,637	,928
Item 10	171	1,99	1,173	,616	,928
Item 11	170	3,12	1,422	-,095	,933
Item 12	167	2,48	1,312	,107	,932
Item 13	169	3,64	1,378	,312	,930
Item 14	170	2,78	1,429	,537	,929
Item 15	172	3,39	1,353	,355	,930
Item 16	172	3,03	1,363	,290	,930
Item 17	170	4,62	1,260	,090	,932
Item 18	168	3,33	1,378	,034	,932
Item 19	172	3,31	1,304	,320	,930
Item 20	173	2,32	1,257	,571	,929
Item 21	173	2,76	1,592	,669	,928
Item 22	173	3,43	1,468	,589	,928
Item 23	173	1,87	1,032	,524	,929
Item 24	173	3,39	1,371	,613	,928
Item 25	165	3,47	1,291	,354	,930
Item 26	167	3,05	1,295	,199	,931
Item 27	169	3,82	1,386	,519	,929
Item 28	164	3,40	1,426	,232	,931
Item 29	170	3,11	1,280	,544	,929
Item 30	171	3,15	1,499	,589	,928
Item 31	171	4,60	1,146	,602	,928
Item 32	168	3,40	1,220	,193	,931
Item 33	172	3,66	1,234	,357	,930
Item 34	173	4,81	,885	,414	,930
Item 35	170	3,57	1,367	,303	,930
Item 36	170	4,29	1,242	,518	,929
Item 37	169	3,95	1,444	,527	,929
Item 38	171	1,85	1,122	,556	,929
Item 39	172	3,20	1,409	,539	,929
Item 40	163	3,63	1,154	,288	,930
Item 41	171	4,11	1,359	-,209	,934
Item 42	171	2,37	1,315	,446	,929
Item 43	168	4,18	1,417	,375	,930
Item 44	171	1,63	,993	,492	,929
Item 45	170	2,98	1,431	,649	,928
Item 46	172	1,95	1,056	,252	,930
Item 47	172	2,10	1,112	,513	,929
Item 48	172	2,52	1,512	,648	,928
Item 49	172	2,41	1,319	,497	,929
Item 50	172	1,86	1,186	,563	,929
Item 51	172	1,67	1,042	,488	,929
Item 52	171	1,42	,880	,253	,930
Item 53	169	2,23	1,113	,508	,929
Item 54	171	1,94	1,279	,434	,929
Item 55	169	2,09	1,214	,457	,929
Item 56	171	2,40	1,374	,548	,929
Item 57	171	1,67	1,084	,416	,930
Item 58	171	2,74	1,492	,427	,930
Item 59	172	2,42	1,626	,556	,928

Cronbach $\alpha_{\text{all items}} = .931$

N = 173; Missing values = EM

4.3 Item discussion

In this section the problematic items will be discussed. An item can be regarded as being problematic if the statistical parameters show insufficient values (see 4.2) and/or if analysis of users' comments (each page of the survey was provided with a free text commentary field) shows that participants misunderstood the corresponding item.

The items 3, 11, 12, 23, 41, 54, and 57 will be excluded due to their insufficient statistical parameters.

Surfing the web (item 2): Although the item difficulty of this item is high (.83), the item will not be excluded. Participants were recruited via e-mail; therefore it is not surprising that they all have relatively good Internet skills.

Make a living from Video Games (item 7): The item-scale correlation (.19) and the item difficulty (.04) are low. This question is very specific to its target group. Therefore it is not surprising that most of the participants answered very low on this item. To find different clusters of Video Gamers it is important to consider this issue. The motivation to play Video Games is different from player to player. Therefore the item will not be excluded for the moment.

Buying a Video Game on the day of its release (item 10): The item difficulty is low (.14). Some participants commented on this question that the answer depends on the Video Game and not on the fact that it will be released. So, the item shows already its potential to identify differences among Video Gamers. Therefore the item will not be excluded for the moment.

Buying Video Games on advise (item 17): Although the item-scale correlation is low (.09), the item seems to be of interest for the participants. They commented it with different reasons when they want assistance for buying a Video Game and when not. Therefore the item will not be excluded for the moment.

Buying Video Games on sale (item 18): Although the item-scale correlation is very low (.04), the item will not be excluded. It covers the same topic as "influenced by the price of a Video Game (item 11)", which was already excluded from the questionnaire. But, in contrast, the participants commented it as an important issue when buying Video Games.

Buying additional equipment for a better gaming experience (item 20): The item difficulty is low (.19), but the collected information completes the data from the demographic variables (non-Likert scales) about the Video Gamers' home equipment. Therefore the item will not be excluded.

Happiness based on gaming achievements (item 24): The item is commented to be formulated not clearly enough. For example, a participant asked if "Erfolg" is in contrast to "Misserfolg". This was not the intension. The problem seems to be, that "Erfolge" is a term used on one console (Xbox 360, Microsoft) for special achievements. Therefore, the question will be changed to: "Die in den Spielen erreichten Erfolge, resp. Zwischenziele, machen mich glücklicher".

Plug and Play (item 26): The item-scale correlation is low (.19). But the item correlates with "buying Video Games on advise (item 17)" and "simple and short Video Games (item 25)" and therefore may have a certain value. The item will not be excluded for the moment.

Gathering information about a Video Game before buying it (item 30): This item was commented not to mention the possibility to inform oneself on the Internet about a Video Game. Therefore the item will be changed to: "Vor dem Kauf eines Video Games informiere ich mich mittels Magazinen, TV-Sendungen oder Internet darüber".

Preferring commercial Video Games (item 32): The item-scale correlation is low (.19). This might be because of the way the question is formulated. However, the item correlates with "media presentation of Video Games (item 19)" and "gaming because of boredom (item 35)". Therefore the question will be changed to: "Ich bevorzuge kommerzielle Video Games, die in der Mehrheit beliebt sind".

Obtaining reputation with gaming achievements (item 38): The item difficulty is low (.13). The question seems to be formulated in a too direct way, so the participants misunderstood it. Therefore the question will be changed to: "Ich finde es gut, dass heutzutage alle online sehen können, wie gut ich meine Video Games spiele".

Gaming as much as possible (item 44): The item difficulty is low (.1). This question has the same problem like "preferring the virtual reality over the real one (item 23)", which already was excluded. It is not clear if the participants answer honest to this item (social desirability). Therefore, the question will be changed to: "Ich kann es kaum erwarten nach Hause zu kommen und gleich mit dem Spielen zu beginnen".

Other things are more important than gaming & work is suffering from gaming habits (items 46 & 47): The item difficulties of these items are low (.13, resp. .15). The problem seems to be that the questions intention is to ask for the participants' addiction to play Video Games, nevertheless they are formulated quite softly. Other items (see items 50, 51 & 52) covering the addiction topic were formulated more directly. So it is interesting to see whether people answer differently when the question about addiction is more apparent. Therefore, these items will not be excluded.

Unhappy without Video Games, others worry about me & having more online friends than real ones (items 50, 51 & 52): The item difficulties of these items are low (.13, .1, resp. .07). These items are about addiction and are formulated too directly. Because this study is not about addiction, these items will be excluded. Nevertheless, the issue about addiction will not be disregarded. Items 43 to 49 (item 43: "gaming costs a lot of time"; item 45: "gaming is more important than anything"; item 48: "spending a whole night on a Video Game"; item 49: "emotional improvement by gaming") and 53 will consider this issue for this study.

No loneliness because of gaming (item 53): The item difficulty is low (.17) but the answers are normally distributed. Therefore the item will not be excluded for the moment.

Gaming online only (item 55): The item difficulty is low (.16). This may be an artefact of the participants in this pilot study. Playing online together with other players is specific to Video Gamers that play more often. So, the content of this item is important. Therefore the item will not be excluded.

Hours gaming (item 70): This question was commented to be very difficult to answer. Therefore the question will be changed to an item that can be answered with a drop-down menu. The question will be changed to: "Ich spiele ca. []". To cover all different kind of Video Gamers the selectable answers will be: "weniger als 2 – 3 Mal im Monat", "ca. 1 Mal

pro Woche", "1 – 3 Mal pro Woche", "weniger als 1 Stunde pro Tag", "1 – 3 Stunden pro Tag", "3 – 6 Stunden pro Tag", "mehr als 6 Stunden pro Tag", "keine Angabe".

Video Game genres (items 98-108): A lot of participants commented, that they miss the option "Autorennen (Action / Simulationen)". Therefore this option will be added.

The discussion of the critical items led to the deletion of ten, the modification of six and the addition of one question. Additionally, because the second online survey will be in two different languages (English and German) and spread not only in Switzerland, one question about the currency of the participants' salary was added as well. The second version of the questionnaire therefore contains 80 items in total.

5 Second study – Discovering the Video Gamer

The second questionnaire was implemented in two languages (English and German), was answered by the target group, the Video Gamers, and collected the data for the cluster analysis (see appendix).

5.1 Methodology

To reach as many people as possible, two different ways of spreading the survey were used. First, national and international Video Game magazines were contacted to call attention to the study in their newsletters or magazines. Second, in over 29 different forums worldwide the survey was published. Again, when finished, participants had the option to take part in a raffle for an iPod and/or receive the results of this study. The survey was online for one month.

In total 1632 responses were registered, but only 1059 were valid. 569 participants didn't finish the questionnaire, 2 had too many missings, and 2 had to be excluded because they answered all items exclusively with the best or the worst item score. The sample size for the item analysis therefore consists of 1059 participants.

The participants mean age is 23.5 years (N = 1053; SD = 5.9), 90.9% (963 participants) of them are male and 8.1% (86 participants) female (see figure 2 & table 2). These findings show already, that there seem to be more male Video Gamers than female ones. This goes conform to previous studies that show that female gamers represent about 20% of Video Gamers (Kaplan, 1983; Kubey & Larson, 1990). But these findings also show that the mean age of this study's participants is over 20 years, indicating that many Video Gamers are not teenagers any more.

Fig. 2. Frequencies of participants' age

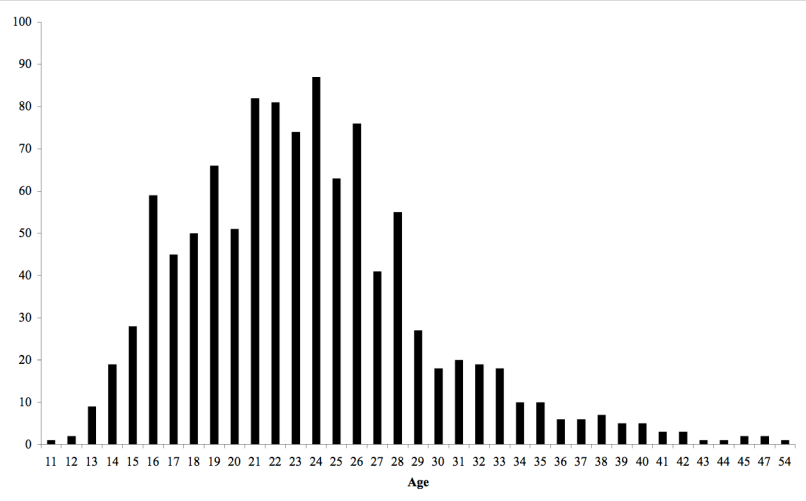


Table 2. Gender distribution

	Frequency	*%*
No answer	10	0.9
Male	963	90.9
Female	86	8.1
Total	1059	100

One of the intentions of this study was to find participants all around the world. Unfortunately this requirement was not achieved (see table 3). Although Video Gamers from 33 different countries and from 6 different continents (Africa, Asia, Australia, Europe, North & South America) participated, the biggest part (55.62%; 589 participants) was from Germany. 7 participants didn't indicate their country (residence).

Table 3. Country statistics

Country	*Frequency*	*%*
No answer	7	0.66
Albania	1	0.09
Australia	10	0.94
Austria	41	3.87
Belgium	1	0.09
Brazil	1	0.09
Canada	15	1.42
Croatia	2	0.19
Denmark	5	0.47
Estonia	2	0.19
Finland	1	0.09
France	2	0.19
Germany	589	55.62
Greece	1	0.09
Holland	3	0.28
India	1	0.09
Ireland	1	0.09
Israel	1	0.09
Japan	1	0.09
Latvia	1	0.09
Liechtenstein	2	0.19
New Zealand	94	8.88
Norway	1	0.09
Pakistan	2	0.19
Philippines	2	0.19
Portugal	1	0.09
Puerto Rico	1	0.09
Singapore	9	0.85
Sweden	1	0.09
Switzerland	150	14.16
Turkey	1	0.09
United Kingdom	30	2.83
USA	78	7.37
Virgin Islands	1	0.09
Total	1059	100

Table 4 shows the salary of the participants. 29.9% (317 participants) earn less than 10'000.- € per year, more than 40% of the participants earn less than 20'000.- € per year. 28.0% (296 participants) didn't even answer this question.

Table 4. Participants' salary in Euros

	Frequency	*%*
No Answer	296	28.00
Less than 10'000	317	29.90
10'001 - 20'000	136	12.80
20'001 - 30'000	79	7.50
30'001 - 40'000	62	5.90
40'001 - 50'000	37	3.50
50'001 - 60'000	36	3.40
60'001 - 70'000	38	3.60
70'001 - 80'000	12	1.10
80'001 - 90'000	16	1.50
90'001 - 100'000	6	0.60
More than 100'000	24	2.30
Total	1059	100

Regarding participants' education it can be seen, that most of them (59.4%; 629 participants) have either a Matura or a University degree (see table 5). This goes in line with the salary discussed above. Many participants still seem to be involved in some kind of education. However, this could be an artefact caused by the participants' age (see figure 2).

Table 5. Participants' education

	Frequency	*%*
No answer	64	6.00
No finished education / degree	127	12.00
Apprenticeship / business school / commercial school	162	15.30
Matura	356	33.60
College of higher education / University (also Bachelor degree)	273	25.80
Other	77	7.30
Total	1059	100

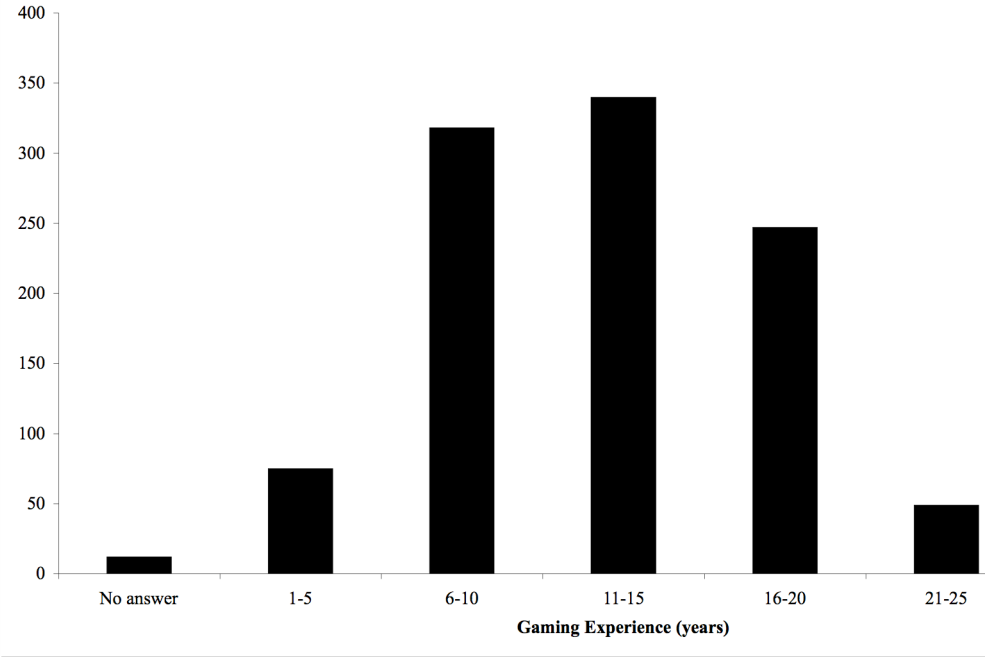
Interesting, but not surprising are the findings about participants' marital status and children: 59.0% (625 participants; see table 6) are single, and 91.5% (969 participants) have no children.

Table 6. Participants' marital status

	Frequency	*%*
No answer	49	4.60
Single	625	59.00
In relationship	300	28.30
Married	78	7.40
Divorced	6	0.60
Widow/er	1	0.10
Total	1059	100

Figure 3 shows, that most participants have gaming experience between 8 and 20 years.

Fig. 3. Frequencies of participants' experience in video gaming



5.2 Results

In this section, the second version of the online survey will be validated. Then a factor analysis, and finally a cluster analysis will be run.

5.2.1 Validation of the second online survey

In a first step the answers with Likert scales were analysed. In total there were 61 Likert scale items, but only 41 where taken into account because 8 items were excluded before validation

(see section 5.2.2) and 12 questions deal with the preferred genre of Video Games and are not fit for defining clusters (but will be integrated in the clusters found later). All “No answer” options were treated as missing values. For 2 items the polarity of the scale had to be reversed because the questions were asked negatively.
To avoid sample size reduction with the Listwise and Pairwise Deletion, again the Expectation-Maximization Algorithm (EM) was used to replace the missing values.
The discrimination power was calculated with the product-moment correlation of the item score with the test score (Fisseni, 1997). Here, the discriminatory coefficients ranged between .12 (item 17) and .60 (item 33). No negative values were found. According to Borg and Groenen (1997) the lowest acceptable discriminatory power is .30. 13 items fall below this category. The rest of the items are in an acceptable to good range (see table 7).

The homogeneity examines whether all 41 items of the questionnaire measure the same construct and whether there are items that overlap (measure similar aspects of the construct). This topic can be explored in the intercorrelation matrix (see table 19 in the appendix). Most of the correlations and the overall correlation (r = .16) are very low, but not an issue to the intention of this study.

Cronbach α for the second version of the questionnaire is again relatively high (α = .889), indicating a good reliability for this instrument. The difference between Cronbach α of the first and the second questionnaire is small and can be ignored, as both values are high.

Beside the statistics, the participants’ comments (162 comments of different participants about different items) were taken into account for the item validation and discussion. Especially for the non-Likert scale answers the comments were a worthy input. The problematic items are discussed in section 5.2.2.

Table 7. Statistical parameters of the second validation (for item description see table 18 in the appendix)

	N	*M*	*SD*	*Corrected Item-Total Correlation*	*Alpha if Item Deleted*
Item 1	1058	5,3951	,74512	excluded	excluded
Item 2	1054	5,6186	,57213	excluded	excluded
Item 3	1046	5,0641	1,15195	,215	,889
Item 4	1046	5,1071	1,24432	,219	,889
Item 5	1052	4,6388	1,40569	,405	,886
Item 6	1026	1,2934	,90672	excluded	excluded
Item 7	1053	4,0038	1,67400	,472	,885
Item 8	1052	4,4125	1,60724	,425	,886
Item 9	1049	3,1954	1,44523	,478	,885
Item 10	1056	3,9403	1,46208	,215	,889
Item 11	1039	3,8094	1,47695	,500	,884
Item 12	1053	3,2669	1,45203	,176	,890
Item 13	1048	2,8845	1,45320	,201	,889
Item 14	1053	1,7474	1,09909	,138	,890
Item 15	1049	2,8008	1,3512	excluded	excluded
Item 16	1049	3,2421	1,39400	,232	,889
Item 17	1056	3,1951	1,50947	,414	,886
Item 18	1052	3,7338	1,66439	,554	,883
Item 19	1051	3,9239	1,34657	,416	,886
Item 20	1049	4,1144	1,22641	,534	,884
Item 21	1014	4,0986	1,23463	,119	,890
Item 22	1050	3,2876	1,46362	excluded	excluded
Item 23	1047	4,6266	1,17045	,215	,889
Item 24	1031	3,6537	1,31584	,197	,889
Item 25	1042	3,5643	1,21003	,365	,887
Item 26	1057	5,0568	1,11998	,217	,889
Item 27	1055	5,3735	,69891	excluded	excluded
Item 28	1027	3,5560	1,18121	,311	,887
Item 29	1050	4,0552	1,30731	,374	,886
Item 30	1057	5,3084	,64510	,279	,888
Item 31	1051	3,8906	1,40422	,302	,888
Item 32	1053	4,9772	1,03891	,452	,886
Item 33	1052	4,5067	1,20218	,297	,888
Item 34	972	3,3724	1,44561	,597	,883
Item 35	1042	3,5605	1,46319	,578	,883
Item 36	998	4,0681	1,19316	,226	,889
Item 37	1037	2,8129	1,49313	,391	,886
Item 38	1052	3,5627	1,38939	,582	,883
Item 39	1054	3,1613	1,31922	,602	,883
Item 40	1052	3,5190	1,31977	,512	,884
Item 41	1052	2,1160	1,10093	excluded	excluded
Item 42	1032	2,5107	1,40177	excluded	excluded
Item 43	1055	3,5223	1,65107	,446	,885
Item 44	1047	2,9752	1,46709	,511	,884
Item 45	1027	2,9523	1,43088	,497	,884
Item 46	1052	2,6388	1,43715	,425	,886
Item 47	1053	3,0389	1,44329	,492	,884
Item 48	1054	3,2533	1,43202	,483	,885
Item 49	1051	3,1380	1,60505	,404	,886

Cronbach $\alpha_{\text{all items}}$ = .889

N = 1'059; Missing values = EM

5.2.2 Item discussion

In this section the excluded items of the second version of the questionnaire will be discussed. Excluded items will be disregarded for the clusters analysis.
An item can be regarded as being problematic if the statistical parameters show insufficient values (see 5.2.1) and/or if analysis of users' comments shows that participants misunderstood the corresponding item.

Using a computer (item 1): This item asks the participants about their ability to use a computer. Over 87% (931 participants) answered to this question with a value of 5 or 6. This is probably because the survey was spread via Internet and the target group are Video Gamers, which usually use computers quite a lot. The item has little discriminating value and was disregarded.

Surfing the web (item 2): 95% (1010 participants) answered to this question with a value of 5 or 6. There was no answer below 4. The item showed the same problem in the first version of the questionnaire. There is no reason for taking this item into account for the cluster analysis. Therefore the item was excluded.

Make a living from Video Games (item 6): The idea was to find a group corresponding to this question (people that earn money for a living by playing Video Games). Here, 90% (957 participants) answered to this question with a value of 1 or 2. Therefore, the item has no discriminating value and was disregarded.

Buying Video Games on sale (item 15): This item was already problematic in the validation of the first questionnaire. In contrast to the comments from the participants from the first survey, the target group (Video Gamers) didn't state any importance in their comments for this item. Therefore, the item was excluded.

Plug and Play (item 22): This item was excluded because it already was problematic in the validation of the first questionnaire and the nature of the question seemed not to be adequate for today's software products. The desire for usability seems to be important for all Video Gamers, leading to little discriminatory value.

Happiness while gaming (item 27): This item asks the participants if playing Video Games makes them happy. It seems to be a superfluous question, because over 89% (948 participants) answered this question with a value of 5 or 6. The item shows no discriminating value and therefore was excluded.

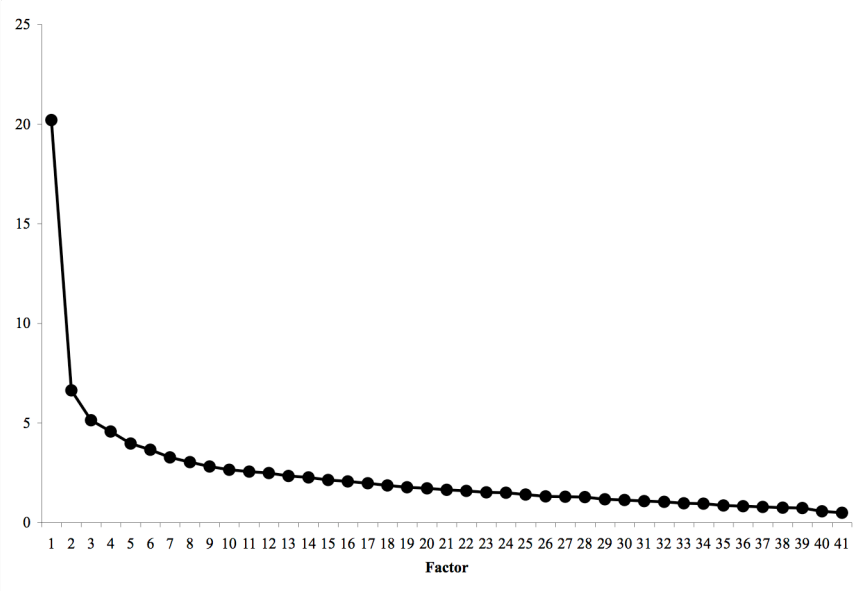
Other things are more important than gaming & work is suffering from gaming habits (item 41 & 42): These items already were problematic in the validation of the first questionnaire. Over 89% (956 participants), resp. 72% (769 participants) answered these questions with a value of 3 or below. Also, there were several comments about this questions, like: *"I realized, that this question is about addiction,…"*. This shows that people perceived these questions as addiction items. This might be a reason why most of them answered low on these questions (social desirability). The items show no discriminating value and were disregarded.

5.2.3 Exploratory factor analysis

To analyze whether items can be grouped into factors, an exploratory factor analysis was conducted (principal component analysis).

The highest correlation was .77, the overall correlation was very low (.16) and all commonalities were higher than .42. The Kaiser-Meyer-Olkin-Criteria (KMO) was .87 and the Bartlett-Test of Sphericity was significant ($\chi^2(820, 1'059) = 9619.367$, $p < .01$). Looking at the Anti-Image correlation-matrix, all measures of sampling adequacy were higher than .62. In the end, one factor explained 20.2% and the second factor only explained 6.6% of the variance (see figure 4). The reason for this seems to be the heterogeneous nature of the questionnaire. Therefore, no meaningful factors could be extracted.

Fig. 4. Screeplot from factor analysis



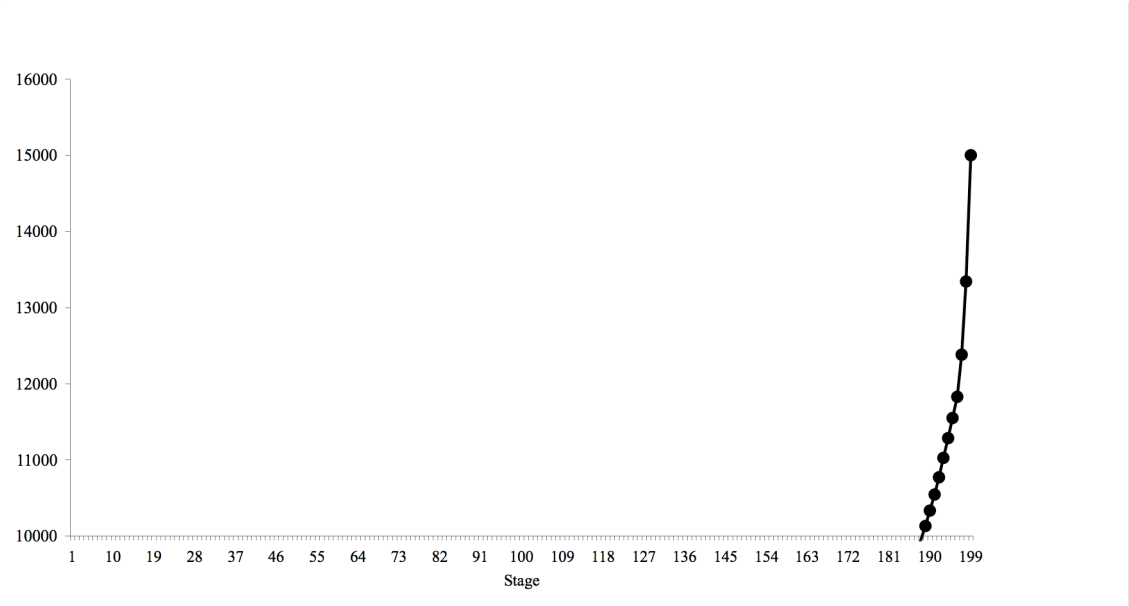
5.2.4 Cluster analysis

The Ward method is used to group items, that increase the variance within the group the fewest. By doing so, clusters as homogenous as possible and with similar sizes are created (Backhaus et al., 2006). It was used to identify the possible number of clusters, before calculating with the whole dataset, which makes sense in this case with over 1000 participants and 41 items.

This hierarchical cluster analysis was calculated with 200 randomly selected participants using the squared Euclidean-Distance. The resulting dendrogram (see figure 9 in the appendix) proposes 4 clusters (shown with the horizontally distance lines). The longer such a horizontally line is, the more it indicates a separate cluster. The resulting agglomeration schedule (see figure 5, and table 20 in the appendix) shows a first raise of the coefficient at stage 196, indicating 4 clusters as well.

In consideration of these findings, the cluster analysis will be run with 4 clusters.

Fig. 5. Agglomeration schedule: coefficients



A cluster analysis using the K-Means Cluster method was conducted with 41 Likert scale items to classify the 1059 Video Gamers. For these calculations the EM had to be used, because otherwise 30.4% (322) of all participants would have been eliminated for the cluster analysis.

The distances between the final cluster centers and the numbers of cases in each cluster can be seen in table 8 and 9.

Table 8. Distances between final cluster centers

Cluster	*1*	*2*	*3*	*4*
1		5.768	10.523	5.867
2	5.768		5.672	4.566
3	10.523	5.672		5.867
4	5.867	4.566	5.867	

Table 9. Number of cases in each cluster

Cluster	*N*
1	299
2	292
3	208
4	260

When screening all items by analyzing their mean distribution, it seemed again, using 4 clusters makes most sense to name and identify different groups of Video Gamers (see table 10).

Table 10. Mean distributions

	Cluster			
	1	*2*	*3*	*4*
Item 3	5.42	5	4.71	5.03
Item 4	5.46	5.38	4.42	4.95
Item 5	5.33	4.32	3.59	5.02
Item 7	5.15	4.86	2.6	2.84
Item 8	5.42	5.13	3.22	3.39
Item 9	4.13	3.14	2.06	3.09
Item 10	4.41	3.73	3.54	3.96
Item 11	4.8	4.02	2.61	3.39
Item 12	3.62	2.97	2.96	3.43
Item 13	3.22	2.82	2.5	2.89
Item 14	2.01	1.59	1.72	1.65
Item 16	3.79	3.08	2.89	3.08
Item 17	4.03	2.93	2.18	3.35
Item 18	4.98	4.09	2.15	3.16
Item 19	4.75	3.94	3.18	3.56
Item 20	4.91	4.09	3.13	4
Item 21	4.19	4.46	3.78	3.84
Item 23	4.87	4.82	4.25	4.42
Item 24	3.98	3.2	3.15	4.17
Item 25	4.04	3.2	2.94	3.92
Item 26	5.3	5.26	4.57	4.93
Item 28	4.09	3.26	3.05	3.67
Item 29	4.67	4.11	3.38	3.83
Item 30	5.56	5.31	5.03	5.24
Item 31	4.59	3.64	3.35	3.81
Item 32	5.53	4.99	4.3	4.86
Item 33	4.88	4.53	4.01	4.44
Item 34	4.41	2.88	2.02	3.65
Item 35	4.68	3.18	2.26	3.73
Item 36	4.34	4	3.54	4.22
Item 37	3.58	2.3	1.94	3.19
Item 38	4.64	3.56	2.3	3.32
Item 39	4.24	3.15	1.98	2.87
Item 40	4.37	3.53	2.42	3.41
Item 43	4.55	3.59	2.31	3.22
Item 44	4.06	2.92	2	2.58
Item 45	3.95	2.7	2.01	2.87
Item 46	3.38	1.82	1.62	3.53
Item 47	3.89	2.32	1.91	3.77
Item 48	4.15	2.77	2.15	3.65
Item 49	3.92	2.66	2.17	3.56

A multivariate analysis of variance using post hoc multiple comparisons with Scheffe has been run to see if the item means are different between the four clusters (see table 21 in the appendix). As can be seen, most of them are significantly different. However, this is not surprising when calculating with an *N* of over 1000. Nevertheless, using 4 clusters has been reconfirmed again.

In order to test the proposed number of clusters, another cluster analysis with a randomly selected sub sample of 100 participants was conducted. As can be seen in table 11, the K-Means Cluster method allocated the sub sample in a similar way to the whole dataset. Both results show the same pattern with cluster 1 being the biggest group, cluster 2 and 4 in the middle, and cluster 3 the smallest group.

Table 11. Comparisons of numbers in each cluster between the whole dataset and sub sample

Cluster	*1059 Participants*		*100 Participants*	
1	299	28.2%	44	44%
2	292	27.6%	31	31%
3	208	19.6%	4	4%
4	260	24.6%	21	21%

However, to describe the clusters, not all of the items were considered. Nevertheless most of the items were statistically different between the clusters, their means weren't different enough for the interpretation, like for example "playing Video Games on a PC/Mac (item 3)" where the largest difference between two clusters is .71. An item like this doesn't seem to be appropriate to argue for different profiles. Therefore, the items 3, 4, 5, 10, 12, 13, 14, 16, 21, 23, 24, 25, 26, 28, 29, 30, 31, 33, 36 and 39 were disregarded for the clusters interpretation.

All other items not considered so far, were added to the according clusters, by comparing the participants' ID-numbers. In table 12, the descriptive statistics of these items can be seen (except "residence (item 55)", whose descriptive statistics are shown in section 5.1).

Table 12. Descriptive statistics for non-Likert scale (for item description see table 18 in the appendix)

	N	*Range*	*M*	*SD*
Item 50	1053	43	23.48	5.91
Item 51	1059	2	1.07	0.29
Item 52	1059	11	2.18	2.61
Item 53	1059	5	1.80	1.31
Item 54	1059	5	2.83	1.30
Item 56	1059	5	1.41	0.73
Item 57	1059	2	1.89	0.38
Item 58	1059	2	1.48	0.56
Item 59	1059	2	1.14	0.77
Item 60	1047	32	13.18	5.34
Item 61	1059	7	4.08	1.46
Item 62	1059	1	0.29	0.45
Item 63	1059	1	0.44	0.50
Item 64	1059	1	0.22	0.41
Item 65	1059	1	0.21	0.41
Item 66	1059	1	0.22	0.41
Item 67	1059	1	0.34	0.47
Item 68	1059	1	0.26	0.44
Item 69	1059	1	0.39	0.49
Item 70	1059	1	0.33	0.47
Item 71	1059	1	0.37	0.48
Item 72	1059	1	0.34	0.48
Item 73	1059	1	0.11	0.32
Item 74	1059	1	0.11	0.32
Item 75	1059	1	0.24	0.43
Item 76	1059	1	0.17	0.37
Item 77	1059	1	0.41	0.49
Item 78	1059	1	0.29	0.45
Item 79	1059	1	0.63	0.48
Item 80	1059	1	0.42	0.49
Item 81	1059	1	0.04	0.20
Item 82	1059	1	0.09	0.28
Item 83	1059	1	0.14	0.35
Item 84	1059	1	0.49	0.50
Item 85	1059	1	0.64	0.48
Item 86	1059	1	0.47	0.50
Item 87	1059	1	0.65	0.48
Item 88	1059	1	0.19	0.40

5.2.5 The Clusters Interpretation

Video Gamers in *cluster 1* can be named as *"Gamer for a Living"*. These Video Gamers would do everything for gaming. They have the highest means in most items. When analyzing their top 4 ratings ("writing reviews for free Video Games (item 7)", "writing reviews for free hardware (item 8)", "Video Gaming as a professional (item 18)" & "happiness based on gaming achievements (item 20)") it can be seen, that they would love to receive Video Games or any hardware for free in order to write reviews. They probably see the free Video Game or hardware as their payment. Regardless that they can't use this kind of payment to buy food or other essential stuff, this leads to the reason, why their 3rd top rating, item 18 is that high.

They would love to be a professional Video Gamer (playing in tournaments for example) or a Video Game tester. At least they say they would love to earn their living with Video Games. In what way in particular can't be said with the results of this study, but might be a question for further studies. It is interesting to see that concerning their education, the members from this first cluster are not all the same (see figure 6). The biggest part has a Matura or a University degree already. But, in contrast, this group also has the highest number of members with uncompleted education.

Another special issue from this group is that playing Video Games gives them a good feeling, which is expressed with their high ratings on the items "feeling better by owning a Video Game (item 11)", "fleeing from reality (item 19)", "happiness based on gaming achievements (item 20)", "obtaining reputation with gaming achievements (item 34)", "gaming is more important than anything (item 40)", "emotional improvement by gaming (item 44)" and "no loneliness because of gaming (item 45)". They become happier when they play or succeed in their Video Games and emphasise this success. They feel better just owning a Video Game. Also, playing Video Games puts them into another world and gives them the feeling not to be alone. Playing Video Games is sometimes more important to them than other things, like going out with friends. Gaming became a part of their life and of their day.

This group plays the most compared to the others. First of all they answered high on "gaming costs a lot of time (item 38)" and "spending a whole night on a Video Game (item 43)", this shows that they know, that they play a lot. Second, more than half of this group's members play 1 to 3 hours per day or more (see figure 7).

Other important aspects of this group are, that the success from others motivates them. They practice the Video Game on and on; they try to play as much as they can, and to buy Video Games on the date of release. They don't hesitate to buy any additional equipment to increase their gaming experience. Also, they prefer Video Games that can be played in online competitions and are playable on the newest generation of Video Game hardware. The last point to mention for this group is, that they have the highest interest in the realistic presentation of violence in Video Games (item 49).

Fig. 6. Crosstab of participants' education and clusters

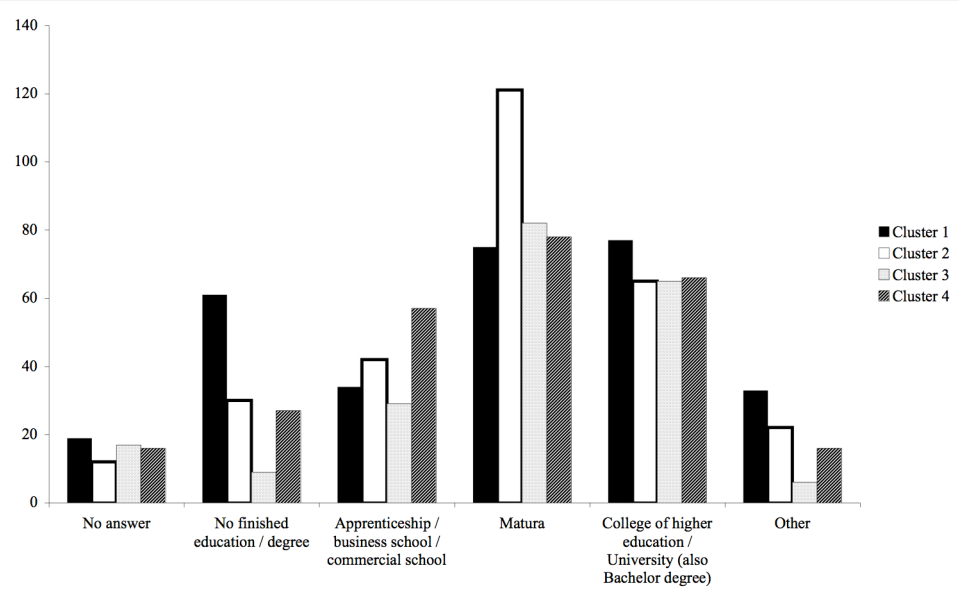
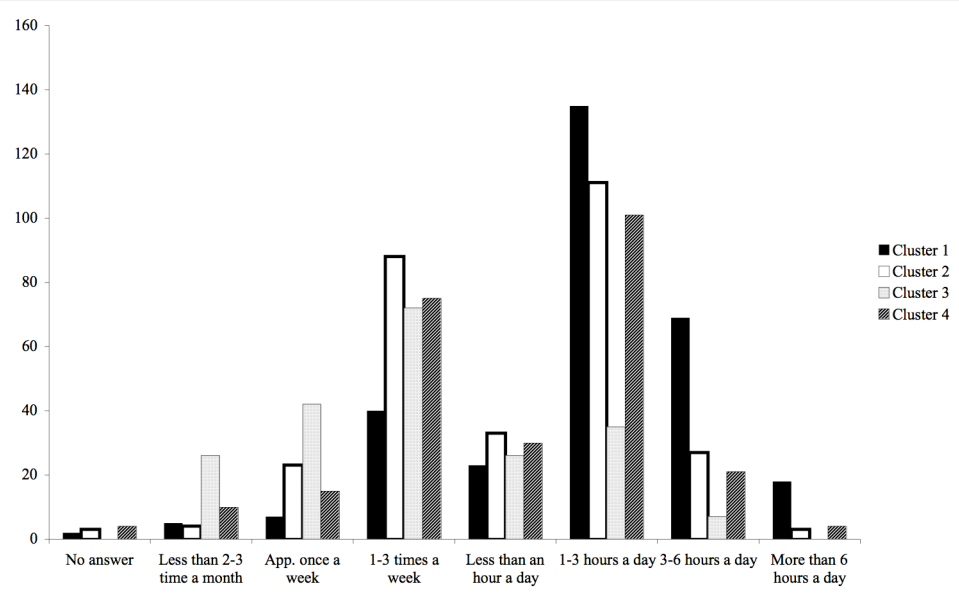


Fig. 7. Crosstab of participants' time spent playing Video Games and clusters



Video Gamers in *cluster 2* can be named *"Traditional Video Gamer"*. This group is really close to cluster 4, but different in six items especially.

First of all, this group has high ratings on "writing reviews for free Video Games (item 7)" and "writing reviews for free hardware (item 8)", but not as high as the first group. This means, that this group is also very interested in receiving free stuff in order to write reviews, but when regarding "feeling better by owning a Video Game (item 11)", "Video Gaming as a

professional (item 18)", "fleeing from reality (item 19)" and "happiness based on gaming achievements (item 20)", they show some respect, fear or realism. It can be said, that they see free Video Games or hardware as a gift for their work writing a review, especially because item 18 is lower than in the first group. The feelings they get through playing Video Games are far away from the high ratings in the the first group. In short, they like the feeling when playing Video Games, but it doesn't make their life better. As already mentioned before, this group is quite close to cluster 1, but doesn't care about the items 7, 8 and 18 in contrast.
When having a look at figure 6, it can be seen, that more than half of the members of this group are relatively high educated, especially because they are the biggest group in the Matura category.
Regarding other items like "gaming costs a lot of time (item 38)", "gaming is more important than anything (item 40)" and "spending a whole night on a Video Game (item 43)", they show average scores, indicating that they rarely spent too much time playing Video Games. They are just "in the middle" regarding these topics. A better understanding is generated when having a look at figure 7.
The *"Traditional Video Gamer"* doesn't care if a Video Game has a realistic presentation of violence, but on the other hand, is also not against violence in Video Games (item 49).
Regarding "gaming on newest console generation only (item 37)", "gaming online only (item 46)" and "gaming competitional Video Games only (item 47)", this group actually prefers Video Games not addressed to competition and not only playable on the newest console. Also, their Video Games don't need an online feature. These last mentioned items are again differentiators to cluster 1.

Video Gamers in *cluster 3* can be named *"Casual Gamer"*. This group has the lowest item scores of all 4 clusters. They answered to most of the items with a value between 2 and 3.
Probably the most expressive statement of this group – in contrast to the others – is on "gaming as much as possible (item 39)". They clearly declare, that they do not intend to play as much as they possibly could. This can also be seen in figure 7, showing the time spent playing. The biggest part of this group plays only 1 to 3 times a week. Table 13 shows that in this group a main part of participants don't own a Video Game console.
These people don't feel better when gaming; they don't feel less alone while gaming or need the Video Game to be playable online. And they wouldn't buy special equipment to have a better gaming experience. They don't think about standing up in the middle of the night to go to the Video Game seller to buy a Video Game on its release date.

Also, this group is the one that disagrees the most with realistic presentation of violence in Video Games.

But, this group has fun when playing games. They play when bored (item 31) or to reduce stress (item 29), and most of all, for amusement, like all the other groups do as well (item 30).

Table 13. Participants with no console

Cluster	*N*
1	29
2	20
3	47
4	24
Total	120

Video Gamers in *cluster 4* can be named as *"Show-Off Gamer"*. As already mentioned when the *"Traditional Video Gamer"* was explained, this group is very similar to it.

The six items ("writing reviews for free Video Games (items 7)", "writing reviews for free hardware (item 8)", "gaming on newest console generation only (item 37)", "gaming online only (item 46)", "gaming competitional Video Games only (item 47)" & "realistic presentation of violence in Video Games (item 49)"), which separate these two groups from each other the most, have already been explained above. This group doesn't really care about item 7 and 8, what is a remarkable difference in their way of handling Video Games. It seems, that this group doesn't actually care about gifts or payments. They seem to have enough money to buy them. They are also more interested in buying the additional equipment, than the *"Traditional Video Gamer"* is. As can be seen in table 14, cluster 4 has the biggest part of all participants earning more than 50'000 a year.

This group, like the first one, has an interest in the realistic presentation of violence in Video Games.

Then, in contrast to group 2 and 3, this group has a certain interest in playing competitional and online Video Games (items 46 & 47). They also care about their reputation through success in Video Games ("happiness based on gaming achievements (item 20)" & "obtaining reputation with gaming achievements (item 34)") and get motivated, when they know others being better than them ("motivated by others (item 35)") and therefore train to become better ("training for success in Video Games (item 48)"). Here it is valuable to look at figure 7 to see that their time spending pattern is nearly the same as in cluster 2. They probably have not enough time to train as much as they would like, and therefore can't reach the level of a

"Gamer for a Living". This lack of time might also be the reason, why they prefer to buy things instead of doing something for receiving free stuff.

At last it can be said, this group actually really cares about its Video Game reputation. They are public oriented with competitional and online Video Games, and on "playing in groups (item 24)", although this item doesn't separate this group strongly from others, they have the highest mean score. They like to play in groups, probably because in groups they can show what gaming skills they have.

In short, they are just proud of what they can, care about their reputation and like to show their skills.

Table 14. Salary statistics by cluster

	Cluster 1	*Cluster 2*	*Cluster 3*	*Cluster 4*	*Total*
No answer	78	85	66	67	296
Less than 10'000 a year	102	92	47	76	317
10'001 – 20'000 a year	39	42	21	34	136
20'001 – 30'000 a year	16	25	17	21	79
30'001 – 40'000 a year	20	14	12	16	62
40'001 – 50'000 a year	13	8	10	6	37
50'001 – 60'000 a year	8	4	12	12	36
60'001 – 70'000 a year	10	10	5	13	38
70'001 – 80'000 a year	3	3	3	3	12
80'001 – 90'000 a year	4	2	6	4	16
90'001 – 100'000 a year	1	1	2	2	6
More than 100'000 a year	5	6	7	6	24
Total	299	292	208	260	1059

The profiles show that there seem to be differences among Video Gamers. Not everybody plays the same amount, the same games, with the same motivation or alone or not, but nevertheless, they play. Therefore, Video Gamers are not just young male teenagers anymore. Everybody plays, but in different ways.

Participants were also asked to indicate which 3 Video Games they are playing the most, either at the moment or in the near future, and on what system they play these specific Video Games.

1047 participants answered to this open text question and only 12 did not. The most named Video Game with 69 nominations is Grand Theft Auto 4 (GTA4) for Microsoft's Xbox 360, Sony's Playstation 3 and for the PC (in the near future). On the second place with 52 nominations is Call of Duty 4: Modern Warfare (CoD4) for Microsoft's Xbox 360, Sony's Playstation 3 and for the PC. And the third most indicated Video Game with 45 nominations is World of Warcraft (WoW) for Mac and PC.

These indications go along with their appearance in today's media, and therefore, were not really surprising.

On the other hand, participants were asked to indicate (again using Likert scales) how "cool" they would rate the most popular genres of Video Games (see figure 8).

Fig. 8. Mean coolness ratings of Video Game genre for all clusters

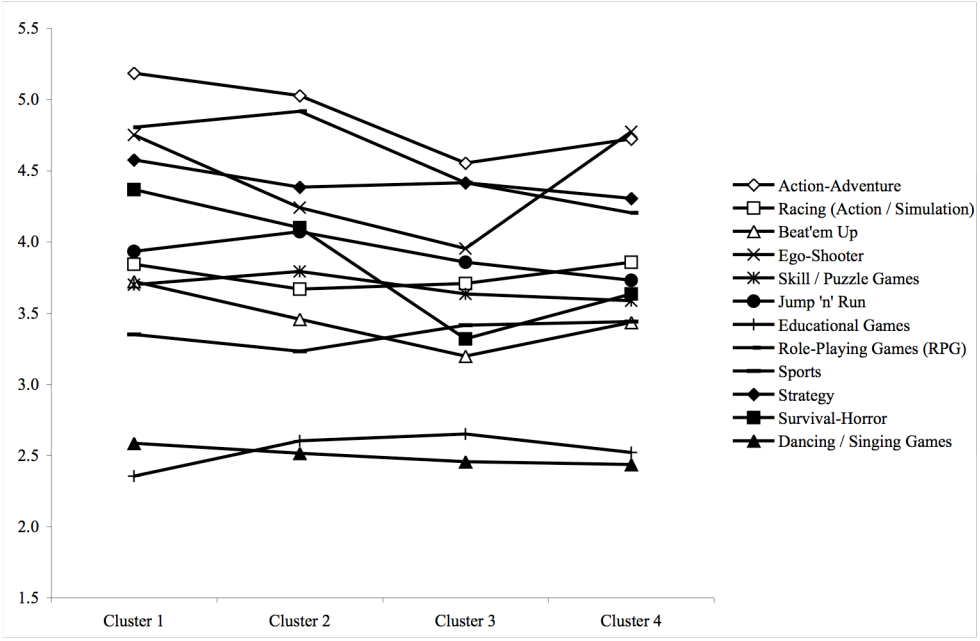


Figure 8, that the Action-Adventure games genre is the most popular one within 3 of 4 clusters. The genre that is the most popular in the forth cluster is the genre Ego-Shooters. Second and third most preferred genres are RPG's and Strategy games. These findings are similar to those from a study about Video Gamers in Europe (Nielsen Interactive Entertainment, 2008), except the genre of Action-Adventure games. They claimed, that in Europe Strategy games are the most preferred category, RPG's second, and Shooters third.
The genre of Educational Games and Dancing / Singing Games are likewise unpopular, sharing the lowest mean scores for all clusters.

Cluster 1, the *"Gamer for a Living"* has the highest ratings for 5 of the 12 genres. These are the genres of Action-Adventure, Beat'em Up, Strategy, Survival-Horror, and Dancing / Singing Games. The group shows again its "love" for Video Games. As the genre of Action-Adventure is popular in general, it is not surprising that this group also scores high on this genre. Strategy games and RPG's (where this group reached second place, but nevertheless

scored high) for example are Video Games that need a lot of time to play, not only at once, but also over weeks or months. And, as this group was identified to be the one to play the most, it is not surprising that they scored this high on these genres. The genre of Survival-Horror games seems to be the one where the *"Gamer for a Living"* apparently scores the highest in contrast to all other groups. The reason might be that this genre is somehow special compared to all the others. Video Games from this genre are mostly violent and designed to scare the player. To play these games, people can't have an aversion to violence and / or horror films, a characteristic of this group.

Cluster 2, the *"Traditional Video Gamer"* scores the highest in 3 of 12 genres, Skill / Puzzle Games, Jump 'n' Run, and RPG's. As already mentioned before, this group doesn't care about modern aspects of gaming, like gaming online or on newest consoles only. Therefore, these findings are not surprising and reconfirm this cluster. Skill / Puzzle Games don't need high quality graphics or an online feature to be played. A representative example for this genre is one of the most famous Video Games around the world ever: Tetris (1985). This game is all about problem solving. The genre of Jump 'n' Run even holds the best selling Video Game of all time, selling over 40 million copies worldwide (Guinness World Records Gamer's Edition, 2008): Super Mario Bros. Again, like Skill / Puzzle Games, this genre isn't built on high quality graphics or online features, but on the simple idea of running through 2D levels and jumping over obstacles basically. Therefore, these genres fit well into this cluster.

Cluster 3, the *"Casual Gamer"* reconfirms its refusal of realistic presentation of violence in Video Games. Compared to the other clusters, they have the lowest means for the genres Ego-Shooter, Survival-Horror and Beat'em Up, which are those with the most realistic presentation of violence. For all other genres, they score similar to the other groups. This can be explained by the previous finding, that this is the group with the lowest score on having own consoles and therefore probably prefer to play with others at their places. They don't have much choice; they have to play what is available.

Cluster 4, the *"Show-Off Gamer"* shows one interesting finding in particular. While having similar means in all genres to cluster 1 and 2, they have a very low mean score for the genre of RPG's. As already mentioned, this group of gamers doesn't have enough time to play. Therefore, their low score in this genre is not surprising. On the other hand, this group has the highest mean scores in Racing, Ego-Shooter, and Sports games. These findings reconfirm the

group's preference for competitional Video Games. Racing and Sports games are simulations of real sports, and therefore represent their competitional aspect. But above all, Shooter games, which is the absolutely top rated genre by this group, are one of the genres, which are played in public tournaments the most. Also, beside Survival-Horror and Beat'em Up games, the genre of Ego-Shooter has a realistic presentation of violence, a distinguishing variable for this group as well.

In the end, the Video Games named the most, and the genres rated by their "coolness", went in line with the four clusters found in this study.

"Missing data" has no influence on these findings. The lowest mean of the genre with the most missings (Beat'em Up, N = 1019) is above value 3 ("kind of cool"), indicating an average likeness for this genre for all clusters. Therefore, missing data does neither cause the high ratings on Action-Adventure games nor the low ratings on Dancing / Singing Games.

The ANOVA in table 15 shows, that 6 genres show significant differences between the 4 clusters. These are the genres Action-Adventure, Beat'em Up, Ego-Shooter, Jump 'n' Run, RPG's and Survival-Horror, which have already been explained above.

Table 15. ANOVA for the distribution of Video Game genre

		Sum of Squares	*df*	*M*	*F*	*Sig.*
Action-Adventure	Between Groups	53.748	3	17.916	16.767	0.00
	Within Groups	1118.756	1047	1.069		
	Total	1172.504	1050			
Racing (Action / Simulation)	Between Groups	10.184	3	3.395	1.527	0.21
	Within Groups	2332.684	1049	2.224		
	Total	2342.868	1052			
Beat'em Up	Between Groups	65.615	3	21.872	10.616	0.00
	Within Groups	2099.482	1019	2.06		
	Total	2165.097	1022			
Ego-Shooter	Between Groups	126.038	3	42.013	18.872	0.00
	Within Groups	2301.843	1034	2.226		
	Total	2427.881	1037			
Skill / Puzzle Games	Between Groups	4.677	3	1.559	0.867	0.46
	Within Groups	1878.867	1045	1.798		
	Total	1883.544	1048			
Jump 'n' Run	Between Groups	16.012	3	5.337	2.711	0.04
	Within Groups	2055.667	1044	1.969		
	Total	2071.679	1047			
Educational Games	Between Groups	11.396	3	3.799	2.104	0.10
	Within Groups	1863.291	1032	1.806		
	Total	1874.687	1035			
Role Playing Gamens (RPG)	Between Groups	86.978	3	28.993	11.765	0.00
	Within Groups	2587.459	1050	2.464		
	Total	2674.437	1053			
Sports	Between Groups	6.565	3	2.188	0.722	0.54
	Within Groups	3182.153	1050	3.031		
	Total	3188.718	1053			
Strategy	Between Groups	9.753	3	3.251	1.81	0.14
	Within Groups	1891.66	1053	1.796		
	Total	1901.413	1056			
Survival-Horror	Between Groups	179.826	3	59.942	23.098	0.00
	Within Groups	2693.702	1038	2.595		
	Total	2873.528	1041			
Dancing / Singing Games	Between Groups	6.951	3	2.317	0.95	0.42
	Within Groups	2527.511	1036	2.44		
	Total	2534.462	1039			

6 Discussion

This study identified 4 different profiles of Video Gamers. The *"Gamer for a Living"*, who is definitely the one who plays the most, plays all genres, does anything for gaming and would love to earn his living by playing Video Games. He corresponds to the *"Pro or Hardcore Gamer"* from the interviews held initially.

Then, there is the *"Traditional Video Gamer"*. This group is quite close to the *"Show-Off Gamer"*, but shows more motivation for Video Games themselves. He can be seen as the typical stereotype many people have from a gamer: young, male and student. Also, his preferred genres of Video Games are "typically" to gamers ever since. In the interviews, no similar profile was mentioned.

The third profile is the *"Casual Gamer"*. These Video Gamers play occasionally and are not lunatic about Video Games like the *"Gamer for a Living"* or the *"Traditional Video Gamer"* might be. They just play to have fun and spend some spare time, probably with others. Nevertheless, their most remarkable characteristic is their constant refusal of violence in Video Games, also expressed by their genre ratings. In the interviews, this group appeared, but was also not easy to classify. The *"Casual Gamer"* seems to be a heterogeneous group of people and therefore might be of interest for further research.

The last profile found in this study, is the *"Show-Off Gamer"*. This was probably the most surprising profile to discover. These people are proud of what they have, like having a Ferrari, and they want others to know, that they are good skilled in gaming, like showing-off ones business card with a Ph. D. title on it. Therefore, it was not surprising that this group was the one that preferred competitional genres, like Ego-Shooters the most. And, especially in contrast to the *"Gamer for a Living"* and the *"Traditional Video Gamer"*, they would definitely not do anything for Video Games, but rather buy what's needed. This profile was also mentioned a few times in the interviews, but as a subgroup of the *"Casual Gamer"*. Also a group called the *"Wannabe Gamer"* was mentioned in the interviews. The combination of the before mentioned subgroup and the *"Wannabe Gamer"*, seems to fit the characteristics of the *"Show-Off Gamer"* found in this study, quite well. These findings are surprising, because a profile like this was never mentioned in any other literature or media before.

This means that 2 of the profiles mentioned in the interviews couldn't be found, the *"Avatar Gamer"* and the *"Kids"*. Possible reasons could be, that the *"Avatar Gamer"* is either too busy playing a MMORPG, as described in the profile from the interviews, or they were not regular visitors of the forums the online survey was posted, or this profile doesn't exist.

The “Kids” profile was described to be really young, and for this study, only 118 out of 1059 were 16 years old or younger. Therefore, this group could probably not be reached, because the way the online survey was spread was not a typical way to reach kids. This remains a subject for further research.

Regarding the genres, the participants had to rate, two of them were surprisingly low: Educational Games and Dancing / Singing Games. Today, especially since the appearance of Nintendo’s Wii, so called “casual” games are becoming popular. The Wii gives the player the opportunity to play Video Games without pushing any button combinations, and is therefore easy to use for beginners. As a consequence, most of the games designed for the Wii are easy to play, and suit the Video Game industry’s new target group. Educational Games and Dancing / Singing Games are “casual” games, and therefore have no need for high quality graphics, complex stories, high gameplay skills, and all other things. A possible explanation, why the mean scores for these genres were low, is, that gamers of such “casual” games are not fanatic enough about Video Games to visit Video Game forums regularly on the Internet, and therefore weren’t recruited for this study. This is another reason, why especially cluster 3, the *“Casual Gamer”* needs further research for further classification.
Two more genres need to be discussed: Beat’em Up’s and RPG’s. The reason, why the *“Gamer for a Living”* scored high on Beat’em Up games might be their strong link to Video Games, as this genre is quite infamous and mostly played in gambling houses, where the player has to pay for, and rarely made a successful appearance on home consoles, or on PC’s to this day. But this can only be assumed and remains a subject for further studies.
The *“Traditional Video Gamer”* has the highest mean score in the genre of RPG’s. This was not expected (as RPG’s need a lot of time to play), but may be explained. The *“Avatar Gamer”*, which was described in the interviews to play RPG’s, wasn’t found in this study. But this group could be a subgroup of the *“Traditional Video Gamer”*. Or this group couldn’t be found because not enough *“Avatar Gamers”* participated to form a group of their own, and therefore, mixed up with cluster 2, sharing several similarities. However, further research is needed to clarify this issue.

When researchers are looking for something, they will find it. This can be said here as well. When conducting interviews, analyzing them and then forming questions out of this qualitative analysis, it might not be surprising to find the same patterns again. This study found not exactly the same profiles like those from the interviews before. But the question is,

how to get an idea of what to ask for. Here, a lot of items couldn't be used to identify different clusters, because they had no discriminating value. This shows how difficult it is to ask the right questions.
What also might be criticized is the fact that the interviewed experts were all from Switzerland, male and young. But who knows better about Video Gamers than the chosen experts? As this study was created in Switzerland, it was at hand to find experts in the near area. But nevertheless, the experts had international experience in their expertise. And, the main group of Video Gamers are male and young. Therefore it is again not surprising that the experts were male and young as well. This way, they were closer to the target group than anybody else. And the problem of the number of interviewed experts is a problem the qualitative method always has. But, former researchers, like for example Flick (2002) justified its usage.

Another important issue to come back to is "addiction". In this survey, in both questionnaires, items about addiction were asked, some of them more directly and others more indirectly. Originally, this study had not the intention to take the addiction topic into account, not only because when asked for the first time, the interviewed experts were always afraid of this issue, but also because it was not the main focus. But after analyzing the qualitative data, the *"Avatar Gamer"* profile showed clearly a tendency to addiction. And therefore a few questions had to be integrated to cover all of the findings from the qualitative analysis. But the question now is, why everybody answered low on all of these items. As mentioned above, the addicted Video Gamers probably don't want to be recognized and therefore answer low on the apparent questions about addiction. But why did all answer low also on the indirect phrased questions (like "other things are more important than gaming (item 41)" and "work is suffering from gaming habits (item 42)")? The explanation can be easier than expected: the items were too easy to be recognized. Now, this might be another reason why the profile of the *"Avatar Gamer"* couldn't be found, but as already mentioned a few times before, it was not the intention to cover the addiction topic. And, as already mentioned in the introductory section, there are other studies taking care of this issue.

When taking a look at the Likert scales used in the online questionnaire, it can be argued that the choice for the six-point Likert scale with alternative option leads to similar problems as when an uneven Likert scale with neutral option is used. Participants can choose this option to express different phenomena: (1) they do not know how to answer the question or (2) they do

indeed have a neutral attitude and therefore are not able to express their opinion. Nevertheless, for this study, it seemed to offer the best trade-off.
Another point to be mentioned for the qualitative analysis is Cronbach α. It was high in both versions of the questionnaire. Although it was a little lower in the second version, it was still relatively high. This might not only be because of the good reliability of this survey, but also due to the phenomenon, that with many items (here: 41), Cronbach α is always high, because it is dependent on N (number of components, items in this case).

Regarding the international claim of this study, it can be argued, that there are cultural differences among the found profiles. This might be true, but can't be said yet and not with the data from this study. But the question remains and seems to be interesting for further investigation, using the 4 profiles found here under consideration of cultural aspects.

Finally, it has to be said, that unfortunately not all Likert scale items were useful to define clusters and discriminate between the clusters. The same was the case with a lot of the non-Likert scale items. Most of them could be used to describe the participants in general, but not to separate different Video Gamers. But, using this many items when trying to classify Video Gamers, this study at least found some more and some less important items, which can be used for further studies. The useless items can be discarded and the focus can be put on the important issues, which will make it a lot easier when calculating with an N of over 1000.

This study was looking for different profiles of Video Gamers and found four: the *"Gamer for a Living"*, the *"Traditional Video Gamer"*, the *"Casual Gamer"* and the *"Show-Off Gamer"*. These profiles seem to fit quite well, nevertheless it is recommended to test these profiles again. And it is also recommended to use the main items found in this study to identify different clusters, and reproduce this study with only them and probably only a few new. Further research based on this study can probably identify more detailed profiles of Video Gamers, what will not only be of interest in the market economy, but also for science.

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Glossary

A "Java application on a mobile – game": For example, a digital game version of Solitaire, which can be found on nearly any mobile device today.

Additional equipment / periphery: Today's Video Games are coded with Sourround Sound or 16:9 format, like movies on DVD's. Therefore, to enjoy the maximum of gaming experience, besides a TV, extra equipment is needed.

Beat'em Up: Beat 'em Ups (often called scrolling fighting games, fighting action games, scrolling Beat 'em Ups or sometimes brawlers) are Video Games where close combat fighting against multiple opponents is the main objective. Beat 'em Ups based around mêlée weapons are often called hack 'n' slash. Though firearms may be featured, unlike "Shoot 'em Up" games, the purpose of the game and main means of progress is hand-to-hand fighting against waves of enemies. Beat 'em Ups are a distinct genre, separate from fighting games. There are several distinguishing features. Beat 'em Ups take place over a large level, with the screen scrolling as the player moves through the stage. Competitive fighting games have evolved to include a greater variety of attacks that the player can use, while Beat 'em Ups offer fewer attacks with a simpler control scheme. In this type of fighting game, one or more players (most often two, but sometimes as many as six) each choose a unique character and team up to punch, kick, throw and slash their way through a horde of computer-controlled enemies. Thus, unlike fighting games, when several players play simultaneously, they do not fight each other.

CoD4: Call of Duty 4: Modern Warfare is a First-Person Shooter Video Game developed by Infinity Ward and published by Activision. The game breaks away from the World War II setting of previous games in the series and is instead set in modern times. The game is the first in the series to be rated Mature in North America. The story is centered around a fictional near-future conflict involving the United States, the United Kingdom, and Russia, who are fighting against Russian ultranationalists in civil war torn Russia, and rebels that have staged a coup d'état in a small Middle Eastern country. It is told from the perspectives of a United States Marine and British SAS operative, and is set in multiple locations, including the Middle East, Azerbaijan, Russia, and Prypiat, Ukraine. Call of Duty 4: Modern Warfare received considerable praise and has won numerous awards from gaming websites, including

IGN's "Best Xbox 360 Game". It was the top-selling game worldwide for 2007, reaching over seven million copies as of January 2008.

Console: A Video Game console is an interactive entertainment computer or electronic device that produces a video display signal which can be used with a display device (a television, monitor, etc.) to display a Video Game. The term "Video Game console" is used to distinguish a machine designed for consumers to buy and use solely for playing video games from a personal computer, which has many other functions, or arcade machines, which are designed for businesses that buy and then charge others to play.

Dancing / Singing Games: An example for a Dancing Game is Dance Dance Revolution, also known as Dancing Stage and abbreviated DDR. It is a long-standing music Video Game series produced by Konami. Dance Dance Revolution is the pioneering series of the rhythm and dance genre in Video Games. Players stand on a "dance platform" or stage and hit coloured arrows laid out in a cross with their feet to musical and visual cues. Players are judged by how well they time their dance to the patterns presented to them and are allowed to choose more music to play to if they receive a passing score. DDR is also viewed as an exercise tool and is in use as such in many gyms and schools.
An example for a Singing Game is SingStar (only for Sony's consoles). SingStar is a competitive karaoke Video Game. Thirteen English-language instalments of the series have been released for the PlayStation 2, with a version for the PlayStation 3 released in December 2007. The games have also undergone a number of non-English releases in various European countries. SingStar games are distributed either as the software alone, or bundled with a pair of USB microphones - one red, one blue. The games are compatible with the EyeToy camera (connectable to the console), allowing players to see themselves singing.

Educational Games: Educational Games are games that have been specifically designed to teach people about a certain subject, expand concepts, reinforce development, understand a historical event or culture, or assist them in learning a skill as they play. They include board and card games, and Video Games. Some people call these Educational Video Games edutainment because they combine education and entertainment. Closely related to the use of educational games is the use of what is known as "Serious Games". An educational computer game can be defined as an electronic medium with all the characteristics of a gaming environment that have intended educational outcomes targeted at specific groups of learners.

Video games can aid the development of proficiency by allowing users to interact with objects and manipulate variables. They are said to be particularly effective when designed to address a specific problem or teach a certain skill in curriculum subjects, where specific objectives can be stated and when deployed selectively within a context relevant to the learning activity and goal. Simple types of games can be designed to address specific learning outcomes such as recall of factual content.

Ego-Shooter: A First-Person Shooter (FPS, aka Ego-Shooter) is an action Video Game from the shooter game subgenre. Like all shooters, they involve “an avatar, one or more ranged weapons, and a varying number of enemies". FPSs are distinguished by a first person perspective that renders the game world from the visual perspective of the players’ character. The character is nominally a literal person; humanoid movement is expected.

GTA4: Grand Theft Auto IV (abbreviated as GTA IV) is a sandbox-style Action-Adventure Video Game developed by Rockstar North. It is the ninth title in the Grand Theft Auto series and the first in its fourth generation. The game is set in a redesigned rendition of Liberty City, a fictional city based heavily on modern day New York City. It follows Niko Bellic, a war veteran from Eastern Europe, who comes to the United States in search of the American Dream, but quickly becomes entangled in a seedy underworld of gangs, crime, and corruption. Like other games in the series, GTA IV is composed of elements from driving games and third-person shooters, and features "open-world" gameplay that gives players more control over their playing experience.

Jump ‘n’ Run: Platform game, or platformer, (aka Jump ‘n’ Run) is a Video Game genre characterized by jumping to and from suspended platforms or over obstacles. It must be possible to control these jumps and to fall from platforms or miss jumps. The most common unifying element to these games is a jump button; other jump mechanics include swinging from extendable arms, or bouncing from springboards or trampolines. These mechanics, even in the context of other genres, are commonly called "platforming," a verbification of the term "platform." Games where jumping is automated completely, fall outside of the genre.

Microsoft’s Xbox 360: The Xbox 360 is the second video game console produced by Microsoft, and was developed in cooperation with IBM, ATI, and SiS. The integrated Xbox Live service allows players to compete online and download content such as arcade games,

game demos, trailers, TV shows, and movies. The Xbox 360 is the successor to the Xbox, and competes with Sony's PlayStation 3 and Nintendo's Wii as part of the seventh generation of Video Game consoles.

MMORPG: A Massively Multiplayer Online Role-Playing Game (MMORPG) is a genre of Computer Role-Playing Games (CRPGs) in which a large number of players interact with one another in a virtual world. The term MMORPG was coined by Richard Garriott, the creator of Ultima Online, the game credited with popularizing the genre in 1997. As in all RPGs, players assume the role of a fictional character (often in a fantasy world), and take control over many of that character's actions. MMORPGs are distinguished from single-player or small multi-player CRPGs by the number of players, and by the game's persistent world, usually hosted by the game's publisher, which continues to exist and evolve while the player is away from the game.

Nintendo's Wii: The Wii (pronounced as the English pronoun "we") is a home Video Game console released by Nintendo. A distinguishing feature of the console is its wireless controller, the Wii Remote, which can be used as a handheld pointing device and detect movement in three dimensions. Another is WiiConnect24, which enables it to receive messages and updates over the Internet while in standby mode. The Wii competes with other seventh-generation consoles in the market, primarily Microsoft's Xbox 360 and Sony's PlayStation 3. Since its release, the Wii has consistently outsold both. The Wii is Nintendo's fifth home console, the direct successor to the Nintendo GameCube, and able to play all official GameCube games.

Racing (Action / Simulation): Racing games are either in the first or third person perspective. They may be based on anything from real world racing leagues to entirely fantastical settings, and feature any type of land, air, or sea vehicles. In general, they can be distributed along a spectrum anywhere between hardcore simulations, and simpler arcade racing games.

RPG: A Role-Playing Game (RPG) is a game in which the participants assume the roles of fictional characters. Participants determine the actions of their characters based on their characterization, and the actions succeed or fail according to a formal system of rules and

guidelines. Within the rules, players can improvise freely; their choices shape the direction and outcome of the games.

Skill / Puzzle Games: Puzzle Video Games are a genre of Video Games that emphasize puzzle solving. The types of puzzles can test many problem-solving skills including logic, strategy, pattern recognition, sequence solving, and word completion.

Sony's Playstation 3: The PlayStation 3 (officially marketed PLAYSTATION 3, commonly abbreviated PS3) is the third home Video Game console produced by Sony Computer Entertainment, and the successor to the PlayStation 2 as part of the PlayStation series. The PlayStation 3 competes with Microsoft's Xbox 360 and Nintendo's Wii, as part of the seventh generation of video game consoles.
A major feature that distinguishes the PlayStation 3 from its predecessors is its unified online gaming service, the PlayStation Network, which contrasts with Sony's former policy of relying on game developers for online play. The PS3 was also the first Blu-ray 2.0-compliant Blu-ray player on the market.

Sports: A Sports Game is a computer or Video Game that simulates the playing of traditional sports. They are extremely popular, the genre including some of the best-selling games. Almost every familiar sport has been recreated with a game, including baseball, association football, American football, boxing, wrestling, cricket, golf, basketball, ice hockey, tennis, bowling, rugby, hunting, fishing, etc. Some games emphasize actually playing the sport, while others emphasize the strategy behind the sport (manager games). Others satirize the sport for comic effect. This genre has been popular throughout the history of video games and is extremely competitive, just like real-world sports. A number of games series feature the names and characteristics of real teams and players, and are updated annually to reflect real-world changes. The genre is not to be confused with electronic sports, which is used to describe computer and Video Games that are played as competitive sports.

Strategy: Strategy Video Games are Video Games that focus on gameplay requiring careful and skilful thinking and planning in order to achieve victory. In most of these games, the player is given a godlike view of the game world, indirectly controlling the units under his command. The origin of strategy games is rooted in their close cousins, board games. Strategy games instantiated on computers generally take one of four archetypal forms, depending on

whether the game is turn-based or real-time and whether the game's focus is upon military strategy or tactics.

Super Mario Bros.: Super Mario Bros. is a platform game developed by Nintendo in late 1985 and published for the Nintendo Entertainment System, a sequel to the 1983 game, Mario Bros. In Super Mario Bros., Italian plumber Mario must save Princess Peach (Princess Toadstool in the US version) of the Mushroom Kingdom from the evil King Koopa (later known as Bowser). In two-player mode, his brother, Luigi, aids Mario in his quest. In order to save Princess Peach, the Mario Bros. must conquer the eight worlds that comprise the Mushroom Kingdom. Mario (or Luigi) must make his way to the castle in each world and defeat one of the Bowser's evil minions. In order to reach each castle Mario or Luigi must battle through three "sub-worlds" by either destroying or avoiding Bowser's henchmen. If Mario or Luigi successfully fights his way through the castle and defeats the evil minion, a Mushroom Retainer (later called Toad), is freed. Inside the eighth castle, the Mario Bros. will find Princess Peach.
As of 2008, Super Mario Bros. is the best selling Video Game of all time (selling over 40 million copies to date). It was largely responsible for the initial success of the Nintendo Entertainment System, as well as ending the two-year slump of Video Game sales in the United States after the Video Game crash of 1983. One of Shigeru Miyamoto's most influential early successes, it has inspired countless imitators, two direct sequels, and many spin-offs, as well as an entire Video Game series. Mario went on to become Nintendo's most well known mascot.

Survival-Horror: Survival-Horror is a Video Game genre inspired by fictional horror films in which the player's primary objective is to survive and/or escape a threat typical of horror fiction, usually monsters or supernatural beings of some sort. The genre makes liberal use of both Western and Japanese horror film elements. The term "Survival-Horror" was first used for the original Japanese release of Resident Evil (1996). The term has since been used to describe games of a similar nature, including some that were released before Resident Evil. The Survival-Horror genre is unique from other Video Game genres in that it is not generally defined by mechanics, but rather by theme, subject matter, and design ethic. Survival-Horror games generally depict protagonists that are relatively ordinary and have very constrained resources such as health and ammunition. They most commonly feature Action Game and/or Adventure Game elements, usually a combination of both.

Tetris: Tetris (Russian: Тетрис) is a Puzzle Game originally designed and programmed by Alexey Pajitnov in June 1985, while working for the Dorodnicyn Computing Centre of the Academy of Science of the USSR in Moscow. He derived its name from the Greek numerical prefix "tetra-", as all of the pieces contain four segments, and tennis, Pajitnov's favorite sport. The game (or one of its many variants) is available for nearly every Video Game console and computer operating system, as well as on devices such as graphing calculators, mobile phones, portable media players, PDA's and even as an Easter egg on non-media products like oscilloscopes. While versions of Tetris were sold for a range of 1980's home computer platforms, it was the hugely successful handheld version for the Game Boy (Nintendo) launched in 1989 that established the reputation of the game as one of the most popular ever. Electronic Gaming Monthly's 100th issue had Tetris in first place as "Greatest Game of All Time". In 2007, Tetris came in second place in IGN's "100 Greatest Video Games of All Time".

Video Game store: The difference between a store selling Video Games and a Video Game store is its specialisation. In a Video Game store, the sellers are Video Gamers themselves and have deep knowledge about any Video Game in their store. In a store like a supermarket, people selling Video Games don't need to have any knowledge about Video Games.

WoW: World of Warcraft (commonly acronymed as WoW) is a Massively Multiplayer Online Role Playing Game (MMORPG). It is Blizzard Entertainment's fourth released game set in the fantasy Warcraft universe, which was first introduced by Warcraft: Orcs & Humans in 1994. World of Warcraft takes place within the world of Azeroth, four years after the events at the conclusion of Blizzard's previous release, Warcraft III: The Frozen Throne. With more than 10.9 million monthly subscribers, World of Warcraft is currently the world's largest MMORPG in those terms, and holds the Guinness World Record for the most popular MMORPG. In April 2008, World of Warcraft was estimated to hold 62% of the Massively Multiplayer Online Game (MMOG) market.

Appendix

Questions from the interviews

1. *"Welche Arten von Spielern (Video Gamers) kennst Du?"*
   What kind of players (Video Gamers) do you know?
2. *"Wie würdest Du diese kategorisieren?"*
   How would you categorize them?
3. *"Warum? Was macht den jeweiligen Charakter aus? (Was haben sie für Eigenschaften, Wünsche und Motive?)"*
   Why? What defines each character? (What kind of characteristics, wishes and motives do they have?)
4. *"Wann kaufen sie ein Spiel und wann nicht? Was sind deren wichtigste Entscheidungsgrundlagen?"*
   When do they buy a game and when not? What is their decision basis?
5. *"Gibt es Spieler Kategorien, die durch die Hardware, die Software oder den Preis bestimmt werden?"*
   Are there categories, which are defined by hardware, software or the price of a game?
6. *"Welche konkreten Spiele kaufen die jeweiligen Spieler im Moment und in naher Zukunft?"*
   Which game buys each gamer at the moment or in near future?

Table 16. Items of the first online survey

Item No	*Question*
Item 1	Bedienen von Computern (Bitte schätze Dein Wissen in den folgenden Gebieten ein:)
Item 2	Surfen im Internet (Bitte schätze Dein Wissen in den folgenden Gebieten ein:)
Item 3	Einkaufen im Internet (Bitte schätze Dein Wissen in den folgenden Gebieten ein:)
Item 4	Spielen auf dem PC (Bitte schätze Dein Wissen in den folgenden Gebieten ein:)
Item 5	Spielen auf einer Konsole (auch portable Konsolen) (Bitte schätze Dein Wissen in den folgenden Gebieten ein:)
Item 6	Online Spielen (PC & Konsole) (Bitte schätze Dein Wissen in den folgenden Gebieten ein:)
Item 7	Einen wichtigen Bestandteil meines Einkommens verdiene ich mit dem Spielen von Video Games.
Item 8	Um ein Video Game kostenlos nach Hause geliefert zu bekommen, wäre ich bereit mich dafür verpflichten zu lassen, das Video Game innert vorgegebener Zeit zu Ende zu spielen und einen Bericht darüber zu schreiben.
Item 9	Um Hardware / Konsolen kostenlos nach Hause geliefert zu bekommen, wäre ich bereit mich dafür verpflichten zu lassen, diese innert vorgegebener Zeit vollständig zu testen und einen Bericht darüber zu schreiben.
Item 10	Es ist mir wichtig ein Video Game am Tag der Veröffentlichung (Release) zu kaufen.
Item 11	Der Preis eines Video Games ist für mich ein wichtiger Faktor für die Kaufentscheidung.
Item 12	Wenn ich ein Video Game nicht budgetiert habe, kann ich gut mit dem Kauf dieses Video Games warten.
Item 13	Demos von Video Games sind für mich ein wichtiger Faktor für die Kaufentscheidung.
Item 14	Wenn ich ein Video Game gekauft und es zu Hause habe, fühle ich mich „besser“ durch diesen Besitz.
Item 15	Beim Kauf von Video Games lasse ich mich von meinen Freunden beeinflussen.
Item 16	Es kommt vor, dass ich Video Games spontan, zum Beispiel auf Grund von Werbung kaufe.
Item 17	Wenn ich in ein Geschäft gehe um ein Video Game zu kaufen, lasse ich mich beraten.
Item 18	Ich bevorzuge den Kauf von Video Games, welche vergünstigt angeboten werden.
Item 19	Die Präsentation eines Video Games in den Medien, Verkaufshäusern und / oder Magazinen, beeinflusst meine Kaufentscheidung.
Item 20	Um vom gesamten Potenzial einer Konsole / PC profitieren zu können, scheue ich keine Kosten, entsprechende Peripheriegeräte (bspw. HD-TV, Sourround – Systeme, etc.) zu kaufen.
Item 21	Ich würde „Spielen“ gerne zu meinem (zweiten) Beruf machen (bspw. als Tester, der Berichte schreibt oder als Wettkämpfer, der Turniere bestreitet).
Item 22	Das Spielen von Video Games versetzt mich in eine „andere Welt“.
Item 23	Ich verbringe den Tag lieber in der virtuellen als in der realen Welt.
Item 24	Erfolge beim Spielen machen mich glücklicher.
Item 25	Ich mag kurzes und simples Vergnügen bei Video Games lieber, als ein langes und komplexes Video Game.
Item 26	Es ist mir wichtig, das Video Game nur „einschieben“ zu müssen und dann sofort loslegen zu können (ohne irgendwelche Einstellungen vornehmen zu müssen).
Item 27	Ein Video Game muss eine tiefe, packende und nicht zu kurze Story haben.
Item 28	Ich spiele lieber in der Gruppe als alleine, egal welche Art von Video Game.
Item 29	Damit mir ein Video Game gefällt, muss es viel Action enthalten.
Item 30	Vor dem Kauf eines Video Games informiere ich mich mittels Magazinen oder TV – Sendungen darüber.
Item 31	Das Spielen von Video Games bereitet mir Freude.
Item 32	Ich bevorzuge Video Games, die von anderen bereits gekauft und in der Mehrheit beliebt sind.
Item 33	Ich spiele um den Alltagsstress abzubauen.
Item 34	Ich spiele Video Games zur Unterhaltung.
Item 35	Ich spiele aus Langeweile.
Item 36	Wenn ich ein Video Game gekauft habe, probiere ich dies zu Hause sofort aus.
Item 37	Die meisten meiner Video Games habe ich zu Ende gespielt.
Item 38	Es ist mir wichtig mit Spielerfolgen in der Video Game Welt einen Ruf zu erlangen.
Item 39	Wenn Andere in einem Video Game weiter sind als ich, dann motiviert mich das (ebenfalls) weiter zu spielen.
Item 40	Ich würde eher ein Spiel kaufen, bei dem die Physik und der Realismus des Spiels ausgeprägter sind, als die Grafik.
Item 41	Ich kaufe auch Video Games, welche mir unbekannt sind.
Item 42	Damit mich ein Video Game interessiert, muss es auf der neuesten Konsole (oder dem leistungsfähigsten PC) spielbar sein.
Item 43	Das Spielen von Video Games beansprucht viel Zeit.
Item 44	Sobald ich nach Hause komme, spiele ich, bis ich einschlafe oder wieder zur Arbeit muss.
Item 45	Obwohl ich weiss, dass ich eigentlich Wichtigeres zu tun hätte, nehme ich mir die Zeit zu spielen.
Item 46	Für Freunde, Familie und andere Interessen (Verein, Sport, etc.) lege ich jedes Video Game zur Seite.
Item 47	Manchmal leiden meine beruflichen Verpflichtungen aufgrund meiner Spielaktivitäten.
Item 48	Hin und wieder mache ich für ein Video Game auch „Freinacht“ oder spiele das ganze Wochenende durch.
Item 49	Wenn es mir nicht gut geht, spiele ich damit es mir besser geht.
Item 50	Ohne meine Video Games wäre ich unglücklich.
Item 51	Andere haben mir gegenüber schon Sorgen / Befürchtungen geäussert, weil ich so viel spiele.
Item 52	Ich habe mehr Online Freunde, als Freunde in der realen Welt.
Item 53	Wenn ich spiele, habe ich das Gefühl nicht alleine zu sein.
Item 54	Ich wäre gerne eine Spielfigur aus einem meiner Video Games.
Item 55	Video Games, die mich interessieren, müssen online spielbar sein.
Item 56	Es ist mir wichtig, mich mit anderen Spielern messen zu können.
Item 57	Wenn ich erfahre, dass ein Treffen im Namen eines meiner Video Games organisiert wird, gehe ich wenn möglich hin.
Item 58	Um besser zu werden, spiele ich dasselbe Video Game immer wieder.
Item 59	Die realistische Darstellung von Gewalt (Blut, Leichen die nicht verschwinden, etc.) in einem Video Game ist mir wichtig.

Item 60	Geburtsjahr
Item 61	Geschlecht
Item 62	Lohn
Item 63	Höchster Bildungsabschluss
Item 64	Wohnort (Land)
Item 65	Zivilstand
Item 66	Hast Du Kinder?
Item 67	Hast Du eine Kreditkarte?
Item 68	Fall ja, benutzt Du diese auch online?
Item 69	Ich spiele seit Jahren Video Games.
Item 70	Pro Tag spiele ich ca. __ Stunden.
Item 71	Sony Playstation (Welche Spielkonsolen hast Du?)
Item 72	Sony Playstation 2 (Welche Spielkonsolen hast Du?)
Item 73	Sony Playstation 3 (Welche Spielkonsolen hast Du?)
Item 74	Sony Playstation Portable (Welche Spielkonsolen hast Du?)
Item 75	Microsoft Xbox (Welche Spielkonsolen hast Du?)
Item 76	Microsoft Xbox 360 (Welche Spielkonsolen hast Du?)
Item 77	Nintendo Game Cube (Welche Spielkonsolen hast Du?)
Item 78	Nintendo Wii (Welche Spielkonsolen hast Du?)
Item 79	Nintendo DS (Welche Spielkonsolen hast Du?)
Item 80	Nintendo Micro / Advance (Welche Spielkonsolen hast Du?)
Item 81	andere Spielkonsole (Welche Spielkonsolen hast Du?)
Item 82	keine Spielkonsole (Welche Spielkonsolen hast Du?)
Item 83	LCD oder Plasma TV (Welche Peripheriegeräte hast Du?)
Item 84	LCD oder Plasma TV - HD Ready (Welche Peripheriegeräte hast Du?)
Item 85	LCD oder Plasma TV - Full HD (Welche Peripheriegeräte hast Du?)
Item 86	Surround System (Welche Peripheriegeräte hast Du?)
Item 87	keine spez. Peripherie (Welche Peripheriegeräte hast Du?)
Item 88	Wohnzimmer (Wo spielst Du am häufigsten?)
Item 89	Schlafzimmer (Wo spielst Du am häufigsten?)
Item 90	Arbeitsplatz oder Schule (Wo spielst Du am häufigsten?)
Item 91	Unterwegs (Wo spielst Du am häufigsten?)
Item 92	andere Orte (Wo spielst Du am häufigsten?)
Item 93	Spiele in der Vergangenheit (In dieser Zeit spielen meine bevorzugten Video Games?)
Item 94	Spiele in der Gegenwart (In dieser Zeit spielen meine bevorzugten Video Games?)
Item 95	Spiele in der Zukunft (In dieser Zeit spielen meine bevorzugten Video Games?)
Item 96	Spiele in der Fantasiewelt oder -zeit (In dieser Zeit spielen meine bevorzugten Video Games?)
Item 97	Spiele in anderen Zeiten (oder Szenarien) (In dieser Zeit spielen meine bevorzugten Video Games?)
Item 98	Action-Adventure (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 99	Beat `em Up (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 100	Ego-Shooter (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 101	Geschicklichkeitsspiel (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 102	Jump'n'Run (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 103	Lernspiel (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 104	Rollenspiel (RPG) (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 105	Sportspiel (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 106	Strategiespiel (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 107	Survival-Horror (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 108	Tanz- / Singspiel (Gib hier bitte an, welches Game - Genre Du wie toll findest:)

Table 17. Intercorrelation matrix and homogeneity indices (first validation)

	Item 1	*Item 2*	*Item 3*	*Item 4*	*Item 5*	*Item 6*	*Item 7*	*Item 8*	*Item 9*	*Item 10*	*Item 11*
Item 1	1										
Item 2	.765	1									
Item 3	.522	.552	1								
Item 4	.518	.398	.389	1							
Item 5	.199	.213	.184	.372	1						
Item 6	.322	.301	.255	.683	.357	1					
Item 7	-.016	-.005	.041	.121	.137	.100	1				
Item 8	.260	.244	.225	.525	.251	.473	.163	1			
Item 9	.373	.317	.305	.519	.323	.422	.125	.813	1		
Item 10	.260	.170	.065	.441	.355	.397	.245	.502	.512	1	
Item 11	-.050	-.040	-.012	-.080	-.017	-.033	.000	-.118	-.181	.105	1
Item 12	-.044	-.034	-.094	-.004	.028	.025	.019	.059	.002	.214	.384
Item 13	.140	.167	.139	.238	.058	.262	.077	.316	.339	.227	-.184
Item 14	.107	.141	.076	.276	.153	.222	.174	.328	.337	.374	-.064
Item 15	.170	.198	.031	.079	.030	.047	.025	.162	.202	.175	-.128
Item 16	.243	.268	.322	.179	.143	.097	.086	.142	.261	.194	-.116
Item 17	.222	.208	.137	.265	-.058	.150	-.139	.167	.147	.044	-.133
Item 18	.105	.116	.089	.010	.057	.074	.027	.013	-.058	.235	.555
Item 19	.109	.110	.008	.088	.177	.051	.076	.150	.237	.151	-.093
Item 20	.223	.157	.120	.356	.247	.316	.183	.388	.360	.522	.122
Item 21	.173	.199	.070	.460	.377	.513	.224	.582	.490	.481	.037
Item 22	.150	.195	-.024	.356	.229	.390	.006	.388	.367	.299	-.208
Item 23	.083	.093	.013	.212	.062	.309	.117	.336	.263	.250	-.078
Item 24	.068	.100	.116	.353	.138	.360	.144	.424	.386	.298	-.105
Item 25	.107	.064	.083	.295	.093	.254	-.094	.387	.309	.278	-.066
Item 26	.122	.044	.018	.272	-.018	.160	-.044	.306	.201	.150	.030
Item 27	.181	.230	.138	.373	.170	.332	.114	.444	.394	.310	-.165
Item 28	.014	.041	-.027	.142	.303	.295	.144	.082	.158	.191	-.002
Item 29	.262	.248	.119	.313	.390	.266	.204	.310	.334	.306	.063
Item 30	.290	.338	.125	.421	.294	.344	.185	.474	.446	.493	-.010
Item 31	.205	.161	.074	.434	.329	.316	.009	.417	.426	.359	-.260
Item 32	.101	.084	.008	.108	.034	-.049	.094	.103	.181	.115	-.136
Item 33	.056	.077	.059	.255	.065	.215	.113	.231	.236	.227	-.192
Item 34	.112	.190	.105	.334	.346	.284	-.014	.266	.331	.235	-.181
Item 35	-.021	.034	-.001	.098	-.003	.157	-.003	.167	.184	.123	-.067
Item 36	.137	.164	.063	.369	.188	.371	.034	.337	.384	.336	-.164
Item 37	.141	.147	.101	.403	.187	.403	.146	.543	.498	.306	-.155
Item 38	.079	.085	.044	.341	.123	.467	.153	.344	.240	.389	.063
Item 39	.121	.183	.116	.301	.069	.374	.090	.303	.284	.255	.011
Item 40	.129	.166	-.003	.302	.178	.208	.073	.292	.226	.057	-.103
Item 41	-.038	-.076	-.229	-.176	-.104	-.087	-.225	-.102	-.179	-.134	.157
Item 42	.195	.247	.096	.331	.122	.306	.111	.271	.253	.367	.027
Item 43	.016	.076	.044	.179	-.040	.188	.059	.325	.367	.195	-.128
Item 44	.076	.059	-.035	.227	.008	.313	.081	.272	.230	.334	.015
Item 45	.157	.114	.112	.492	.170	.481	.108	.409	.396	.352	-.259
Item 46	-.004	-.014	-.021	.070	-.092	.140	-.006	.157	.048	.078	-.010
Item 47	.050	.048	-.048	.274	.062	.385	.111	.326	.193	.327	-.057
Item 48	.148	.093	.033	.383	.249	.433	-.060	.477	.444	.417	-.052
Item 49	.114	.033	.094	.301	.209	.304	.146	.456	.379	.305	-.183
Item 50	.113	.059	.084	.325	.209	.368	.244	.398	.317	.366	-.040
Item 51	.139	.093	.065	.356	.111	.371	.015	.374	.275	.240	-.137
Item 52	-.060	.043	-.060	-.003	-.058	.154	.047	.116	.044	.139	-.048
Item 53	.094	.124	.096	.261	.031	.296	.129	.301	.287	.294	-.174
Item 54	-.046	.014	-.024	.162	.148	.226	.012	.308	.104	.271	-.071
Item 55	.090	.165	.136	.298	.063	.533	.195	.258	.247	.259	.162
Item 56	.104	.184	.137	.274	.128	.422	.226	.302	.238	.237	.097
Item 57	.071	.061	.064	.209	.115	.307	.126	.243	.186	.262	-.064
Item 58	.026	.006	.035	.189	.083	.221	.184	.206	.182	.233	-.050
Item 59	.185	.174	.058	.363	.374	.309	.161	.407	.448	.484	.038
H	.144	.148	.089	.276	.147	.279	.083	.298	.278	.270	-.044

H = Homogeneity coefficient
N = 173; Missing values = EM

	Item 12	*Item 13*	*Item 14*	*Item 15*	*Item 16*	*Item 17*	*Item 18*	*Item 19*	*Item 20*	*Item 21*	*Item 22*
Item 1											
Item 2											
Item 3											
Item 4											
Item 5											
Item 6											
Item 7											
Item 8											
Item 9											
Item 10											
Item 11											
Item 12	1										
Item 13	-.140	1									
Item 14	.168	.184	1								
Item 15	-.175	.242	.231	1							
Item 16	-.092	.200	.284	.318	1						
Item 17	-.027	-.117	.029	-.052	-.044	1					
Item 18	.362	-.088	.058	-.014	-.177	.113	1				
Item 19	.053	.292	.408	.350	.409	-.122	-.100	1			
Item 20	.187	.212	.307	.245	.210	-.053	.147	.264	1		
Item 21	.105	.273	.303	.196	.157	-.011	.152	.183	.501	1	
Item 22	-.011	.236	.379	.281	.096	-.050	-.220	.196	.220	.401	1
Item 23	.047	.152	.356	.140	.136	-.016	-.079	.089	.243	.409	.524
Item 24	.050	.133	.588	.265	.203	.110	-.047	.242	.293	.366	.464
Item 25	.148	.057	.155	.116	-.090	.318	.181	.035	.266	.270	.173
Item 26	.169	.001	.011	-.024	-.115	.375	.182	-.080	.187	.169	-.003
Item 27	-.061	.225	.275	.225	.169	.112	-.117	.185	.368	.375	.432
Item 28	-.018	.124	.074	.222	.046	-.125	-.011	.144	.275	.340	.094
Item 29	.051	.196	.264	.411	.253	-.047	.153	.244	.454	.503	.329
Item 30	.172	.291	.362	.302	.246	.024	.106	.329	.533	.449	.364
Item 31	-.019	.170	.398	.285	.274	.136	-.158	.316	.342	.318	.459
Item 32	-.183	.179	.202	.371	.149	-.102	-.109	.316	.201	.114	.141
Item 33	-.054	.156	.237	.195	.160	-.060	-.200	.220	.135	.101	.380
Item 34	-.216	.247	.284	.172	.112	.075	-.046	.155	.124	.281	.422
Item 35	-.067	.024	.148	.290	.239	-.002	-.120	.199	.074	.182	.275
Item 36	-.015	.075	.420	.246	.247	.270	-.047	.245	.231	.267	.338
Item 37	-.068	.093	.221	.106	.099	.222	-.130	-.004	.322	.337	.404
Item 38	.127	.104	.242	.049	.056	-.021	.153	.011	.428	.443	.216
Item 39	-.085	.167	.422	.356	.164	-.101	-.018	.207	.325	.416	.373
Item 40	-.030	.135	.208	.121	.061	-.069	-.235	.294	.092	.187	.231
Item 41	.110	-.121	-.111	-.103	-.413	.173	.185	-.172	-.173	-.203	-.124
Item 42	.158	.228	.281	.145	.134	-.025	.162	.156	.480	.435	.247
Item 43	-.012	.220	.217	.057	.253	.088	-.196	.207	.223	.245	.316
Item 44	.235	.182	.210	.142	.223	-.087	.100	.084	.299	.315	.245
Item 45	.043	.264	.377	.176	.227	.169	-.180	.149	.311	.344	.504
Item 46	.364	-.051	.163	-.058	.011	.025	.013	-.007	.060	.118	.152
Item 47	.119	.135	.182	.135	.027	-.033	.034	.095	.321	.322	.359
Item 48	.147	.214	.370	.249	.207	.068	-.030	.176	.352	.450	.497
Item 49	.017	.073	.255	.145	.256	-.031	-.143	.135	.224	.331	.423
Item 50	.106	.130	.302	.041	.173	.002	.026	.047	.339	.393	.350
Item 51	.115	.101	.215	.059	.144	.107	-.126	.106	.192	.315	.388
Item 52	.015	.019	.214	.086	.035	.024	-.060	.057	.027	.137	.219
Item 53	.072	.187	.330	.234	.116	.057	-.120	-.004	.200	.267	.510
Item 54	.089	-.030	.203	.122	.078	.044	-.005	.095	.182	.351	.418
Item 55	.083	.316	.195	.192	.071	-.060	.078	.117	.272	.299	.185
Item 56	.032	.197	.240	.393	.044	-.131	.099	.169	.331	.431	.320
Item 57	.009	.144	.272	.248	.049	-.009	.048	.114	.180	.398	.238
Item 58	-.034	.106	.246	.230	.165	.038	-.004	.240	.170	.222	.215
Item 59	.153	.110	.350	.200	.231	.132	.108	.241	.392	.429	.365
H	.047	.138	.239	.158	.131	.040	.016	.141	.250	.293	.261

H = Homogeneity coefficient
N = 173; Missing values = EM

	Item 23	*Item 24*	*Item 25*	*Item 26*	*Item 27*	*Item 28*	*Item 29*	*Item 30*	*Item 31*	*Item 32*	*Item 33*
Item 1											
Item 2											
Item 3											
Item 4											
Item 5											
Item 6											
Item 7											
Item 8											
Item 9											
Item 10											
Item 11											
Item 12											
Item 13											
Item 14											
Item 15											
Item 16											
Item 17											
Item 18											
Item 19											
Item 20											
Item 21											
Item 22											
Item 23	1										
Item 24	.381	1									
Item 25	.082	.247	1								
Item 26	-.039	.090	.514	1							
Item 27	.204	.275	.426	.083	1						
Item 28	.018	.112	-.012	.025	.173	1					
Item 29	.153	.272	.152	.015	.424	.501	1				
Item 30	.145	.316	.338	.154	.439	.341	.501	1			
Item 31	.231	.512	.311	.189	.384	.111	.341	.415	1		
Item 32	.188	.104	-.168	-.111	.055	.098	.111	.156	.152	1	
Item 33	.221	.336	.045	-.057	.213	.248	.098	.165	.357	.096	1
Item 34	.177	.311	.112	-.047	.354	.161	.248	.214	.501	.239	.334
Item 35	.283	.271	-.104	-.167	.260	.252	.161	.042	.206	.294	.334
Item 36	.253	.468	.153	.002	.321	.365	.252	.337	.532	.193	.275
Item 37	.252	.395	.369	.166	.475	.314	.365	.356	.467	-.096	.183
Item 38	.401	.358	.151	.104	.279	.168	.314	.272	.161	.037	.190
Item 39	.299	.450	.073	.111	.331	.258	.324	.261	.318	.181	.223
Item 40	.124	.185	.208	.016	.291	.075	.168	.236	.292	.232	.153
Item 41	-.154	-.146	.046	.165	-.173	.013	-.159	-.128	-.126	.019	-.172
Item 42	.146	.149	.113	.060	.321	.192	.405	.398	.167	.161	.052
Item 43	.201	.298	.175	.034	.285	-.001	.187	.208	.278	.152	.109
Item 44	.505	.294	.043	.006	.079	-.008	.162	.269	.166	.142	.181
Item 45	.403	.517	.151	.130	.332	.048	.282	.300	.537	.082	.434
Item 46	.473	.145	.091	.096	.049	-.104	.078	-.012	.083	.015	.151
Item 47	.415	.288	.113	.196	.161	.114	.190	.267	.308	.025	.250
Item 48	.383	.481	.311	.146	.265	.099	.283	.350	.448	.040	.214
Item 49	.355	.468	.128	.063	.280	-.083	.262	.249	.312	.027	.405
Item 50	.566	.410	.115	.117	.163	-.013	.219	.166	.374	.007	.278
Item 51	.524	.314	.121	.236	.157	-.002	.054	.157	.283	.039	.303
Item 52	.536	.151	.047	.002	.031	-.055	.024	.079	.087	.011	.106
Item 53	.439	.418	.153	.122	.234	.113	.206	.197	.350	.101	.307
Item 54	.416	.263	.260	.068	.278	-.032	.286	.245	.294	-.012	.191
Item 55	.248	.225	.165	.020	.244	.285	.224	.294	.045	.026	.125
Item 56	.350	.385	.130	.098	.207	.364	.354	.285	.195	.141	.193
Item 57	.391	.260	.189	.042	.191	.297	.226	.104	.195	.099	.048
Item 58	.357	.340	.018	.063	.057	.023	.226	.157	.322	.219	.198
Item 59	.208	.320	.243	.188	.351	.103	.478	.343	.450	.088	.204
H	.238	.269	.153	.086	.228	.102	.238	.259	.263	.088	.162

H = Homogeneity coefficient
N = 173; Missing values = EM

	Item 34	*Item 35*	*Item 36*	*Item 37*	*Item 38*	*Item 39*	*Item 40*	*Item 41*	*Item 42*	*Item 43*	*Item 44*
Item 1											
Item 2											
Item 3											
Item 4											
Item 5											
Item 6											
Item 7											
Item 8											
Item 9											
Item 10											
Item 11											
Item 12											
Item 13											
Item 14											
Item 15											
Item 16											
Item 17											
Item 18											
Item 19											
Item 20											
Item 21											
Item 22											
Item 23											
Item 24											
Item 25											
Item 26											
Item 27											
Item 28											
Item 29											
Item 30											
Item 31											
Item 32											
Item 33											
Item 34	1										
Item 35	.268	1									
Item 36	.477	.294	1								
Item 37	.300	.086	.401	1							
Item 38	.070	.143	.212	.271	1						
Item 39	.247	.292	.336	.254	.400	1					
Item 40	.191	.033	.213	.222	.132	.221	1				
Item 41	-.071	-.059	-.003	-.100	-.086	-.112	-.140	1			
Item 42	-.020	.084	.218	.182	.429	.286	.126	-.126	1		
Item 43	.198	.213	.284	.300	.234	.171	.121	-.183	.246	1	
Item 44	.038	.204	.195	.189	.512	.265	.036	-.122	.227	.259	1
Item 45	.344	.267	.425	.409	.443	.370	.109	-.150	.304	.374	.467
Item 46	-.027	.072	.101	.043	.244	.065	.069	-.041	.171	.142	.374
Item 47	.129	.215	.206	.253	.438	.282	-.015	-.059	.239	.265	.523
Item 48	.289	.180	.264	.439	.371	.326	.247	-.153	.194	.258	.487
Item 49	.157	.292	.122	.307	.361	.204	.179	-.269	.155	.177	.391
Item 50	.213	.157	.249	.260	.440	.277	.120	-.174	.194	.250	.581
Item 51	.173	.137	.235	.180	.315	.187	.070	-.109	.136	.210	.546
Item 52	.032	.162	.116	.166	.198	.257	.073	-.057	.040	.095	.335
Item 53	.233	.254	.249	.303	.311	.333	.083	-.091	.218	.212	.232
Item 54	.172	.172	.242	.300	.346	.221	.171	-.063	.126	.195	.288
Item 55	.031	.079	.196	.274	.493	.295	.048	-.019	.305	.186	.338
Item 56	.147	.140	.168	.259	.514	.515	.201	-.143	.260	.110	.329
Item 57	.129	.141	.083	.204	.358	.328	.140	-.177	.105	.090	.247
Item 58	.177	.254	.194	.175	.333	.318	.098	-.172	.180	.228	.372
Item 59	.341	.247	.294	.365	.268	.320	.169	.005	.265	.154	.158
H	.180	.135	.228	.231	.247	.238	.128	-.097	.197	.166	.221

H = Homogeneity coefficient
N = 173; Missing values = EM

	Item 45	*Item 46*	*Item 47*	*Item 48*	*Item 49*	*Item 50*	*Item 51*	*Item 52*	*Item 53*	*Item 54*	*Item 55*
Item 1											
Item 2											
Item 3											
Item 4											
Item 5											
Item 6											
Item 7											
Item 8											
Item 9											
Item 10											
Item 11											
Item 12											
Item 13											
Item 14											
Item 15											
Item 16											
Item 17											
Item 18											
Item 19											
Item 20											
Item 21											
Item 22											
Item 23											
Item 24											
Item 25											
Item 26											
Item 27											
Item 28											
Item 29											
Item 30											
Item 31											
Item 32											
Item 33											
Item 34											
Item 35											
Item 36											
Item 37											
Item 38											
Item 39											
Item 40											
Item 41											
Item 42											
Item 43											
Item 44											
Item 45	1										
Item 46	.253	1									
Item 47	.529	.254	1								
Item 48	.513	.226	.436	1							
Item 49	.485	.203	.385	.450	1						
Item 50	.514	.365	.517	.416	.485	1					
Item 51	.520	.439	.514	.465	.456	.607	1				
Item 52	.179	.419	.310	.178	.153	.277	.244	1			
Item 53	.392	.280	.375	.404	.395	.333	.325	.401	1		
Item 54	.292	.214	.385	.401	.345	.386	.309	.266	.412	1	
Item 55	.254	.159	.303	.336	.100	.211	.166	.097	.228	.172	1
Item 56	.311	.155	.336	.344	.239	.297	.236	.163	.329	.257	.628
Item 57	.228	.142	.274	.376	.138	.314	.143	.310	.291	.348	.396
Item 58	.379	.193	.331	.332	.280	.398	.399	.244	.332	.228	.286
Item 59	.363	.114	.227	.395	.304	.326	.157	.070	.176	.181	.116
H	.288	.118	.230	.284	.221	.255	.220	.118	.228	.194	.202

H = Homogeneity coefficient
N = 173; Missing values = EM

	Item 56	*Item 57*	*Item 58*	*Item 59*
Item 1				
Item 2				
Item 3				
Item 4				
Item 5				
Item 6				
Item 7				
Item 8				
Item 9				
Item 10				
Item 11				
Item 12				
Item 13				
Item 14				
Item 15				
Item 16				
Item 17				
Item 18				
Item 19				
Item 20				
Item 21				
Item 22				
Item 23				
Item 24				
Item 25				
Item 26				
Item 27				
Item 28				
Item 29				
Item 30				
Item 31				
Item 32				
Item 33				
Item 34				
Item 35				
Item 36				
Item 37				
Item 38				
Item 39				
Item 40				
Item 41				
Item 42				
Item 43				
Item 44				
Item 45				
Item 46				
Item 47				
Item 48				
Item 49				
Item 50				
Item 51				
Item 52				
Item 53				
Item 54				
Item 55				
Item 56	1			
Item 57	.497	1		
Item 58	.488	.271	1	
Item 59	.216	.125	.097	1
H	.244	.187	.195	.244

H = Homogeneity coefficient
N = 173; Missing values = EM

Questionnaire – English version

1. I am involved in a research project on gaming and would like to learn more about people who play video games.
   Therefore, I would appreciate your help.
   This survey can be completed online in about 10 to 15 minutes.
   Amongst all participants 5 iPods will be raffled off.
   Your information will be treated confidentially and will not be passed on to third parties. Your identity cannot be revealed.
   If you have any questions or remarks please contact:
   Patrick Keller, B.Sc.
   Department of General Psychology and Methodology
   Faculty of Psychology
   University of Basel
   Switzerland
   patrick.keller@stud.unibas.ch
   Please click „next“.
2. Personal Information
3. Date of birth
4. Gender
5. Your salary
6. Currency (of your salary)
7. Highest education
8. Residence (country)
9. Marital status
10. Do you have any children?
11. In the following please estimate your skills:
    Scale:
    very experienced ; experienced ; rather experienced ; rather inexperienced ; inexperienced ; very inexperienced ; no answer
12. Using a computer
13. Surfing the web
14. Playing video games on a pc/Mac
15. Playing video games on a game console (also portable ones)
16. Online gaming on a pc/Mac and/or game console

17. Do you own a credit card?
18. If yes, do you use your card online?
19. Which of the following consoles do you own?
    Sony Playstation
    Sony Playstation 2
    Sony Playstation 3
    Sony Playstation Portable
    Microsoft Xbox
    Microsoft Xbox 360
    Nintendo Game Cube
    Nintendo Wii
    Nintendo DS
    Nintendo Micro / Advance
    Other
    None of the above
    No answer
20. Which of the following additional equipment do you own?
    LCD or Plasma TV
    LCD or Plasma TV - HD Ready
    LCD or Plasma TV - Full HD
    Surround System
    None of the above
    No answer
21. Where do you play the most?
    Living Room
    Bed Room
    At work / school
    On the go
    Other places
    No answer
22. Please specify how much you agree with the following statements.
    Scale:
    totally agree ; agree ; rather agree ; rather disagree; disagree ; totally disagree ; no answer

23. I earn a substantial amount of my income by playing video games.
24. In order to receive a free video game, I would be willing to play the game in a given timeframe and write a report.
25. In order to receive free hardware/consoles, I would be willing to test it/them in a given timeframe and write a report.
26. It is important to me to buy a new game on the day of its release.
27. To me demos are an important factor when it comes to deciding on which new video games to buy.
28. I feel better after having bought a video game and finally owning it.
29. When I buy video games, I am influenced by my friends.
30. Sometimes I buy a video game spontaneously, for instance due to advertisements.
31. When I go into a store to buy a video game, I like being advised by a salesman.
32. I prefer buying video games on sale.
33. The presentation of video games in the media, stores and/or magazines influences my buying decisions.
34. In order to get the full gaming experience (console/pc), I do not hesitate to buy the corresponding additional equipment (e.g. HD-TV, surround systems, etc.).
35. I would like to have gaming as a (second) career (e.g. testing games and writing reports or playing at tournaments/ competing).
36. Playing video games puts me into another world.
37. The accomplished achievements and attained levels in a game make me happy.
38. I prefer simple and short rather than long and complex video games.
39. It is important to me to be able to insert the video game and start playing immediately (without having to make configurations first).
40. A video game must have a profound and enthralling story that is not too short.
41. I prefer playing in groups than alone, no matter what kind of video game it is.
42. In order for a video game to please me, it must contain a lot of action.
43. Before buying a video game, I inform myself about the game with the help of magazines, TV or the Internet.
44. Playing video games makes me happy.
45. I prefer commercial video games that are very popular.
46. I play to reduce everyday stress.
47. I play video games for entertainment purposes.
48. I play because I’m bored.

49. After having bought a video game, I immediately try it out at home.
50. I have finished most of my video games, respectively mastered them to my level of satisfaction.
51. I like the fact that nowadays everyone can see online how well I play my video games.
52. If others are better in a video game than I am, it motivates me to keep on going.
53. I would rather buy a video game that is more distinct in physics and realism than in graphics.
54. In order for a video game to interest me, it must be playable on the newest console (or most powerful pc).
55. I have been playing video games for _____ years.
56. I play approximately ...
    Less than 2-3 times a month
    App. once a week
    1-3 times a week
    Less than an hour a day
    1-3 hours a day
    3-6 hours a day
    More than 6 hours a day
    No answer
57. Playing video games consumes a substantial amount of my time.
58. I can hardly wait to come home and start playing.
59. Although I know I have more important things to do, I take the time to play.
60. For friends, family and other interests (club, sports, etc.) I put my video games aside.
61. Sometimes my work suffers due to my gaming habits.
62. Once in a while I spend all night or even a whole weekend on a video game.
63. When I'm feeling bad, I play to make myself feel better.
64. When I play I don't feel so alone.
65. Video games that interest me must be playable online.
66. It is important to me to be able to compare my skills with other players.
67. In order to improve myself, I play the same video game over and over again.
68. The realistic presentation of violence in a video game (e.g. blood, corpses that don't vanish, etc.) is very important to me.
69. My preferred video games play in the:
    Past

Present

Future

Fantasy

Other

No answer

70. How much do you like the following video game genres?

Scale:

very cool ; cool ; rather cool ; kind of cool ; not cool ; not cool at all ; no answer

71. Action-Adventure

72. Racing (Action / Simulation)

73. Beat ’em Up

74. Ego-Shooter

75. Skill / Puzzle Games

76. Jump’n’ Run

77. Educational Games

78. Role Playing Games (RPG)

79. Sports

80. Strategy

81. Survival-Horror

82. Dancing / Singing Games

83. Please name 3 video games (name and system) that you are playing at the moment or will be playing in the near future:

84. 1. _____

2. _____

3. _____

85. If you have any additional comments or suggestions please note them here:

_____

86. You have reached the end.

Thank you for your participation.

87. Would you like to participate in the raffle of the iPods?

Yes

88. Would you like to be informed about the results of this study?

Yes

89. I f you answered on one of the questions above with “Yes”, please enter your email address here: _____

90. Thank you very much.
Patrick Keller B. Sc.

Questionnaire – German version

1. Im Rahmen einer Forschungsarbeit möchte ich mehr über Menschen erfahren, die Video Games spielen.
   Und dazu brauche ich Deine Hilfe.
   Der Fragebogen kann online ausgefüllt werden und dauert ca. 10-15 Minuten.
   Unter allen TeilnehmerInnen werden als kleines Dankeschön 5 iPod's verlost.
   Deine Daten werden vertraulich behandelt und nicht weitergegeben. Ausserdem lässt diese Untersuchung keine Rückschlüsse auf Deine Identität zu.
   Allfällige Fragen und Anmerkungen bitte an:
   Patrick Keller, B.Sc.
   Abteilung für Allgemeine Psychologie und Methodologie
   Fakultät für Psychologie
   Universität Basel
   Klicke jetzt bitte auf „weiter".
2. Angaben zur Person
3. Geburtsjahr
4. Geschlecht
5. Gehalt
6. Währung (Gehalt)
7. Höchster Bildungsabschluss
8. Wohnort (Land)
9. Familienstand
10. Kinder
11. Bitte schätze Dein Wissen in den folgenden Gebieten ein:
    Skala:
    sehr erfahren ; erfahren ; eher erfahren ; eher unerfahren ; unerfahren ; sehr unerfahren ; keine Angabe
12. Bedienen von Computern
13. Surfen im Internet
14. Spielen auf dem PC/Mac
15. Spielen auf einer Konsole (auch portable Konsolen)
16. Online Spielen (PC/Mac)
17. Hast Du eine Kreditkarte?
18. Falls ja, benutzt Du diese auch online?

19. Welche Spielkonsolen hast Du?
    Sony Playstation
    Sony Playstation 2
    Sony Playstation 3
    Sony Playstation Portable
    Microsoft Xbox
    Microsoft Xbox 360
    Nintendo Game Cube
    Nintendo Wii
    Nintendo DS
    Nintendo Micro / Advance
    Andere
    Keine
    Keine Angabe
20. Welche Peripheriegeräte hast Du?
    LCD oder Plasma TV
    LCD oder Plasma TV - HD Ready
    LCD oder Plasma TV - Full HD
    Sourround System
    Keines dieser Geräte
    Keine Angabe
21. Wo spielst Du am häufigsten?
    Wohnzimmer
    Schlafzimmer
    Am Arbeitsplatz / Schule
    Unterwegs
    Anderer Ort
    Keine Angabe
22. Gib nun bitte an, wie sehr die folgenden Aussagen auf Dich zutreffen oder nicht.
    Skala:
    trifft völlig zu ; trifft zu ; trifft eher zu ; trifft eher nicht zu ; trifft nicht zu ; trifft überhaupt nicht zu ; keine Angabe
23. Einen wichtigen Bestandteil meines Einkommens verdiene ich mit dem Spielen von Video Games.

24. Um ein Video Game kostenlos nach Hause geliefert zu bekommen, wäre ich bereit mich dafür verpflichten zu lassen, das Video Game binnen vorgegebener Zeit zu Ende zu spielen und einen Bericht darüber zu schreiben.
25. Um Hardware / Konsolen kostenlos nach Hause geliefert zu bekommen, wäre ich bereit mich dafür verpflichten zu lassen, diese binnen vorgegebener Zeit vollständig zu testen und einen Bericht darüber zu schreiben.
26. Es ist mir wichtig ein Video Game am Tag der Veröffentlichung (Release) zu kaufen.
27. Demos von Video Games sind für mich ein wichtiger Faktor für die Kaufentscheidung.
28. Wenn ich ein Video Game gekauft und es zu Hause habe, fühle ich mich „besser“ durch diesen Besitz.
29. Beim Kauf von Video Games lasse ich mich von meinen Freunden beeinflussen.
30. Es kommt vor, dass ich Video Games spontan, zum Beispiel auf Grund von Werbung kaufe.
31. Wenn ich in ein Geschäft gehe um ein Video Game zu kaufen, lasse ich mich beraten.
32. Ich bevorzuge den Kauf von Video Games, welche vergünstigt angeboten werden.
33. Die Präsentation eines Video Games in den Medien, Verkaufshäusern und / oder Magazinen, beeinflusst meine Kaufentscheidung.
34. Um vom gesamten Potenzial einer Konsole / PC profitieren zu können, scheue ich keine Kosten, entsprechende Peripheriegeräte (bspw. HD-TV, Sourround – Systeme, etc.) zu kaufen.
35. Ich würde „Spielen“ gerne zu meinem (zweiten) Beruf machen (bspw. als Tester, der Berichte schreibt oder als Wettkämpfer, der Turniere bestreitet).
36. Das Spielen von Video Games versetzt mich in eine „andere Welt“.
37. Die in den Spielen erreichten Erfolge, resp. Zwischenziele, machen mich glücklicher.
38. Ich mag kurzes und simples Vergnügen bei Video Games lieber, als ein langes und komplexes Video Game.
39. Es ist mir wichtig, das Video Game nur „einschieben“ zu müssen und dann sofort loslegen zu können (ohne irgendwelche Einstellungen vornehmen zu müssen).
40. Ein Video Game muss eine tiefe, packende und nicht zu kurze Story haben.
41. Ich spiele lieber in der Gruppe als alleine, egal welche Art von Video Game.
42. Damit mir ein Video Game gefällt, muss es viel Action enthalten.
43. Vor dem Kauf eines Video Games informiere ich mich mittels Magazinen, TV – Sendungen oder Internet darüber.

44. Das Spielen von Video Games bereitet mir Freude.
45. Ich bevorzuge kommerzielle Video Games, die in der Mehrheit beliebt sind.
46. Ich spiele um den Alltagsstress abzubauen.
47. Ich spiele Video Games zur Unterhaltung.
48. Ich spiele aus Langeweile.
49. Wenn ich ein Video Game gekauft habe, probiere ich dies zu Hause sofort aus.
50. Die meisten meiner Video Games habe ich zu Ende gespielt, resp. für mich befriedigend abgeschlossen.
51. Ich finde es gut, dass heutzutage alle online sehen können, wie gut ich meine Video Games spiele.
52. Wenn Andere in einem Video Game weiter sind als ich, dann motiviert mich das (ebenfalls) weiter zu spielen.
53. Ich würde eher ein Spiel kaufen, bei dem die Physik und der Realismus des Spiels ausgeprägter sind, als die Grafik.
54. Damit mich ein Video Game interessiert, muss es auf der neuesten Konsole (oder dem leistungsfähigsten PC) spielbar sein.
55. Ich spiele seit ca. _____ Jahren Video Games.
56. Ich spiele ca. ...
    Weniger als 2-3 Mal im Monat
    Ca. 1 Mal pro Woche
    1-3 Mal pro Woche
    Weniger als 1 Stunde pro Tag
    1-3 Stunden pro Tag
    3-6 Stunden pro Tag
    Mehr als 6 Stunden pro Tag
    Keine Angabe
57. Das Spielen von Video Games beansprucht einen erheblichen Teil meiner Zeit.
58. Ich kann es kaum erwarten nach Hause zu kommen und gleich mit dem Spielen zu beginnen.
59. Obwohl ich weiss, dass ich eigentlich Wichtigeres zu tun hätte, nehme ich mir die Zeit zu spielen.
60. Für Freunde, Familie und andere Interessen (Verein, Sport, etc.) lege ich jedes Video Game zur Seite.

61. Manchmal leiden meine beruflichen Verpflichtungen aufgrund meiner Spielaktivitäten.
62. Hin und wieder mache ich für ein Video Game auch „Freinacht“ oder spiele das ganze Wochenende durch.
63. Wenn es mir nicht gut geht, spiele ich damit es mir besser geht.
64. Wenn ich spiele, habe ich das Gefühl nicht alleine zu sein.
65. Video Games, die mich interessieren, müssen online spielbar sein.
66. Es ist mir wichtig, mich mit anderen Spielern messen zu können.
67. Um besser zu werden, spiele ich dasselbe Video Game immer wieder.
68. Die realistische Darstellung von Gewalt (Blut, Leichen die nicht verschwinden, etc.) in einem Video Game ist mir wichtig.
69. In dieser Zeit spielen meine bevorzugten Video Games:
    Vergangenheit
    Gegenwart
    Zukunft
    Fantasiewelt / - zeit
    Andere
    Keine Angabe
70. Gib hier bitte an, welches Game - Genre Du wie toll findest:
    Skala:
    sehr toll ; toll ; eher toll ; eher nicht toll ; nicht toll ; überhaupt nicht toll ; keine Angabe
71. Action-Adventure
72. Autorennen (Action / Simulation)
73. Beat’em Up
74. Ego-Shooter
75. Geschicklichkeitsspiel
76. Jump’n’Run
77. Lernspiel
78. Rollenspiel (RPG)
79. Sportspiel
80. Strategiespiel
81. Survival-Horror
82. Tanz- / Singspiel

83. Bitte nenne 3 Video Games, die Du zurzeit oder in absehbarer Zukunft spielst (Name, System):

84. 1. _____
2. _____
3. _____

85. Falls Du noch Kommentare oder Anregungen hast, die Dir während des Ausfüllens des Fragebogens in den Sinn gekommen sind, dann schreibe diese bitte in dieses Feld.

_____

86. Du hast nun das Ende erreicht.
Vielen Dank für Deine Teilnahme.

87. Möchtest Du an der Verlosung der iPod's teilnehmen?
Ja

88. Möchtest Du über die Resultate dieser Studie informiert werden?
Ja

89. Solltest Du eine der beiden Fragen mit „Ja" beantwortet haben, trage bitte hier Deine E-Mail Adresse ein: _____

90. Vielen Dank.
Patrick Keller, B. Sc.

Table 18. Items of the second online survey

Item No	*Question*
Item 1	Bedienen von Computern (Bitte schätze Dein Wissen in den folgenden Gebieten ein:)
Item 2	Surfen im Internet (Bitte schätze Dein Wissen in den folgenden Gebieten ein:)
Item 3	Spielen auf dem PC (Bitte schätze Dein Wissen in den folgenden Gebieten ein:)
Item 4	Spielen auf einer Konsole (auch portable Konsolen) (Bitte schätze Dein Wissen in den folgenden Gebieten ein:)
Item 5	Online Spielen (PC & Konsole) (Bitte schätze Dein Wissen in den folgenden Gebieten ein:)
Item 6	Einen wichtigen Bestandteil meines Einkommens verdiene ich mit dem Spielen von Video Games.
Item 7	Um ein Video Game kostenlos nach Hause geliefert zu bekommen, wäre ich bereit mich dafür verpflichten zu lassen, das Video Game binnen vorgegebener Zeit zu Ende zu spielen und einen Bericht darüber zu schreiben.
Item 8	Um Hardware / Konsolen kostenlos nach Hause geliefert zu bekommen, wäre ich bereit mich dafür verpflichten zu lassen, diese binnen vorgegebener Zeit vollständig zu testen und einen Bericht darüber zu schreiben.
Item 9	Es ist mir wichtig ein Video Game am Tag der Veröffentlichung (Release) zu kaufen.
Item 10	Demos von Video Games sind für mich ein wichtiger Faktor für die Kaufentscheidung.
Item 11	Wenn ich ein Video Game gekauft und es zu Hause habe, fühle ich mich „besser“ durch diesen Besitz.
Item 12	Beim Kauf von Video Games lasse ich mich von meinen Freunden beeinflussen.
Item 13	Es kommt vor, dass ich Video Games spontan, zum Beispiel auf Grund von Werbung kaufe.
Item 14	Wenn ich in ein Geschäft gehe um ein Video Game zu kaufen, lasse ich mich beraten.
Item 15	Ich bevorzuge den Kauf von Video Games, welche vergünstigt angeboten werden.
Item 16	Die Präsentation eines Video Games in den Medien, Verkaufshäusern und / oder Magazinen, beeinflusst meine Kaufentscheidung.
Item 17	Um vom gesamten Potenzial einer Konsole / PC profitieren zu können, scheue ich keine Kosten, entsprechende Peripheriegeräte (bspw. HD-TV, Sourround – Systeme, etc.) zu kaufen.
Item 18	Ich würde „Spielen“ gerne zu meinem (zweiten) Beruf machen (bspw. als Tester, der Berichte schreibt oder als Wettkämpfer, der Turniere bestreitet).
Item 19	Das Spielen von Video Games versetzt mich in eine „andere Welt“.
Item 20	Die in den Spielen erreichten Erfolge, resp. Zwischenziele, machen mich glücklicher.
Item 21	Ich mag kurzes und simples Vergnügen bei Video Games lieber, als ein langes und komplexes Video Game.
Item 22	Es ist mir wichtig, das Video Game nur „einschieben“ zu müssen und dann sofort loslegen zu können (ohne irgendwelche Einstellungen vornehmen zu müssen).
Item 23	Ein Video Game muss eine tiefe, packende und nicht zu kurze Story haben.
Item 24	Ich spiele lieber in der Gruppe als alleine, egal welche Art von Video Game.
Item 25	Damit mir ein Video Game gefällt, muss es viel Action enthalten.
Item 26	Vor dem Kauf eines Video Games informiere ich mich mittels Magazinen, TV – Sendungen oder Internet darüber.
Item 27	Das Spielen von Video Games bereitet mir Freude.
Item 28	Ich bevorzuge kommerzielle Video Games, die in der Mehrheit beliebt sind.
Item 29	Ich spiele um den Alltagsstress abzubauen.
Item 30	Ich spiele Video Games zur Unterhaltung.
Item 31	Ich spiele aus Langeweile.
Item 32	Wenn ich ein Video Game gekauft habe, probiere ich dies zu Hause sofort aus.
Item 33	Die meisten meiner Video Games habe ich zu Ende gespielt, resp. für mich befriedigend abgeschlossen.
Item 34	Ich finde es gut, dass heutzutage alle online sehen können, wie gut ich meine Video Games spiele.
Item 35	Wenn Andere in einem Video Game weiter sind als ich, dann motiviert mich das (ebenfalls) weiter zu spielen.
Item 36	Ich würde eher ein Spiel kaufen, bei dem die Physik und der Realismus des Spiels ausgeprägter sind, als die Grafik.
Item 37	Damit mich ein Video Game interessiert, muss es auf der neuesten Konsole (oder dem leistungsfähigsten PC) spielbar sein.
Item 38	Das Spielen von Video Games beansprucht einen erheblichen Teil meiner Zeit.
Item 39	Ich kann es kaum erwarten nach Hause zu kommen und gleich mit dem Spielen zu beginnen.
Item 40	Obwohl ich weiss, dass ich eigentlich Wichtigeres zu tun hätte, nehme ich mir die Zeit zu spielen.
Item 41	Für Freunde, Familie und andere Interessen (Verein, Sport, etc.) lege ich jedes Video Game zur Seite.
Item 42	Manchmal leiden meine beruflichen Verpflichtungen aufgrund meiner Spielaktivitäten.
Item 43	Hin und wieder mache ich für ein Video Game auch „Freinacht“ oder spiele das ganze Wochenende durch.
Item 44	Wenn es mir nicht gut geht, spiele ich damit es mir besser geht.
Item 45	Wenn ich spiele, habe ich das Gefühl nicht alleine zu sein.
Item 46	Video Games, die mich interessieren, müssen online spielbar sein.
Item 47	Es ist mir wichtig, mich mit anderen Spielern messen zu können.
Item 48	Um besser zu werden, spiele ich dasselbe Video Game immer wieder.
Item 49	Die realistische Darstellung von Gewalt (Blut, Leichen die nicht verschwinden, etc.) in einem Video Game ist mir wichtig.

Item 50	Geburtsjahr
Item 51	Geschlecht
Item 52	Gehalt
Item 53	Währung (Gehalt)
Item 54	Höchster Bildungsabschluss
Item 55	Wohnort (Land)
Item 56	Familienstand
Item 57	Kinder
Item 58	Hast Du eine Kreditkarte?
Item 59	Fall ja, benutzt Du diese auch online?
Item 60	Ich spiele seit ca. __ Jahren Video Games.
Item 61	Ich spiele ca.
Item 62	Sony Playstation (Welche Spielkonsolen hast Du?)
Item 63	Sony Playstation 2 (Welche Spielkonsolen hast Du?)
Item 64	Sony Playstation 3 (Welche Spielkonsolen hast Du?)
Item 65	Sony Playstation Portable (Welche Spielkonsolen hast Du?)
Item 66	Microsoft Xbox (Welche Spielkonsolen hast Du?)
Item 67	Microsoft Xbox 360 (Welche Spielkonsolen hast Du?)
Item 68	Nintendo Game Cube (Welche Spielkonsolen hast Du?)
Item 69	Nintendo Wii (Welche Spielkonsolen hast Du?)
Item 70	Nintendo DS (Welche Spielkonsolen hast Du?)
Item 71	Nintendo Micro / Advance (Welche Spielkonsolen hast Du?)
Item 72	andere Spielkonsole (Welche Spielkonsolen hast Du?)
Item 73	keine Spielkonsole (Welche Spielkonsolen hast Du?)
Item 74	LCD oder Plasma TV (Welche Peripheriegeräte hast Du?)
Item 75	LCD oder Plasma TV - HD Ready (Welche Peripheriegeräte hast Du?)
Item 76	LCD oder Plasma TV - Full HD (Welche Peripheriegeräte hast Du?)
Item 77	Surround System (Welche Peripheriegeräte hast Du?)
Item 78	keine spez. Peripherie (Welche Peripheriegeräte hast Du?)
Item 79	Wohnzimmer (Wo spielst Du am häufigsten?)
Item 80	Schlafzimmer (Wo spielst Du am häufigsten?)
Item 81	Arbeitsplatz oder Schule (Wo spielst Du am häufigsten?)
Item 82	Unterwegs (Wo spielst Du am häufigsten?)
Item 83	andere Orte (Wo spielst Du am häufigsten?)
Item 84	Spiele in der Vergangenheit (In dieser Zeit spielen meine bevorzugten Video Games?)
Item 85	Spiele in der Gegenwart (In dieser Zeit spielen meine bevorzugten Video Games?)
Item 86	Spiele in der Zukunft (In dieser Zeit spielen meine bevorzugten Video Games?)
Item 87	Spiele in der Fantasiewelt oder -zeit (In dieser Zeit spielen meine bevorzugten Video Games?)
Item 88	Spiele in anderen Zeiten (oder Szenarien) (In dieser Zeit spielen meine bevorzugten Video Games?)
Item 89	Action-Adventure (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 90	Autorennen (Action / Simulation)
Item 91	Beat `em Up (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 92	Ego-Shooter (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 93	Geschicklichkeitsspiel (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 94	Jump'n'Run (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 95	Lernspiel (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 96	Rollenspiel (RPG) (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 97	Sportspiel (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 98	Strategiespiel (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 99	Survival-Horror (Gib hier bitte an, welches Game - Genre Du wie toll findest:)
Item 100	Tanz- / Singspiel (Gib hier bitte an, welches Game - Genre Du wie toll findest:)

Table 19. Intercorrelation matrix and homogeneity indices (second validation)

	Item 3	*Item 4*	*Item 5*	*Item 7*	*Item 8*	*Item 9*	*Item 10*	*Item 11*
Item 3	1							
Item 4	-.042	1						
Item 5	.487	.208	1					
Item 7	.107	.202	.147	1				
Item 8	.098	.224	.150	.764	1			
Item 9	.072	.326	.263	.243	.245	1		
Item 10	.127	.041	.144	.098	.066	.231	1	
Item 11	.037	.188	.104	.343	.269	.385	.224	1
Item 12	.052	-.072	.076	.023	.047	-.022	.063	.141
Item 13	-.012	.017	.026	.086	.065	.040	.002	.090
Item 14	-.055	.023	-.033	.085	.076	.040	.025	.067
Item 16	.017	-.014	.023	.125	.109	.052	.062	.152
Item 17	.090	.243	.273	.143	.167	.447	.211	.230
Item 18	.093	.233	.207	.571	.492	.329	.090	.342
Item 19	.068	.033	.084	.253	.157	.148	.103	.359
Item 20	.078	.081	.151	.272	.193	.222	.123	.477
Item 21	.178	.030	.116	.174	.158	.033	-.006	.102
item 23	.171	-.002	.072	.168	.122	.103	.074	.097
Item 24	.053	.037	.267	.025	.060	.141	.020	-.004
Item 25	.058	.052	.185	.106	.089	.135	.060	.106
Item 26	.101	.118	.076	.167	.139	.231	.241	.273
Item 28	.049	-.015	.112	.076	.093	.142	.074	.145
Item 29	.078	.080	.127	.210	.182	.168	.131	.195
Item 30	.035	.127	.117	.112	.105	.170	.104	.158
Item 31	.050	.009	.079	.170	.173	.060	-.001	.177
Item 32	.080	.117	.135	.228	.235	.298	.110	.320
Item 33	.078	.090	.098	.222	.129	.200	.050	.108
Item 34	.126	.177	.361	.272	.235	.336	.131	.247
Item 35	.132	.134	.267	.244	.227	.301	.054	.297
Item 36	.088	-.076	.070	.102	.103	.094	.087	.064
Item 37	.044	.157	.206	.060	.090	.350	.184	.111
Item 38	.169	.146	.257	.299	.259	.336	.081	.353
Item 39	.107	.175	.176	.282	.267	.345	.077	.400
Item 40	.080	.077	.142	.256	.236	.216	.042	.344
Item 43	.103	.144	.158	.262	.243	.242	.044	.269
Item 44	.141	.053	.147	.277	.235	.183	.078	.357
Item 45	.103	.020	.185	.182	.154	.141	.058	.359
Item 46	.158	.010	.442	.065	.081	.180	.145	.055
Item 47	.065	.098	.340	.148	.138	.221	.093	.123
Item 48	.078	.095	.243	.182	.126	.206	.055	.202
Item 49	.125	.102	.195	.110	.068	.203	.143	.165
H	.092	.091	.172	.196	.177	.201	.093	.211

H = Homogeneity coefficient
N = 1'059; Missing values = EM

	Item 12	*Item 13*	*Item 14*	*Item 16*	*Item 17*	*Item 18*	*Item 19*	*Item 20*
Item 3								
Item 4								
Item 5								
Item 7								
Item 8								
Item 9								
Item 10								
Item 11								
Item 12	1							
Item 13	.215	1						
Item 14	.214	.221	1					
Item 16	.191	.279	.223	1				
Item 17	.003	.114	.066	.144	1			
Item 18	.026	.123	.082	.149	.227	1		
Item 19	.145	.129	.083	.135	.137	.277	1	
Item 20	.158	.116	.088	.182	.152	.290	.515	1
Item 21	-.089	-.078	-.028	-.051	-.044	.150	.127	.070
item 23	-.081	-.058	-.013	.016	.010	.184	.158	.120
Item 24	.163	.029	.074	.027	.137	.094	-.047	.022
Item 25	.089	.166	.085	.155	.188	.195	.118	.150
Item 26	-.002	-.089	-.036	.080	.170	.108	.069	.147
Item 28	.119	.156	.058	.258	.178	.097	.057	.164
Item 29	.036	.166	.033	.058	.148	.208	.349	.277
Item 30	.026	.032	-.024	.054	.145	.144	.187	.201
Item 31	.110	.118	-.004	.148	.037	.176	.109	.180
Item 32	.089	.094	.030	.077	.203	.258	.187	.245
Item 33	-.038	-.017	.004	.016	.112	.254	.177	.141
Item 34	.067	.111	.065	.133	.276	.355	.177	.360
Item 35	.164	.130	.063	.111	.264	.322	.230	.407
Item 36	.032	.057	.026	.009	.078	.130	.098	.077
Item 37	.020	.089	.120	.141	.448	.166	.039	.085
Item 38	.045	.091	.011	.078	.204	.424	.315	.391
Item 39	.082	.132	.097	.100	.252	.408	.394	.419
Item 40	.109	.164	.033	.120	.130	.332	.284	.343
Item 43	.102	.105	.056	.049	.180	.286	.305	.337
Item 44	.119	.129	.074	.110	.141	.305	.372	.406
Item 45	.160	.107	.072	.124	.118	.252	.392	.426
Item 46	.140	.066	.050	.044	.239	.130	.022	.160
Item 47	.125	.080	.041	.079	.234	.230	.074	.270
Item 48	.133	.069	.112	.143	.187	.270	.140	.319
Item 49	.053	.066	.061	.075	.294	.200	.134	.167
H	.076	.086	.057	.100	.174	.230	.177	.225

H = Homogeneity coefficient
N = 1'059; Missing values = EM

	Item 21	*item 23*	*Item 24*	*Item 25*	*Item 26*	*Item 28*	*Item 29*	*Item 30*
Item 3								
Item 4								
Item 5								
Item 7								
Item 8								
Item 9								
Item 10								
Item 11								
Item 12								
Item 13								
Item 14								
Item 16								
Item 17								
Item 18								
Item 19								
Item 20								
Item 21	1							
item 23	.410	1						
Item 24	-.147	.004	1					
Item 25	-.081	.135	.202	1				
Item 26	.080	.114	-.037	.034	1			
Item 28	-.111	.014	.170	.284	.060	1		
Item 29	.020	.153	.045	.149	.074	.154	1	
Item 30	.096	.111	.016	.119	.170	.074	.177	1
Item 31	.021	.026	.004	.142	.031	.191	.183	.124
Item 32	.092	.150	.049	.157	.168	.176	.165	.247
Item 33	.270	.352	-.028	.184	.053	.064	.155	.165
Item 34	.028	.053	.155	.255	.107	.235	.205	.127
Item 35	.070	.083	.164	.189	.124	.185	.174	.153
Item 36	.070	.139	.197	.084	.087	.079	.071	.048
Item 37	-.089	.068	.135	.326	.117	.336	.150	.113
Item 38	.183	.154	.056	.153	.173	.083	.249	.224
Item 39	.124	.140	.074	.167	.080	.168	.301	.208
Item 40	.087	.100	.060	.122	.086	.137	.213	.189
Item 43	.127	.115	-.006	.093	.088	.026	.177	.146
Item 44	.085	.116	-.018	.091	.067	.131	.373	.117
Item 45	.058	.097	.086	.147	.049	.190	.295	.092
Item 46	-.069	.017	.402	.362	.015	.279	.103	.047
Item 47	-.037	.005	.350	.320	.065	.224	.092	.095
Item 48	-.006	-.009	.210	.180	.064	.178	.122	.150
Item 49	.021	.148	.102	.438	.110	.206	.142	.139
H	.054	.096	.084	.155	.094	.132	.160	.121

H = Homogeneity coefficient
N = 1'059; Missing values = EM

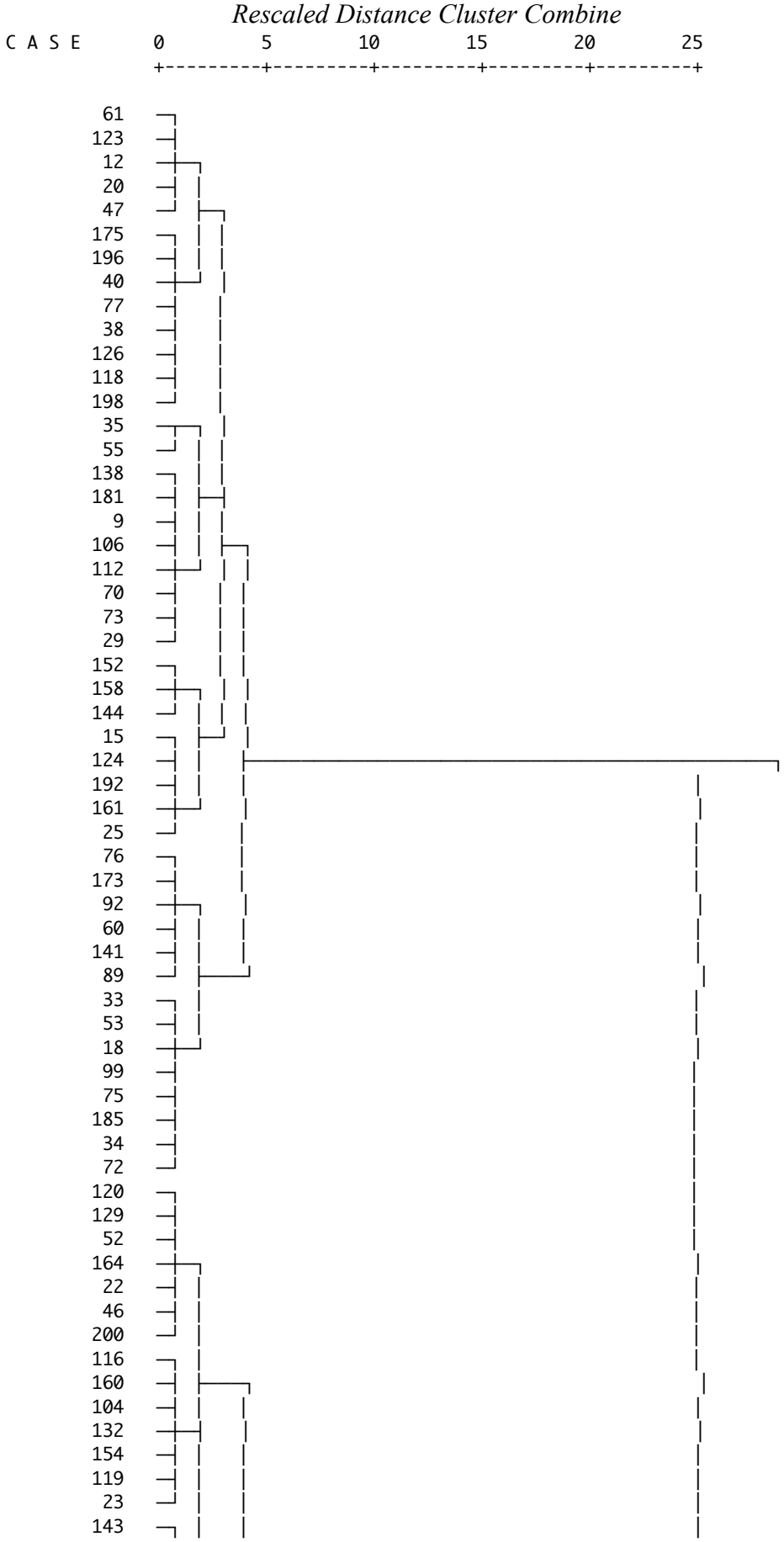
	Item 32	*Item 33*	*Item 34*	*Item 35*	*Item 36*	*Item 37*	*Item 38*	*Item 39*
Item 3								
Item 4								
Item 5								
Item 7								
Item 8								
Item 9								
Item 10								
Item 11								
Item 12								
Item 13								
Item 14								
Item 16								
Item 17								
Item 18								
Item 19								
Item 20								
Item 21								
item 23								
Item 24								
Item 25								
Item 26								
Item 28								
Item 29								
Item 30								
Item 31								
Item 32	1							
Item 33	.293	1						
Item 34	.269	.235	1					
Item 35	.292	.178	.595	1				
Item 36	.091	.085	.206	.228	1			
Item 37	.210	.143	.340	.244	.110	1		
Item 38	.316	.182	.352	.351	.103	.153	1	
Item 39	.353	.207	.322	.368	.060	.203	.626	1
Item 40	.330	.112	.307	.317	.110	.114	.604	.620
Item 43	.231	.196	.235	.296	.107	.096	.416	.395
Item 44	.231	.125	.307	.334	.129	.100	.421	.454
Item 45	.171	.127	.306	.348	.090	.128	.352	.431
Item 46	.162	.058	.405	.295	.111	.346	.174	.163
Item 47	.186	.089	.539	.479	.157	.315	.240	.192
Item 48	.237	.135	.419	.468	.198	.200	.291	.262
Item 49	.207	.172	.316	.222	.182	.377	.187	.204
H	.193	.129	.248	.242	.096	.167	.245	.252

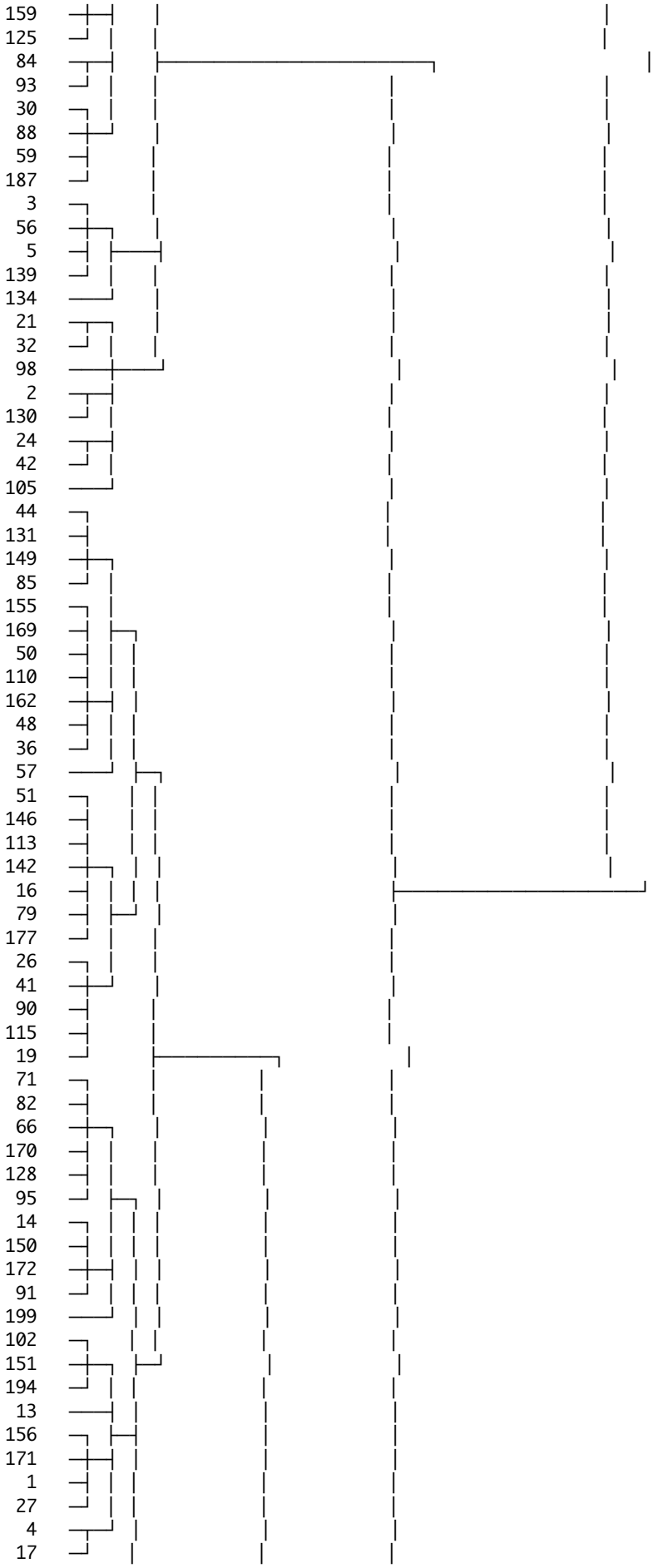
H = Homogeneity coefficient
N = 1'059; Missing values = EM

	Item 43	*Item 44*	*Item 45*	*Item 46*	*Item 47*	*Item 48*	*Item 49*
Item 3							
Item 4							
Item 5							
Item 7							
Item 8							
Item 9							
Item 10							
Item 11							
Item 12							
Item 13							
Item 14							
Item 16							
Item 17							
Item 18							
Item 19							
Item 20							
Item 21							
item 23							
Item 24							
Item 25							
Item 26							
Item 28							
Item 29							
Item 30							
Item 31							
Item 32							
Item 33							
Item 34							
Item 35							
Item 36							
Item 37							
Item 38							
Item 39							
Item 40							
Item 43	1						
Item 44	.374	1					
Item 45	.303	.527	1				
Item 46	.111	.152	.330	1			
Item 47	.180	.175	.278	.669	1		
Item 48	.248	.278	.322	.413	.586	1	
Item 49	.175	.153	.169	.287	.304	.224	1
H	.188	.214	.208	.179	.205	.203	.173

H = Homogeneity coefficient
N = 1'059; Missing values = EM

Fig. 9. Dendrogram using Ward method

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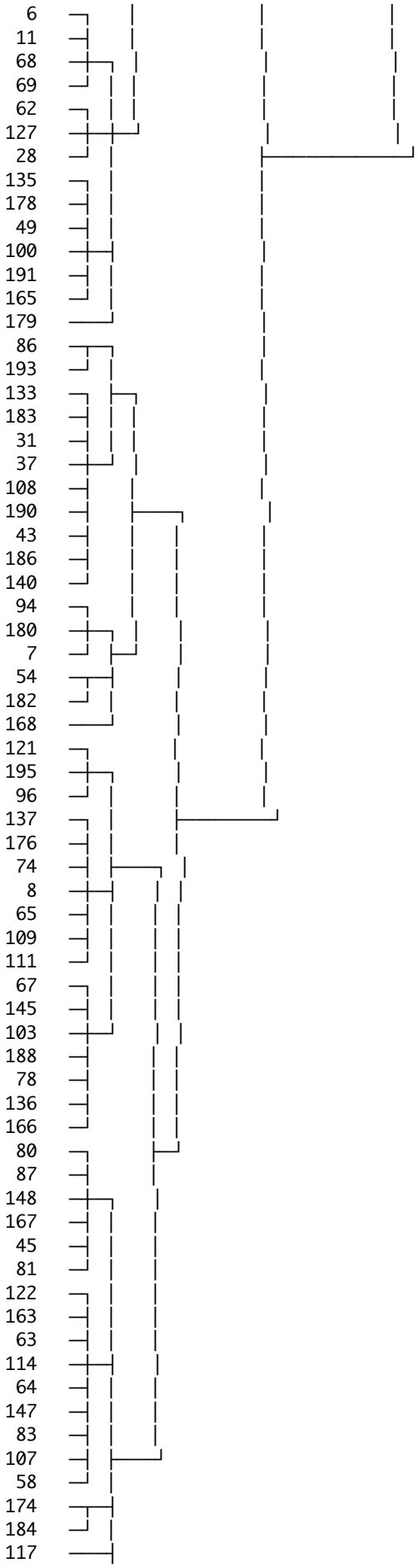
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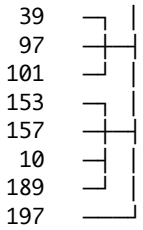
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Table 20. Agglomeration schedule (Ward)

	Cluster Combined			*Stage Cluster First Appears*		
Stage	*Cluster 1*	*Cluster 2*	*Coefficients*	*Cluster 1*	*Cluster 2*	*Next Stage*
1	61	123	7	0	0	27
2	50	110	18.365	0	0	13
3	138	181	34.293	0	0	12
4	122	163	52.793	0	0	59
5	153	157	72.701	0	0	93
6	8	65	92.701	0	0	74
7	37	108	113.308	0	0	81
8	113	142	134.023	0	0	114
9	155	169	155.523	0	0	98
10	80	87	177.023	0	0	40
11	18	99	199.023	0	0	120
12	9	138	221.666	0	3	37
13	50	162	244.44	2	0	17
14	132	154	267.251	0	0	42
15	67	145	290.061	0	0	137
16	40	77	313.16	0	0	58
17	48	50	336.558	0	13	98
18	60	141	360.116	0	0	118
19	94	180	384.116	0	0	119
20	14	150	408.123	0	0	30
21	103	188	432.191	0	0	28
22	15	124	456.352	0	0	45
23	43	186	481.042	0	0	100
24	63	114	506.042	0	0	59
25	135	178	531.542	0	0	69
26	38	126	557.042	0	0	58
27	12	61	582.709	0	1	142
28	78	103	609.105	0	21	55
29	75	185	635.548	0	0	95
30	14	172	662.298	20	0	116
31	83	107	689.062	0	0	72
32	148	167	716.062	0	0	40
33	137	176	743.078	0	0	49
34	64	147	770.337	0	0	117
35	120	129	797.662	0	0	41
36	66	170	826.662	0	0	78
37	9	106	856.08	12	0	60
38	76	173	885.58	0	0	67
39	143	159	915.08	0	0	121
40	80	148	944.83	10	32	111
41	52	120	974.605	0	35	97
42	119	132	1004.462	0	14	101
43	30	88	1034.462	0	0	127
44	16	79	1064.462	0	0	114
45	15	192	1094.804	22	0	65
46	22	46	1125.304	0	0	107
47	44	131	1156.304	0	0	56
48	90	115	1187.304	0	0	112
49	74	137	1218.332	0	33	136
50	156	171	1250.332	0	0	102
51	45	81	1282.701	0	0	111
52	1	27	1315.201	0	0	102
53	39	97	1347.71	0	0	82
54	3	56	1380.226	0	0	105
55	78	136	1412.814	28	0	106
56	44	149	1445.412	47	0	133
57	10	189	1478.474	0	0	93
58	38	40	1511.547	26	16	75
59	63	122	1544.797	24	4	122
60	9	112	1578.171	37	0	129
61	152	158	1611.749	0	0	113
62	51	146	1645.588	0	0	124
63	116	160	1679.527	0	0	89
64	33	53	1713.527	0	0	148
65	15	161	1747.948	45	0	143
66	70	73	1782.893	0	0	77
67	76	92	1818.06	38	0	146
68	26	41	1853.617	0	0	138
69	49	135	1889.45	0	25	110
70	133	183	1925.45	0	0	87
71	102	151	1961.45	0	0	94
72	58	83	1997.886	0	31	117
73	121	195	2035.101	0	0	125
74	8	109	2072.435	6	0	108
75	38	118	2109.785	58	0	130
76	6	11	2147.285	0	0	103
77	29	70	2184.934	0	66	129
78	66	128	2222.601	36	0	115
79	62	127	2260.533	0	0	149
80	59	187	2299.142	0	0	127
81	37	190	2338.319	7	0	131
82	39	101	2377.822	53	0	154
83	86	193	2418.322	0	0	158
84	174	184	2458.919	0	0	152
85	100	191	2499.919	0	0	110
86	5	139	2541.073	0	0	105
87	31	133	2582.406	0	70	144
88	175	196	2624.136	0	0	147
89	104	116	2665.953	0	63	134
90	20	47	2707.953	0	0	142
91	35	55	2750.953	0	0	160
92	71	82	2794.457	0	0	141
93	10	153	2838.281	57	5	154
94	102	194	2882.281	71	0	165
95	34	75	2926.429	0	29	120
96	84	93	2970.67	0	0	153
97	52	164	3014.931	41	0	140
98	48	155	3059.198	17	9	109

98	48	155	3059.198	17	9	109
99	24	42	3103.701	0	0	155
100	43	140	3148.268	23	0	131
101	23	119	3193.006	0	42	134
102	1	156	3238.756	52	50	168
103	6	68	3284.507	76	0	128
104	2	130	3330.507	0	0	179
105	3	5	3376.637	54	86	151
106	78	166	3423.253	55	0	137
107	22	200	3470.753	46	0	140
108	8	111	3518.42	74	0	136
109	36	48	3566.095	0	98	159
110	49	100	3614.562	69	85	123
111	45	80	3664.525	51	40	161
112	19	90	3714.858	0	48	138
113	144	152	3766.182	0	61	169
114	16	113	3817.527	44	8	124
115	66	95	3869.012	78	0	141
116	14	91	3920.887	30	0	157
117	58	64	3972.957	72	34	122
118	60	89	4025.44	18	0	146
119	7	94	4078.107	0	19	176
120	18	34	4131.448	11	95	132
121	125	143	4185.282	0	39	162
122	58	63	4239.484	117	59	161
123	49	165	4294.351	110	0	150
124	16	51	4349.452	114	62	135
125	96	121	4404.604	0	73	173
126	4	17	4459.788	0	0	168
127	30	59	4515.369	43	80	153
128	6	69	4571.839	103	0	182
129	9	29	4628.841	60	77	160
130	38	198	4686.093	75	0	147
131	37	43	4743.651	81	100	144
132	18	72	4801.477	120	0	148
133	44	85	4860.551	56	0	172
134	23	104	4919.91	101	89	171
135	16	177	4981.152	124	0	178
136	8	74	5042.731	108	49	156
137	67	78	5105.788	15	106	156
138	19	26	5168.985	112	68	178
139	21	32	5232.985	0	0	163
140	22	52	5297.591	107	97	183
141	66	71	5362.776	115	92	170
142	12	20	5428.91	27	90	167
143	15	25	5495.739	65	0	169
144	31	37	5562.811	87	131	158
145	54	182	5630.811	0	0	166
146	60	76	5700.254	118	67	174
147	38	175	5770.154	130	88	167
148	18	33	5842.951	132	64	174
149	28	62	5916.059	0	79	164
150	49	179	5989.25	123	0	164
151	3	134	6062.867	105	0	191
152	117	174	6136.694	0	84	175
153	30	84	6211.076	127	96	162
154	10	39	6285.827	93	82	175
155	24	105	6361.945	99	0	179
156	8	67	6438.914	136	137	173
157	14	199	6517.142	116	0	170
158	31	86	6595.772	144	83	187
159	36	57	6677.644	109	0	172
160	9	35	6761.151	129	91	185
161	45	58	6844.69	111	122	181
162	30	125	6930.716	153	121	171
163	21	98	7018.651	139	0	184
164	28	49	7107.608	149	150	182
165	13	102	7199.608	0	94	180
166	54	168	7294.285	145	0	176
167	12	38	7389.755	142	147	185
168	1	4	7486.307	102	126	180
169	15	144	7583.04	143	113	189
170	14	66	7680.19	157	141	190
171	23	30	7777.833	134	162	183
172	36	44	7875.687	159	133	186
173	8	96	7975.928	156	125	194
174	18	60	8083.705	148	146	192
175	10	117	8191.693	154	152	177
176	7	54	8300.196	119	166	187
177	10	197	8412.91	175	0	181
178	16	19	8528.392	135	138	186
179	2	24	8645.746	104	155	184
180	1	13	8763.765	168	165	188
181	10	45	8885.072	177	161	194
182	6	28	9010.682	128	164	188
183	22	23	9140.968	140	171	195
184	2	21	9277.331	179	163	191
185	9	12	9429.349	160	167	189
186	16	36	9588.541	178	172	193
187	7	31	9764.674	176	158	196
188	1	6	9942.919	180	182	190
189	9	15	10128.751	185	169	192
190	1	14	10333.823	188	170	193
191	2	3	10542.784	184	151	195
192	9	18	10768.617	189	174	199
193	1	16	11024.365	190	186	197
194	8	10	11284.036	173	181	196
195	2	22	11550.452	191	183	198
196	7	8	11826.084	187	194	197
197	1	7	12378.7	193	196	198
198	1	2	13342.295	197	195	199
199	1	9	15002.25	198	192	0

Table 21. MANOVA using post hoc multiple comparisons with Scheffe

	(I) Cluster	(J) Cluster	Mean Difference (I-J)	Std. Error	Sig.
Item 3	1	2	.4121*	0.09228	0
		3	.7098*	0.10127	0
		4	.3886*	0.09511	0.001
	2	1	-.4121*	0.09228	0
		3	.2978*	0.10176	0.036
		4	-0.0234	0.09563	0.996
	3	1	-.7098*	0.10127	0
		2	-.2978*	0.10176	0.036
		4	-.3212*	0.10433	0.024
	4	1	-.3886*	0.09511	0.001
		2	0.0234	0.09563	0.996
		3	.3212*	0.10433	0.024
Item 4	1	2	0.0797	0.09682	0.878
		3	1.0325*	0.10625	0
		4	.5114*	0.09979	0
	2	1	-0.0797	0.09682	0.878
		3	.9528*	0.10677	0
		4	.4317*	0.10034	0
	3	1	-1.0325*	0.10625	0
		2	-.9528*	0.10677	0
		4	-.5211*	0.10947	0
	4	1	-.5114*	0.09979	0
		2	-.4317*	0.10034	0
		3	.5211*	0.10947	0
Item 5	1	2	1.0086*	0.10304	0
		3	1.7394*	0.11308	0
		4	.3113*	0.1062	0.036
	2	1	-1.0086*	0.10304	0
		3	.7308*	0.11364	0
		4	-.6973*	0.10679	0
	3	1	-1.7394*	0.11308	0
		2	-.7308*	0.11364	0
		4	-1.4281*	0.11651	0
	4	1	-.3113*	0.1062	0.036
		2	.6973*	0.10679	0
		3	1.4281*	0.11651	0
Item 7	1	2	.2867*	0.1011	0.046
		3	2.5440*	0.11095	0
		4	2.3059*	0.1042	0
	2	1	-.2867*	0.1011	0.046
		3	2.2572*	0.11149	0
		4	2.0192*	0.10478	0
	3	1	-2.5440*	0.11095	0
		2	-2.2572*	0.11149	0
		4	-0.238	0.11431	0.228
	4	1	-2.3059*	0.1042	0
		2	-2.0192*	0.10478	0
		3	0.238	0.11431	0.228
Item 8	1	2	0.2887	0.10461	0.055
		3	2.1957*	0.1148	0
		4	2.0265*	0.10781	0
	2	1	-0.2887	0.10461	0.055
		3	1.9069*	0.11536	0
		4	1.7378*	0.10841	0
	3	1	-2.1957*	0.1148	0
		2	-1.9069*	0.11536	0
		4	-0.1691	0.11828	0.563
	4	1	-2.0265*	0.10781	0
		2	-1.7378*	0.10841	0
		3	0.1691	0.11828	0.563
Item 9	1	2	.9860*	0.1036	0
		3	2.0669*	0.11369	0
		4	1.0382*	0.10678	0
	2	1	-.9860*	0.1036	0
		3	1.0809*	0.11425	0
		4	0.0522	0.10737	0.972
	3	1	-2.0669*	0.11369	0
		2	-1.0809*	0.11425	0
		4	-1.0287*	0.11714	0
	4	1	-1.0382*	0.10678	0
		2	-0.0522	0.10737	0.972
		3	1.0287*	0.11714	0
Item 10	1	2	.6733*	0.11734	0
		3	.8624*	0.12877	0
		4	.4442*	0.12094	0.004
	2	1	-.6733*	0.11734	0
		3	0.1891	0.1294	0.545
		4	-0.2291	0.12161	0.315
	3	1	-.8624*	0.12877	0
		2	-0.1891	0.1294	0.545
		4	-.4182*	0.13268	0.02
	4	1	-.4442*	0.12094	0.004
		2	0.2291	0.12161	0.315
		3	.4182*	0.13268	0.02
Item 11	1	2	.7744*	0.10214	0
		3	2.1829*	0.11209	0
		4	1.4106*	0.10527	0
	2	1	-.7744*	0.10214	0
		3	1.4085*	0.11264	0
		4	.6362*	0.10585	0
	3	1	-2.1829*	0.11209	0
		2	-1.4085*	0.11264	0
		4	-.7723*	0.11548	0
	4	1	-1.4106*	0.10527	0
		2	-.6362*	0.10585	0
		3	.7723*	0.11548	0
Item 12	1	2	.6430*	0.11698	0
		3	.6571*	0.12837	0
		4	0.1812	0.12056	0.521
	2	1	-.6430*	0.11698	0
		3	0.0142	0.129	1
		4	-.4618*	0.12123	0.002
	3	1	-.6571*	0.12837	0
		2	-0.0142	0.129	1
		4	-.4760*	0.13226	0.005
	4	1	-0.1812	0.12056	0.521
		2	.4618*	0.12123	0.002
		3	.4760*	0.13226	0.005
Item 13	1	2	.3987*	0.11756	0.01

Item 13	1	2	.3987*	0.11756	0.01
		3	.7253*	0.12902	0
		4	0.3303	0.12117	0.06
	2	1	-.3987*	0.11756	0.01
		3	0.3266	0.12965	0.097
		4	-0.0684	0.12184	0.957
	3	1	-.7253*	0.12902	0
		2	-0.3266	0.12965	0.097
		4	-.3950*	0.13293	0.032
	4	1	-0.3303	0.12117	0.06
		2	0.0684	0.12184	0.957
		3	.3950*	0.13293	0.032
Item 14	1	2	.4211*	0.08929	0
		3	.2833*	0.09799	0.04
		4	.3609*	0.09203	0.002
	2	1	-.4211*	0.08929	0
		3	-0.1378	0.09847	0.581
		4	-0.0602	0.09254	0.935
	3	1	-.2833*	0.09799	0.04
		2	0.1378	0.09847	0.581
		4	0.0776	0.10096	0.899
	4	1	-.3609*	0.09203	0.002
		2	0.0602	0.09254	0.935
		3	-0.0776	0.10096	0.899
Item 16	1	2	.7045*	0.11073	0
		3	.8992*	0.12151	0
		4	.7009*	0.11412	0
	2	1	-.7045*	0.11073	0
		3	0.1947	0.12211	0.468
		4	-0.0036	0.11476	1
	3	1	-.8992*	0.12151	0
		2	-0.1947	0.12211	0.468
		4	-0.1983	0.1252	0.474
	4	1	-.7009*	0.11412	0
		2	0.0036	0.11476	1
		3	0.1983	0.1252	0.474
Item 17	1	2	1.0991*	0.11202	0
		3	1.8524*	0.12293	0
		4	.6764*	0.11545	0
	2	1	-1.0991*	0.11202	0
		3	.7533*	0.12353	0
		4	-.4226*	0.1161	0.004
	3	1	-1.8524*	0.12293	0
		2	-.7533*	0.12353	0
		4	-1.1760*	0.12666	0
	4	1	-.6764*	0.11545	0
		2	.4226*	0.1161	0.004
		3	1.1760*	0.12666	0
Item 18	1	2	.8847*	0.1079	0
		3	2.8245*	0.11842	0
		4	1.8196*	0.11121	0
	2	1	-.8847*	0.1079	0
		3	1.9398*	0.119	0
		4	.9349*	0.11183	0
	3	1	-2.8245*	0.11842	0
		2	-1.9398*	0.119	0
		4	-1.0049*	0.12201	0
	4	1	-1.8196*	0.11121	0
		2	-.9349*	0.11183	0
		3	1.0049*	0.12201	0
Item 19	1	2	.8050*	0.09998	0
		3	1.5637*	0.10972	0
		4	1.1879*	0.10304	0
	2	1	-.8050*	0.09998	0
		3	.7587*	0.11026	0
		4	.3829*	0.10362	0.004
	3	1	-1.5637*	0.10972	0
		2	-.7587*	0.11026	0
		4	-.3758*	0.11304	0.012
	4	1	-1.1879*	0.10304	0
		2	-.3829*	0.10362	0.004
		3	.3758*	0.11304	0.012
Item 20	1	2	.8222*	0.08737	0
		3	1.7801*	0.09588	0
		4	.9065*	0.09005	0
	2	1	-.8222*	0.08737	0
		3	.9578*	0.09635	0
		4	0.0842	0.09055	0.834
	3	1	-1.7801*	0.09588	0
		2	-.9578*	0.09635	0
		4	-.8736*	0.09878	0
	4	1	-.9065*	0.09005	0
		2	-0.0842	0.09055	0.834
		3	.8736*	0.09878	0
Item 21	1	2	-0.2665	0.0975	0.059
		3	.4078*	0.107	0.002
		4	.3508*	0.10049	0.007
	2	1	0.2665	0.0975	0.059
		3	.6743*	0.10752	0
		4	.6173*	0.10105	0
	3	1	-.4078*	0.107	0.002
		2	-.6743*	0.10752	0
		4	-0.057	0.11024	0.966
	4	1	-.3508*	0.10049	0.007
		2	-.6173*	0.10105	0
		3	0.057	0.11024	0.966
Item 23	1	2	0.0581	0.09368	0.943
		3	.6207*	0.10281	0
		4	.4496*	0.09655	0
	2	1	-0.0581	0.09368	0.943
		3	.5626*	0.10331	0
		4	.3914*	0.09709	0.001
	3	1	-.6207*	0.10281	0
		2	-.5626*	0.10331	0
		4	-0.1712	0.10592	0.456
	4	1	-.4496*	0.09655	0
		2	-.3914*	0.09709	0.001
		3	0.1712	0.10592	0.456

Item 24	1	2	.7765*	0.10079	0
		3	.8291*	0.1106	0
		4	-0.1991	0.10388	0.3
	2	1	-.7765*	0.10079	0
		3	0.0526	0.11115	0.974
		4	-.9755*	0.10445	0
	3	1	-.8291*	0.1106	0
		2	-0.0526	0.11115	0.974
		4	-1.0282*	0.11396	0
	4	1	0.1991	0.10388	0.3
		2	.9755*	0.10445	0
		3	1.0282*	0.11396	0
Item 25	1	2	.8350*	0.09181	0
		3	1.0949*	0.10075	0
		4	0.1165	0.09462	0.679
	2	1	-.8350*	0.09181	0
		3	0.2599	0.10124	0.087
		4	-.7185*	0.09515	0
	3	1	-1.0949*	0.10075	0
		2	-0.2599	0.10124	0.087
		4	-.9784*	0.1038	0
	4	1	-0.1165	0.09462	0.679
		2	.7185*	0.09515	0
		3	.9784*	0.1038	0
Item 26	1	2	0.0373	0.08922	0.982
		3	.7337*	0.09791	0
		4	.3668*	0.09196	0.001
	2	1	-0.0373	0.08922	0.982
		3	.6964*	0.09839	0
		4	.3295*	0.09247	0.006
	3	1	-.7337*	0.09791	0
		2	-.6964*	0.09839	0
		4	-.3669*	0.10088	0.004
	4	1	-.3668*	0.09196	0.001
		2	-.3295*	0.09247	0.006
		3	.3669*	0.10088	0.004
Item 28	1	2	.8274*	0.09043	0
		3	1.0393*	0.09924	0
		4	.4130*	0.09321	0
	2	1	-.8274*	0.09043	0
		3	0.2119	0.09973	0.211
		4	-.4144*	0.09372	0
	3	1	-1.0393*	0.09924	0
		2	-0.2119	0.09973	0.211
		4	-.6264*	0.10225	0
	4	1	-.4130*	0.09321	0
		2	.4144*	0.09372	0
		3	.6264*	0.10225	0
Item 29	1	2	.5547*	0.1005	0
		3	1.2900*	0.11029	0
		4	.8410*	0.10358	0
	2	1	-.5547*	0.1005	0
		3	.7353*	0.11083	0
		4	0.2863	0.10416	0.057
	3	1	-1.2900*	0.11029	0
		2	-.7353*	0.11083	0
		4	-.4490*	0.11363	0.001
	4	1	-.8410*	0.10358	0
		2	-0.2863	0.10416	0.057
		3	.4490*	0.11363	0.001
Item 30	1	2	.2451*	0.05093	0
		3	.5231*	0.05589	0
		4	.3186*	0.05249	0
	2	1	-.2451*	0.05093	0
		3	.2780*	0.05616	0
		4	0.0734	0.05278	0.586
	3	1	-.5231*	0.05589	0
		2	-.2780*	0.05616	0
		4	-.2046*	0.05758	0.006
	4	1	-.3186*	0.05249	0
		2	-0.0734	0.05278	0.586
		3	.2046*	0.05758	0.006
Item 31	1	2	.9503*	0.10879	0
		3	1.2422*	0.11938	0
		4	.7807*	0.11212	0
	2	1	-.9503*	0.10879	0
		3	0.2919	0.11997	0.116
		4	-0.1696	0.11274	0.52
	3	1	-1.2422*	0.11938	0
		2	-0.2919	0.11997	0.116
		4	-.4615*	0.123	0.003
	4	1	-.7807*	0.11212	0
		2	0.1696	0.11274	0.52
		3	.4615*	0.123	0.003
Item 32	1	2	.5388*	0.07815	0
		3	1.2216*	0.08576	0
		4	.6623*	0.08055	0
	2	1	-.5388*	0.07815	0
		3	.6828*	0.08619	0
		4	0.1235	0.081	0.508
	3	1	-1.2216*	0.08576	0
		2	-.6828*	0.08619	0
		4	-.5593*	0.08836	0
	4	1	-.6623*	0.08055	0
		2	-0.1235	0.081	0.508
		3	.5593*	0.08836	0
Item 33	1	2	.3485*	0.09568	0.004
		3	.8675*	0.105	0
		4	.4360*	0.09862	0
	2	1	-.3485*	0.09568	0.004
		3	.5190*	0.10552	0
		4	0.0875	0.09916	0.855
	3	1	-.8675*	0.105	0
		2	-.5190*	0.10552	0
		4	-.4315*	0.10819	0.001
	4	1	-.4360*	0.09862	0
		2	-0.0875	0.09916	0.855
		3	.4315*	0.10819	0.001

Item 34	1	2	1.5369*	0.09271	0
		3	2.3950*	0.10174	0
		4	.7677*	0.09555	0
	2	1	-1.5369*	0.09271	0
		3	.8581*	0.10224	0
		4	-.7692*	0.09608	0
	3	1	-2.3950*	0.10174	0
		2	-.8581*	0.10224	0
		4	-1.6273*	0.10482	0
	4	1	-.7677*	0.09555	0
		2	.7692*	0.09608	0
		3	1.6273*	0.10482	0
Item 35	1	2	1.4942*	0.09704	0
		3	2.4202*	0.1065	0
		4	.9504*	0.10002	0
	2	1	-1.4942*	0.09704	0
		3	.9260*	0.10702	0
		4	-.5438*	0.10058	0
	3	1	-2.4202*	0.1065	0
		2	-.9260*	0.10702	0
		4	-1.4699*	0.10973	0
	4	1	-.9504*	0.10002	0
		2	.5438*	0.10058	0
		3	1.4699*	0.10973	0
Item 36	1	2	.3473*	0.09295	0.003
		3	.8020*	0.10201	0
		4	0.127	0.0958	0.624
	2	1	-.3473*	0.09295	0.003
		3	.4546*	0.10251	0
		4	-0.2203	0.09634	0.156
	3	1	-.8020*	0.10201	0
		2	-.4546*	0.10251	0
		4	-.6750*	0.1051	0
	4	1	-0.127	0.0958	0.624
		2	0.2203	0.09634	0.156
		3	.6750*	0.1051	0
Item 37	1	2	1.2756*	0.11006	0
		3	1.6431*	0.12078	0
		4	.3860*	0.11344	0.009
	2	1	-1.2756*	0.11006	0
		3	.3676*	0.12137	0.028
		4	-.8896*	0.11407	0
	3	1	-1.6431*	0.12078	0
		2	-.3676*	0.12137	0.028
		4	-1.2572*	0.12444	0
	4	1	-.3860*	0.11344	0.009
		2	.8896*	0.11407	0
		3	1.2572*	0.12444	0
Item 38	1	2	1.0746*	0.09283	0
		3	2.3359*	0.10187	0
		4	1.3147*	0.09567	0
	2	1	-1.0746*	0.09283	0
		3	1.2614*	0.10237	0
		4	0.2402	0.09621	0.102
	3	1	-2.3359*	0.10187	0
		2	-1.2614*	0.10237	0
		4	-1.0212*	0.10496	0
	4	1	-1.3147*	0.09567	0
		2	-0.2402	0.09621	0.102
		3	1.0212*	0.10496	0
Item 39	1	2	1.0895*	0.08681	0
		3	2.2628*	0.09527	0
		4	1.3761*	0.08947	0
	2	1	-1.0895*	0.08681	0
		3	1.1733*	0.09574	0
		4	.2867*	0.08997	0.018
	3	1	-2.2628*	0.09527	0
		2	-1.1733*	0.09574	0
		4	-.8866*	0.09816	0
	4	1	-1.3761*	0.08947	0
		2	-.2867*	0.08997	0.018
		3	.8866*	0.09816	0
Item 40	1	2	.8366*	0.09364	0
		3	1.9493*	0.10276	0
		4	.9565*	0.09651	0
	2	1	-.8366*	0.09364	0
		3	1.1127*	0.10326	0
		4	0.1199	0.09704	0.676
	3	1	-1.9493*	0.10276	0
		2	-1.1127*	0.10326	0
		4	-.9927*	0.10587	0
	4	1	-.9565*	0.09651	0
		2	-0.1199	0.09704	0.676
		3	.9927*	0.10587	0
Item 43	1	2	.9582*	0.11976	0
		3	2.2360*	0.13143	0
		4	1.3318*	0.12344	0
	2	1	-.9582*	0.11976	0
		3	1.2778*	0.13208	0
		4	.3736*	0.12412	0.029
	3	1	-2.2360*	0.13143	0
		2	-1.2778*	0.13208	0
		4	-.9042*	0.13542	0
	4	1	-1.3318*	0.12344	0
		2	-.3736*	0.12412	0.029
		3	.9042*	0.13542	0
Item 44	1	2	1.1332*	0.10357	0
		3	2.0575*	0.11366	0
		4	1.4753*	0.10675	0
	2	1	-1.1332*	0.10357	0
		3	.9243*	0.11422	0
		4	.3420*	0.10734	0.018
	3	1	-2.0575*	0.11366	0
		2	-.9243*	0.11422	0
		4	-.5822*	0.11711	0
	4	1	-1.4753*	0.10675	0
		2	-.3420*	0.10734	0.018
		3	.5822*	0.11711	0

Item 45	1	2	1.2524*	0.10224	0
		3	1.9333*	0.1122	0
		4	1.0733*	0.10537	0
	2	1	-1.2524*	0.10224	0
		3	.6809*	0.11275	0
		4	-0.1791	0.10596	0.415
	3	1	-1.9333*	0.1122	0
		2	-.6809*	0.11275	0
		4	-.8600*	0.1156	0
	4	1	-1.0733*	0.10537	0
		2	0.1791	0.10596	0.415
		3	.8600*	0.1156	0
Item 46	1	2	1.5601*	0.09443	0
		3	1.7620*	0.10363	0
		4	-0.1518	0.09732	0.488
	2	1	-1.5601*	0.09443	0
		3	0.2019	0.10413	0.289
		4	-1.7119*	0.09786	0
	3	1	-1.7620*	0.10363	0
		2	-0.2019	0.10413	0.289
		4	-1.9138*	0.10677	0
	4	1	0.1518	0.09732	0.488
		2	1.7119*	0.09786	0
		3	1.9138*	0.10677	0
Item 47	1	2	1.5756*	0.09548	0
		3	1.9829*	0.10479	0
		4	0.127	0.09841	0.645
	2	1	-1.5756*	0.09548	0
		3	.4072*	0.1053	0.002
		4	-1.4486*	0.09896	0
	3	1	-1.9829*	0.10479	0
		2	-.4072*	0.1053	0.002
		4	-1.8559*	0.10796	0
	4	1	-0.127	0.09841	0.645
		2	1.4486*	0.09896	0
		3	1.8559*	0.10796	0
Item 48	1	2	1.3841*	0.09997	0
		3	2.0015*	0.10971	0
		4	.5066*	0.10304	0
	2	1	-1.3841*	0.09997	0
		3	.6174*	0.11025	0
		4	-.8776*	0.10361	0
	3	1	-2.0015*	0.10971	0
		2	-.6174*	0.11025	0
		4	-1.4950*	0.11303	0
	4	1	-.5066*	0.10304	0
		2	.8776*	0.10361	0
		3	1.4950*	0.11303	0
Item 49	1	2	1.2628*	0.11923	0
		3	1.7587*	0.13084	0
		4	.3674*	0.12289	0.031
	2	1	-1.2628*	0.11923	0
		3	.4960*	0.13149	0.003
		4	-.8954*	0.12357	0
	3	1	-1.7587*	0.13084	0
		2	-.4960*	0.13149	0.003
		4	-1.3913*	0.13481	0
	4	1	-.3674*	0.12289	0.031
		2	.8954*	0.12357	0
		3	1.3913*	0.13481	0

* The mean difference is significant at the .05 level