

GAMES AND PEER-TO-PEER FILE SHARING: ATTITUDES TOWARDS ILLEGAL DISTRIBUTION OF COMPUTER GAMES

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ABSTRACT

As peer-to-peer file sharing is a widespread and user friendly technique ideally suited to distribute illegally produced copies of computer games, the users attitudes towards acquiring games through this medium is of great interest.

To obtain information on the extent to which peer-to-peer file sharing is associated with computer games distribution, and the nature of these associations, an empirical study was conducted. Children from age 10 to age 15 were interviewed about their computer based communication habits and attitudes. To ensure unbiased results, games and games related issues were never brought up by the interviewer.

Results show that the distribution of computer games were *spontaneously* pinpointed by 15.58% of the interview subjects being asked about their peer-to-peer file sharing habits. Younger students showed a significantly more positive attitude towards this activity, while a majority of the older students pointed out negative aspects of acquiring computer games this way. Through the negative quotes given, the concept of empathy with game designers is identified as having potential as a possible counterfactor.

BACKGROUND

The computer games phenomenon is a highly diversified one, showing a wide variety of genres and functionality. While it may not be possible to select one single feature that with certainty has influenced the games development more than all others, it does seem clear that the area of communication is at least a strong candidate. With it has come popular genres like multiplayer versions of first-person action games and massively multiplayer online role-playing games. Such communication features embedded in computer games have both introduced new dimensions to the player experience, as well as taken over part of the responsibility for narration and game plots. This shift can be quite notable, as Klastrop puts it: "*Did anyone notice when the story left?*" (Klastrop 2001). Multiplayer games has, at least to a degree, replaced predefined story with the distributed efforts and interactions of all those participating in the game. Used this way, player-to-player interaction is

enhancing the player experience through in-game communication.

In-game player-to-player communication can be divided into in-character and out-of-character communication, referring to the way the players carry out the communication. Using in-character communication, performed during gameplay and mediated through the players avatar, players can add to the games atmosphere while preserving the style of the game. Such in-character communication can be a very important aspect of the game, and players may rely on it heavily. As shown in a survey by Heide Smith, a majority of the participants either mostly agrees or totally agrees to the statement "*Communication/chat with other players is an appealing part of online gaming*", and 81.4% of the participants (those replying "*Sometimes*" excluded) stated that they often or all the time judged other players on the basis of dialogue (Heide Smith 2003).

The in-game intraplayer communication can leave a very strong impression on the player, possibly the strongest. As Klastrop describes her impressions after a study involving active participation in the multiplayer online role-playing game EverQuest: "*I also take with me the experience of becoming part of a social network which goes beyond the individual character and also includes sharing a communal experience of EverQuest as a prop and tool...*" (Klastrop 2003). Also in multiplayer action games with a modest number of players and a high degree of fast combat situations, player-to-player communication may be a key feature, as observed by Wright et al.: "*The meaning of playing Counter-Strike is not merely embodied in the graphics or even the violent game play, but in the social mediations that go on between players through their talk with each other and by their performance within the game. Participants then, actively create the meaning of the game through their virtual talk and behavior borrowing heavily from popular and youth culture representations.*" (Wright et al. 2002).

Apart from in-character communication, also out-of-character communication may be appropriate, although it may be discouraged in games that rely heavily on atmosphere. This is noted by Pajares Tosca in her study of the online version of the role-playing game Vampire: The Masquerade – Redemption: "*In my experience, players will only go OOC*" [Out-Of-Character] "*when they experience some technical problem (or for example wants to tell the others that they are going to be AFK, Away From Keyboard,*

for a couple of minutes.” (Pajares Tosca 2001). Keeping the communication within the boundaries of game atmosphere may be even more important if it is implemented in such a way that allows not only text based messages but also sound. In such a case, crucial parts of the “*Rich Interaction*” outlined by Manninen can be implemented in multiplayer games (Manninen 2001, 383-398). Such interaction can (apart from visual keys) include paralanguage, defined as the non-verbal audio part of speech (Manninen and Kujanpää 2002, 383-401), and informative spatial sound effects that might add significantly to realism. As Furness points out: “*Humans like parallel input. People make use of a combination of sensory stimuli to help reduce ambiguity. The sound of a letter dropping into a mailbox tells us a lot about how full the mail box is. The echoes in a room tell us about the material in the fixtures and floor of a room.*” (Furness 2001, 80-98).

The observation that in-game communication is a powerful tool that can add significantly to gameplay experience is also supported by the extent to which communication-intensive games are played. A survey conducted by Egenfelt-Nielsen in 2002 showed that 70.91% of the participating players played online games 6 hours or more per week, and 46.94% played 12 hours or more per week. As many as 17.24% played 24 hours or more per week (Egenfelt-Nielsen 2002). A study by Castronova on the online massively multiplayer role-playing game EverQuest shows that 31.5% of the players over 18 years of age devoted more time in a typical week to playing EverQuest than they did to working (Castronova 2001). Regarding the number of players involved in multiplayer online gaming, Sony Online Entertainment Inc. reports having sold over 2 million copies of EverQuest, experiencing over 118,000 simultaneous players during peak hours. Sony Online Entertainment Inc. reported having more than 750,000 active player accounts (including other game titles from the same company) in May 2004 (Sony 2004).

The Other Side of The Communication Coin

Apart from the in-game player communication outlined above, also out-of-game communication between players may occur. Undoubtedly, this too can be of great value to gameplay, but in this case there are aspects of the communication that game designers might disapprove of. Such downsides of computer based communication (from the game developers point of view, and possibly also by quite a few players), includes the buying and selling of game world artefacts and game characters. As described by Castronova, game entities are sometimes being traded for real money in web based auction houses: “*Records at one web site show that on an ordinary weekday (Thursday, September 6, 2001), the total volume of successfully completed auctions (N=112) was about \$9,200.*” (Castronova 2001). In a later paper Castronova notes some countermeasures emerging in the design of games: “*Two games (Ultima Online and Dark Ages of Camelot) now offer methods to effectively start out ahead*” ... “*These strategies help companies discourage the buying and selling of avatars outside the game, perhaps at a cost to the atmosphere within the world.*” (Castronova 2003).

A special case of out-of-game communication that may have severe effects for game developers is the distribution of illegally produced copies of the computer games themselves, often referred to as software piracy. It is estimated by the commercial software industry’s interest organisation Business Software Alliance that 36% of all commercial

software units installed world-wide in 2003 were illegally obtained, with peer-to-peer file sharing being pointed out as a factor increasing this software piracy (Business Software Alliance 2004). The functionality provided by peer-to-peer file sharing technology is ideal for distributing and acquiring illegally copied games, while retaining a high degree of anonymity. As peer-to-peer file sharing technology is widespread, the extent to which it is being used to distribute illegally created copies of computer games is a key issue. Of special interest in this context, from the perspective of stopping software piracy of games, are the users attitudes towards games being copied and distributed illegally, and the possible association of this activity with peer-to-peer file sharing systems.

A survey performed on-line by Harris Interactive in 2004 has compared young computer users attitudes towards obtaining various types of material through the internet. Results show that 83% of the 8-18 year old participants were aware that computer games are copyrighted, slightly fewer than the 88% of them that were aware of movies and music being copyrighted. Although not specific about the internet technology being used (peer-to-peer file sharing, or other), the survey also shows that 32% of the respondents had actually downloaded computer games from the internet without paying for them (Harris Interactive 2004). The scale of the problem is increased by technological advances such as increasing transmission speeds, since faster internet connections enable users to download large files, such as computer games, more quickly. By the end of 2003, there were 70 million households with broadband internet connections, a figure that is estimated to reach 170 million broadband connections by the end of 2007 (Business Software Alliance 2004).

RESEARCH QUESTION

As peer-to-peer file sharing can be perceived as more or less closely associated with the illegal distribution of computer games, there is a possibility that some individuals see peer-to-peer file sharing as a natural way to acquire computer games. Since a high degree of user friendliness in combination with easily achieved anonymity may increase the likelihood that illegal activities are carried out, the users attitudes towards such activities are crucial. In the absence of other types of barriers, the users attitudes are all that stand between them and active software piracy of games. The question arises: Is the illegal nature of copying (most) games this way hidden, or perceived as less serious, obscured by the availability and ease of use provided by peer-to-peer systems? And if so, is there something in the users view of the situation that might serve as a barrier preventing such illegal copying of games?

The research issue addressed in this paper is to find out if peer-to-peer file sharing is primarily associated with illegal distribution of computer games by some individuals, and, if so, the nature of these associations. An attempt is made to identify user attitudes with a potential to serve as counterfactors against the illegal copying of computer games.

METHODOLOGY

The empirical contribution of this paper consists of a study that was conducted using in-depth interviews with students of various ages. The study was conducted in the two cities of Stockholm and Umeå, Sweden, where students in their 4:th to 9:th grades (normally corresponding to the years in which

the students reach the ages of 10 to 15, respectively) were interviewed about a wide range of activities related to communication through computers and mobile phones. In this paper the findings regarding copying of computer games in general, and through peer-to-peer file sharing technology in particular, are described and analysed.

In each class, all the students in the class were interviewed, to ensure that not just students interested in computer related issues participated, but rather the full variety of students present. The classes were selected at random, with the option for the teacher to decline if he/she felt the need to do so. However, all teachers welcomed their students to participate in the study. Students not present in school on the day when their classes were interviewed were excluded from the study.

A key aspect of the interviews was not letting the interview subjects know that computer games were of specific interest. To achieve unbiased results, the interviewer never mentioned computer games or game related issues in the questions. This method was chosen specifically, so that the interviewer did not influence the students to focus on game related issues more than they would otherwise have done spontaneously. Only in follow-up questions when the student already had brought up game related subjects on his or her own initiative, did the interviewer explicitly refer to game related issues.

The interviews were conducted individually in a separate room, away from the class room, with no possibilities of anyone else overhearing the conversations. The students retained full anonymity, only being identified by a sequential number untraceable to the specific individual. Each student was informed of this anonymity, and that his or her answers would not be disclosed to anyone else. By taking these measures, the risk of students not daring to reveal their computer based communication habits were eliminated as much as possible.

During the interviews, the interviewer followed a fixed form with questions to ensure equal coverage of topics with all students. Only follow-up questions may differ somewhat among the students, depending on the answers given. All interviews were recorded in their entirety on a portable tape recorder. Later, the information from the tapes were extracted and entered into a database for processing. Key quotes were translated to English for the purpose of appearing in this paper.

RESULTS

131 students were interviewed, out of which 84 reported using peer-to-peer file sharing. When questioned about their peer-to-peer file sharing habits, 15.58% of the peer-to-peer file sharers gave answers relating directly to computer games distribution. When asked the question *“What is good about peer-to-peer file sharing?”*, 9.52% of the peer-to-peer file sharers pointed out aspects of computer games distribution. When asked the question *“What is bad about peer-to-peer file sharing?”*, 5.95% of the peer-to-peer file sharers pointed out aspects of computer games distribution.

By Age, Grades 4-6

Dividing the interview subjects into age groups, 25.00% of the 32 peer-to-peer file sharers in grades 4-6 (normally corresponding to the year in which the students reach the ages 10, 11, and 12, respectively) gave answers relating

directly to computer games distribution. When asked the question *“What is good about peer-to-peer file sharing?”*, 18.75% of the grade 4-6 peer-to-peer file sharers pointed out aspects of computer games distribution. When asked the question *“What is bad about peer-to-peer file sharing?”*, 6.25% of the grade 4-6 peer-to-peer file sharers pointed out aspects of computer games distribution.

By Age, Grades 7-9

Dividing the interview subjects into age groups, 9.61% of the 52 peer-to-peer file sharers in grades 7-9 (normally corresponding to the year in which the students reach the ages 13, 14, and 15, respectively) gave answers relating directly to computer games distribution. When asked the question *“What is good about peer-to-peer file sharing?”*, 3.85% of the grade 7-9 computer chatters pointed out aspects of computer games distribution. When asked the question *“What is bad about peer-to-peer file sharing?”*, 5.77% of the grade 7-9 computer chatters pointed out aspects of computer games distribution.

Quotes pinpointing distribution of games

<i>“What is good about peer-to-peer file sharing?”</i>	
<i>“All the games are there”</i>	Boy, grade 4
<i>“The games that are there”</i>	Boy, grade 4
<i>“The games you get”</i>	Boy, grade 4
<i>“That all the games are free”</i>	Boy, grade 7
<i>“If you can't afford to buy a game”</i>	Boy, grade 5
<i>“The games!”</i>	Boy, grade 5
<i>“Its good for us that get the games”</i>	Boy, grade 6
<i>“You don't have to pay for the games there”</i>	Girl, grade 8

Table 1. Positive quotes about peer-to-peer file sharing, mentioning games distribution.

<i>“What is bad about peer-to-peer file sharing?”</i>	
<i>“When it says it's a game but it isn't”</i>	Girl, grade 8
<i>“When the game doesn't work”</i>	Boy, grade 7
<i>“There can be viruses in the games”</i>	Boy, grade 6
<i>“Its bad for them that made the games”</i>	Boy, grade 6
<i>“Its bad that there are viruses in some of the games”</i>	Girl, grade 8

Table 2. Negative quotes about peer-to-peer file sharing, mentioning games distribution.

DISCUSSION AND CONCLUSIONS

It can be concluded from the results described in this paper that peer-to-peer file sharing is being spontaneously associated with computer games distribution by 15.58% of all the interviewed peer-to-peer file sharers. While this figure might seem small at first sight, its still a significant indication that peer-to-peer file sharing is perceived by many as a natural method of distribution of computer games.

The interviewed students are not just those playing computer games, but all the students in the classes in question, thus including those who never play games at all. In the light of this fact, the 15.58% figure is quite impressive, and even more so since the subject of computer games were never mentioned by the interviewer, but associated to spontaneously by the students themselves.

Age Issues

The spontaneous association of peer-to-peer file sharing in general with the distribution of computer games is considerably more common in the younger age group in the study, 25.00% in the grades 4-6 group versus 9.61% in the grades 7-9 group.

It is interesting to note that the ratio of positive versus negative quotes about peer-to-peer file sharing mentioning distribution of games is very different in the two age groups: Among the younger grades 4-6 peer-to-peer file sharers, 75% of the quotes mentioning computer games distribution were given when discussing positive aspects of peer-to-peer file sharing, while only 25% of the quotes mentioning computer games distribution were given when discussing negative peer-to-peer file sharing aspects. In the group of older peer-to-peer file sharers, the situation is reversed: 40% of the quotes involving games distribution were given when discussing positive peer-to-peer file sharing aspects, while 60% of the quotes involving games distribution were given when discussing negative peer-to-peer file sharing aspects.

The underlying reasons behind the older students being more negative to the peer-to-peer game copying phenomenon, while the younger students are being more positive, may possibly be linked to increased insights about various downsides of peer-to-peer file sharing of illegally copied games, that comes with age and experience. This is not the only possible explanation though, and other factors not linked to age or experience may also contribute, as discussed in the section *Quotes From individual Answers* below.

Quotes From Individual Answers

The individual answers from the students during the interviews reveal various situations in which peer-to-peer file sharing is perceived as either having positive or negative sides in the context of distributing copied computer games. This is the result of the students being asked the questions *"What is good about peer-to-peer file sharing?"* and *"What is bad about peer-to-peer file sharing?"*. With the frequencies shown above, the replies to these questions contained references to computer games distribution.

Some of the positive quotes are not explicit about any cost or price factors being involved, although this seems implicitly likely. Instead, these quotes merely refer to the accessibility as such, as in: *"All the games are there"* (boy, grade 4) or *"The games you get"* (boy, grade 4). In other cases, though, the cost is explicitly referred to in the quotes, such as in: *"If you can't afford to buy a game"* (boy, grade 5). Interestingly, some quotes have an air of naivety about them, possibly hinting that the illegal nature of the activities are sometimes not even fully understood by the students: *"You don't have to pay for the games there"* (girl, grade 8) and *"That all the games are free"* (boy, grade 5) are examples of this.

The majority of the negative quotes are directly related to practical issues, such as the downloaded games not working, or being infected by computer viruses. *"When the game doesn't work"* (boy, grade 7) and *"Its bad that there are viruses in some of the games"* (girl, grade 8) are typical examples of this. One quote may relate to either countermeasures to reduce illegal distribution, or possibly practical joking: *"When it says it's a game but it isn't"* (girl, grade 8).

The observed practical nature of the negative concerns expressed in the quotes is consistent with findings from an on-line survey performed by Harris Interactive in 2004: To the question *"Which of the following things have worried you about downloading software, music, or games on the internet in the past without paying for it?"*, the most common answer was *"Accidentally downloading a virus onto the computer"*, given by 60% of the respondents. The more ethically based answer *"Feeling that this is just not something that is right to do"* was just the 5:th most common answer, given by 39% of the respondents (Harris Interactive 2004).

One of the quotes that are being negative to illegal distribution of computer games through peer-to-peer file sharing stands out from the rest conceptually as it displays empathy with game developers loosing money through software piracy: *"Its bad for them that made the games"* (boy, grade 6). Different feelings seem to fight each other within this particular student, though, as this same individual also remarks *"Its good for us that get the games"*.

Not everyone is even aware of the fact that game developers suffer from losses through software piracy of games, though. The 2004 on-line study by Harris Interactive shows that 26% of the respondents agreed to the statement *"It doesn't hurt anybody when I do this"*, referring to the downloading of commercial games without paying for them (Harris Interactive 2004). Among those that are aware of the game developers losses, it may still be unknown how much hard work is actually involved in creating a computer game.

It is interesting to note that, although ambivalent, the concept of empathy with game developers made the above mentioned individual perceive peer-to-peer file sharing of copied games as an at least partly negative activity. None of the quotes expressed any worries of getting caught or being made liable for damages, suggesting that empathy with game developers might be a more effective preventive factor. Thus, making the effort and hard work involved in developing computer games visible, and publicly known, may prove to be a more important step than legislation, towards reducing the illegal distribution of computer games.

FUTURE RESEARCH

In this paper, a possible counterfactor against illegal distribution of computer games has been identified: empathy with game developers due to the hard work involved in creating games. To further investigate the potential of this possible counterfactor, it needs to be established if there is a correlation between the degree of perceived empathy with game developers, in relation to the degree with which individuals actually download illegally distributed computer games. If such a study confirms (an inverse) correlation between the two, it may be fruitful to evaluate various methods to increase this empathy, as a means to reduce software piracy of games.

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