Strengthening weak ties through on-line gaming

Frantisek Sudzina
Aarhus University
Haslegaardsvej 10
DK-8210 Aarhus
fransu@asb.dk

Liana Razmerita
Copenhagen Business School
Dalgas Have 15
DK-2000 Frederiksberg
lr.isv@cbs.dk

Kathrin Kirchner
Friedrich Schiller University of Jena
Carl-Zeiß-Straße 3
D-07743 Jena
kathrin.kirchner@uni-jena.de

ABSTRACT

On-line gaming became widespread in the last couple of years. The aim of the research presented in the paper is to figure out to what extent does game playing helps to strengthen weak ties and what additional factors influence this process. The approach is rather exploratory – some factors are grounded in theory, some are new. These factors are age, gender, place of origin, number of their Facebook connections (friends in Facebook terminology), the amount of time they are on Facebook, the amount of time they keep the Facebook site open, the amount of time they play on-line games, and the reasons for starting to play on-line games. Regarding the latter, we chose to focus only on escapist reasons.

Categories and Subject Descriptors

K.4.2 [**Computing Milieux**]: Computers and Society - social Issues.

General Terms

Human Factors.

Keywords

Facebook, games, weak ties.

1. INTRODUCTION

Faster Internet connection associated with a new generation of social web applications has resulted in changes of users' attitudes and behavior on the Web. Social interaction can take place in different forms including virtual social networks, virtual worlds and on-line gaming. Online games including Facebook games, such as Farmville and Mafia Wars, are diffusing at a fast pace and are adopted by many types of communities. But as [4] pose, "prosocial behavior within an online game community has seldom been explored".

The aim of the paper is to investigate to what extent playing of on-line games strengthens weak ties and what factors influence this improvement. We investigate Facebook and other on-line games separately because graphics and mechanics of majority of Facebook games may be considered inferior compared e.g. to the World of Warcraft.

2. DATA AND METHODOLOGY

Improvement of weak ties was measured using Gibbons' [2] framework, which consists of friendship, and advice; we added help as an indication of an even higher level of strengthened ties. In our opinion, it has a better interpreting value than frequency of interaction used in [1] and the terms are more appropriate to describe ties than friend, relative, and neighbor used in e.g. [3].

Specifically, we asked the following three questions:

Have you noticed that by playing on-line games somebody, who was not your *friend* (only an acquaintance) before, became a *friend*? If so, how many?

Have you noticed that by playing on-line games somebody, whom you would not ask for an *advice* before, became closer to you so that you would ask him/her for *advice* now? If so, how many?

Have you noticed that by playing online games somebody, whom you would not ask for *help* before, became closer to you so that you would ask him/her for *help* now? If so, how many?

The possible answers were zero, one, two-three, and four and more. Because of the distributions of answers (mostly zeros and ones), the final coding for the quantitative analysis is zero and more than zero.

The factors taken into consideration were age, gender, place of origin, number of their Facebook connections (friends in Facebook terminology), the amount of time they are on Facebook, the amount of time they keep the Facebook site open, the amount of time they play on-line games, and the reasons for starting to play on-line games.

The place of origin for Denmark's respondents was originally divided into Zealand, Jutland, Fyn, rest of Denmark, rest of Scandinavia, rest of Europe, and outside Europe. In order to increase the strength of the statistical test, the first four categories were merged into one – Denmark. All respondents surveyed in Slovakia and were from Slovakia. So, the final categories used in the quantitative analyses are Denmark, rest of Scandinavia, Slovakia rest of Europe, and outside Europe.

The closed categories for number of Facebook connections were up to 100, 101-200, 201-300, 301-400, 401-500, 501-600, 601-700, 701-800, 801-900, 901-1000, and more than 1000.

Regarding the amount of time they are on Facebook, the amount of time they keep the Facebook site open, the amount of time they play on-line games, there were five closed categories - less than 30 minutes, 30 minutes - 1 hour, 1 - 3 hours, 3 - 8 hours, and more than 8 hours.

The framework for the escapist reasons to play was adopted from [5], it consists of mundane breaking, stress relieving, pleasure

seeking, and imagination conjuring. The wording for these reasons were "They helped me to „take a break" from daily activities", "They helped me to vent pain, stress, or frustration", "They helped me to feel good", and "They allowed me to experience an alternative reality" respectively. A 1-7 Likert scale was used, 1 stood for strongly disagree, and 7 meant strongly agree.

Besides the abovementioned information, we also collected data on whom respondents connect to, and on reasons to stop playing games. The categories for the former were - classmates from primary school, classmates from secondary/high school, classmates from college and/or university, acquaintances, who lived or live close to their place, acquaintances, whom they met during their exchange program, at a summer course, a training, a language course, colleagues from office, friends, relatives, and others. The latter contained "I stopped playing because of personal reasons (e.g. lack of time because of studying for exams)", "I stopped playing because of reasons related to the game(s) as such (e.g. the game mechanics became boring)", "I stopped playing because of the experience with people playing the game(s) (e.g. it was disappointing to help others in the game on many occasions but not receiving help when needed)", "I stopped playing because of I liked a different kind of games more". These two questions were not utilized in the further analysis.

We designed a questionnaire and conducted a pilot study in December 2010. The pilot sample consisted of 18 respondents. The pilot questionnaire did not include the place of origin question because it was administered only to students of a course in Danish. As there were no problems with question formulation observed, we carried out the survey in February 2011. Respondents (154 in total) were students of Aarhus School of Business and Social Sciences, Aarhus University (57), of Copenhagen Business School (41), and of the Faculty of Business Economics, University of Economics Bratislava (56).

3. RESULTS AND DISCUSSION

There were 57 respondents from Aarhus School of Business and Social Sciences, Aarhus University, 41 from Copenhagen Business School, and 56 form the Faculty of Business Economics, University of Economics Bratislava. 19, 18, and 54 respectively (had) played Facebook games (i.e. 91 in total), and 18, 15, and 31 respectively (had) played other on-line games (i.e. 64 in total).

Playing Facebook games expanded communities of friendship in 15 cases, communities of advice in 6 cases, and communities of help in 9 cases (16.5%, 6.6%, and 9.9% respectively). Playing other on-line games expanded communities of friendship in 12 cases, communities of advice in 10 cases, and communities of help in 9 cases (18.8%, 15.6%, and 14.1% respectively). In majority of the cases, it was one new strengthened tie. Using the chi-square test, the differences between the effects of Facebook and other on-line games are not statistically significant at $\alpha=0,05$.

ANOVA was used to analyze impact of collected data on strengthening of weak ties. In case of Facebook games, expansion of communities of friendship, advice, and help was positively correlated with the number of Facebook connections. Regarding communities of help, the ties strengthened more in case the respondent started to play in order to relieve stress. When it comes to other on-line games, expansion of communities of friendship, and help was positively correlated with imagination conjuring (i.e. experiencing an alternative reality). There was no statistically significant factor found to influence expansion of communities of advice in players of other on-line games.

4. CONCLUSIONS

According to the survey, 59.1% of students (had) played Facebook games, and 41.6% (had) played other on-line games. This significant difference can be explained by ease of access to these two types of games. Generally, Facebook games are for free and are only a few clicks away. Other on-line games are usually not for free and a player needs to spend a little bit more time to log in the first time.

Playing Facebook games strengthened at least one weak tie in about 6-17% of respondents depending on the type of community. Playing other on-line games strengthened at least one weak tie in about 14-19% of respondents depending on the type of community.

To sum up, although there was no significant difference between impacts of Facebook and other on-line games on strengthening weak ties, the underlying factors are different.

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