Attributes of Participation in Online Communities among Czech Internet Users

Václav Štětka & David Šmahel, Masaryk University, Czech Republic

Abstract

In this research paper, we examine the presence and characteristics of online communities in the Czech Republic, with a particular focus on selected socio-demographic (age, gender) and psychological characteristics as well as individual motivations of their participants. According to our findings, about one fifth of Czech Internet users regularly attend at least one online community. There are no significant gender differences in the membership; however, participants differ according to age, with the youngest age groups being the most active in belonging to an online group. We also investigate the question of correlation between the intensity of engagement in online communities, and the quality of their participants' social life in the "offline world" (measured primarily by the number of online/offline friends and the amount of time spent with them or with their families). Finally, we pay attention to the perceived psychological benefits from belonging to an online group. The analysis, which we present as a pioneer study aimed at the Czech Internet users, is conducted using the data from the World Internet Project, which in 2006 surveyed a representative sample of the Czech population (1710 respondents aged 12+).

Keywords: online communities; internet use; participation; gender; age; Czech Republic.

Introduction

The search for community, its manifestations and changes under the conditions of modernity has been preoccupying academics and researchers since the dawn of social sciences. In his famous conceptualization, Ferdinand Tönnies (1887) distinguished between "Gemeinschaft" and "Gesselschaft" as two opposite types of human commonalty, where the former (community) is based on interactions among people sharing the same physical and temporal space, while the latter (society), emerging with the age of industrialization, is characterized mostly by impersonal relationships among largely atomized and spatially dispersed individuals. This not only conceptual but at the same time normative dichotomy (giving a clear preference to the Gemeinschaft as an ideal sphere of social interaction) has been echoed in many subsequent theories of modernity and has influenced the perception of community as a unit bound to certain place and communicating primarily face-to-face. However, with the spread of mediated interaction facilitated by electronic media, human communication becomes increasingly de-territorialized (Meyrowitz, 1985; Thompson, 1995), enabling for new forms of social integration and generating new socialization patterns. The coming of the Internet and new media have further intensified this process of restructuralization of social geography and brought yet another challenge for the conceptualization and definition of community

(Cavanagh, 2007), which has in the last decades shifted "emphasis from geographic place to a feeling or sense of collectivity" (Jankowski, 2002, quoted in Fernback, 2007: 52) and stresses processual aspects over territorial ones, including "processes of social solidarity, material processes of production and consumption, law making and symbolic processes of collective experience and cultural meaning" (Fernback, 2007: 50) which makes it more suitable for the age of computer-mediated communication.

The research interest in online communities has been rapidly growing since the early 1990s, without, however, coming to a consensus on the precise meaning and use of that very concept (Cox, 2008: 4). It seems that this ambiguity is inherited from the earlier sociological debates over the concept of community, where "an agreement on an adequate definition is impossible to reach", as Cavanagh (2007: 102) noted. In his ground-breaking text, originally published in 1993, Howard Rheingold offered a definition of "virtual communities", which he understood as "social aggregations that emerge from [the Internet] when enough people carry on . . . public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace" (Rheingold, 2000: 6, quoted in Fox, 2004: 48). Ren, Kraut and Kiesler (2007: 378) defined an online community as "an Internet-connected collective of people who interact over time around a shared purpose, interest, or need". According to Carolyn Haythornthwaite (2007), online communities bear similar characteristics to the "real" communities. As she puts it, "members of online environments who stay together for interest, work or learning, display the same kinds of characteristics of community found offline, such as common language, rules of behaviour and their enforcement, support during crises and communal history" (Haythornthwaite, 2007: 124).

However, some researchers oppose using the term "online community" for these kinds of computer-mediated communication groups and interactions. For Fernback, "the community metaphor placed on virtual social relations is inadequate and inappropriate", as it describes "only a fraction of our culturally understood ideas about community" (Fernback, 2007: 62). For more or less similar reasons, alternative analytical concepts for online social relations have been suggested, like "virtual togetherness", which is supposed to avoid the normative bias associated with the concept of community (Bakardjieva, 2003); "distributed communities", conceiving the Internet less as a specific space and more as a "mechanism for widely-dispersed individuals to interact with one another" (Gochenour, 2006: 34), or "social cyberspace" (Smith – Farnham – Drucker, 2000).

Apart from the difficulties with the conceptualization of online communities, there have been disputes about the effects of online social relations on people's offline environment. As Cavanagh pointed out, what the study of online communities "inherits is a sense of community as a political construct, tied into utopian or dystopian possibilities" (Cavanagh, 2007: 106). According to Sorin Matei and Sandra Ball-Rokeach (2001: 550), "the emergence of the Internet as a communication and social interaction tool was initially met with

great hopes for revitalizing the faltering sense of community afflicting late-modern societies". However, this kind of techno-optimistic view, portraying online communities almost as a modern-day incarnation of Tönnies's Gemeinschaft (Haythornthwaite, 2007: 123), is counterweighted by a more skeptical perspective, seeing in new communication technologies potential instruments for further individualization and fragmentarization of social relations. The question of relationship between people's "online" and "offline" life, and subsequently the possible impact of "virtual" on "real" communities and social ties, still remains open, as different studies bring different results and interpretations of the phenomenon. In her review of research on this topic, Allison Cavanagh noted that "…research evidence to date is more or less evenly split between two opposing points of view: first, that the Internet, and mass media more generally, lead to a decline in offline communities and, second, that they actually enhance offline life" (Cavanagh, 2007: 11). The study conducted in the USA by Nie and Erbring (2002) reported that with the growth of Internet penetration and use, Americans tend to "spend less time with friends and family, shopping in stores or watching television, and more time working for their employers at home", and that "the more hours people use the Internet, the less time they spend with real human beings" (Nie – Erbring, 2002: 283). Another study from the United States concluded that in a longer term, "using the Internet may lead to declines in visiting with friends and family" (Shklovski – Kraut – Rainie, 2004). On the other hand, Pew Internet and American Life Project found out that using the Internet expands people's social networks, and that US Internet users have more contacts than non-users (Boase et al., 2006). According to Wagner et al. (2002, quoted in Haythornthwaite, 2007: 123), "computer kids" tend to avoid socially less accepted activities and are generally more active. Analysing and comparing altogether 16 studies about the relationship between Internet use and social involvement, Shlkovski et al. 2006 (quoted in Rice et al., 2007: 10) determined that out of 74 relationships examined, 10 were significantly positive (increased time with friends, family etc.) and 12 were significantly negative (decreased time with family, social visits). Refusing the "either/or" debate and criticising the exaggerated claims about the impact of the online technologies (negative or positive) on social environments, some researchers hold the opinion that "effects of the Internet on social contact are supplementary, unlike the predictions of either the utopians or dystopians" (Wellman et al., 2001: 450) and that "the strength of virtual ties can be expected to reflect those of real ones" (Matei – Ball-Rokeach, 2001: 553).

Inspired by the above presented findings and discussions, we set the issue of the relationship between Internet users' involvement in online communities and the quality of their social life in the "real world" as one of the focal topics for our research, which is aimed at exploring the existence and basic characteristics of online communities among Internet users in the Czech Republic. Apart from examining the influence of

gender and age on the community participation, we will also investigate people's individual motivations for attending online groups.

Research Questions and Hypotheses

Since we know that access to the Internet and the patterns of its use are usually influenced by socio-demographic factors (Rice et al., 2007), we aim to investigate if it is also the case for participants in online communities. Therefore, we formulate our first research question in order to address this issue:

RQ1:

How do the participants in online communities differ according to selected socio-demographic factors?

We decided to focus on two factors, namely gender and age. According the previous WIP survey in the Czech Republic (Šmahel – Machovcová, 2006), there are small differences between men and women in access to Internet in the Czech Republic (in 2005, 45.9 % men and 45.7% women were using Internet); however, age is a much more stratifying factor, as there are 89 % of Internet users among people aged 12-15 years, while only 33 % of people aged 51-60 were Internet users (Šmahel – Machovcová, 2006). Age was also confirmed as a significant exogenous variable explaining involvement in an online community in a study by Kavanaugh et al. (2005). Our hypotheses concerning influence of gender and age on the involvement in online communities are therefore as follows:

> *H1:*
>
> *There will be no significant gender difference in the frequency and intensity of participation in online communities.*
>
> *H2:*
>
> *The involvement in online communities will be associated with age.*

Further, we concentrate on the issue of relationship between the "online" and "offline" social interactions of community members. Our second research question is:

RQ2:

What kind of relationship is there between respondents' participation in online communities and their social life in the "offline world"?

According to the Pew Internet and American Life Project (Boase et al., 2006), Internet users tend to have a larger network of close and significant contacts. We therefore assume that the same will be true for the Czech participants in online communities:

> *H3:*
>
> *Members of online communities will have more friends in their real life than non-members.*

On the other hand, it is only logical that the time spent in online communities must be "missing" elsewhere. As Wellman et al. put it, "the Internet may compete for time with other activities in an inelastic 24-hour day" (Wellman et al., 2001: 439). There is evidence that Internet use may negatively effect the amount of "offline" time spent with family and friends (Nie – Erbring, 2002; Shklovski – Kraut – Rainie, 2004). Our fourth hypothesis goes in line with these findings:

H4:

The amount of time spent in the online communities will be negatively correlated with the time spent offline with friends and families.

Our last research question deals with the issue of psychological benefits from attending online communities:

RQ3:

What psychological benefits do the members get from their participation in an online community, and how is this perception affected by the intensity of participation?

Among the benefits of membership in a virtual community, literature mentions access to information; social and emotional support that the community can provide; a sense of belonging; encouragement; finding friendship, companionship; opportunity for socializing and networking, as well as the entertainment the participation can provide (Ridings – Gefen, 2004; see also Haythornthwaite, 2007; Cavanagh, 2007). However, as our research on this subject has merely an exploratory character, we decided not to postulate a hypothesis concerning the perception of benefits as such, but only a hypothesis relating the perception of benefits to the frequency of visits and amount of time spent in communities:

H5:

People who attend online community more frequently and spend more time there will more likely see psychological benefits from their participation.

Methodology and Sample

We analyzed the data from a random survey which was conducted (by means of face-to-face interviews) in September 2006 as part of the "World Internet Project – Czech Republic". The sample was representative for the Czech population aged 12+ as far as the variables of sex age, region and the size of respondent's domicile are concerned. The total number of respondents was 1706.

54 % of respondents from our sample claimed to be Internet users. There were slightly more men users (51.3 %) than women users (48.7 %). The mean age of Internet users was 33 years (SD = 15). Regarding the proportion of Internet users among particular age groups, the most "Internet active" respondents were

among the youngest group (12 – 15 years old), of which 90 % were Internet users; in the age group 16 – 20 years, there were 86 % Internet users. With the rising age, the proportion was further sinking: Internet was used by 69 % of people aged 21 – 30, by 63 % of 31 – 40 year olds, by 60 % of those aged 41 – 50 and by 24 % of people aged 51 years and older.

Analysis and Results

Two hundred respondents (12 % of the sample and 22 % of the Internet users) answered positively to the filter question "On the Internet, do you regularly visit places where you meet the same people or groups of people, such as chat rooms, discussion forums, games, IRC, etc. ?" which we regarded as an indicator of their participation in an online community. In most cases, the Czech respondents claimed to be attending communities oriented at hobbies (44.8 %), followed by entertainment (35.5 %) and relationship seeking (29.5 %).[1]

The median average of visits per week was four (mean = 5.72, SD = 9.24), while the mean time spent in the group was 4.56 hours per week (SD = 5.76). Most of the respondents have not been visiting that group for longer than one year (median = 1, mean = 1.66, SD = 1.61), which indicates relatively high fluctuation of the participants within such a community (however, it should be also noted that the Internet environment is in a state of permanent flux, allowing for a quick establishment and growth of new networks and communities). The most common activity performed by respondents when connected to the group was "talking to people" (71.2 %), followed by "searching for information" (43.9 %) and "inserting information" (21.2 %).[2] Regarding the intensity of communication activities within the group, most members in our sample seemed to be rather active contributors to the group discussions: 33 % of them said they "always" participate at the communication within the group and 55.5 % of them participate "sometimes"; only 11.5 % said they communicate "rarely" or "never". The intensity of communication shows positive correlation with the time spent in the group (Spearman's rho = 0.44, sig. = 0.000) as well as with the length of their involvement in there – in other words, the longer the respondents participate in the group, the more often they tend to engage in the intra-group communication (however, this correlation is rather weak; Spearman's rho = 0.18, sig. = 0.01).

After the presentation of these general characteristics of participation in online communities in our sample, we now turn to the analysis of the possible differences based on selected sociodemographic factors (RQ1). Looking at the gender differences, we found out that the participants in online communities were more

---

[1] The total exceeds 100 % because the question was designed as a multiple response set. The other options of community orientation were "work or school" and "other".
[2] The total exceeds 100 % because the question was designed as a multiple response set. The other options of community activities were "requesting advice" and "other".
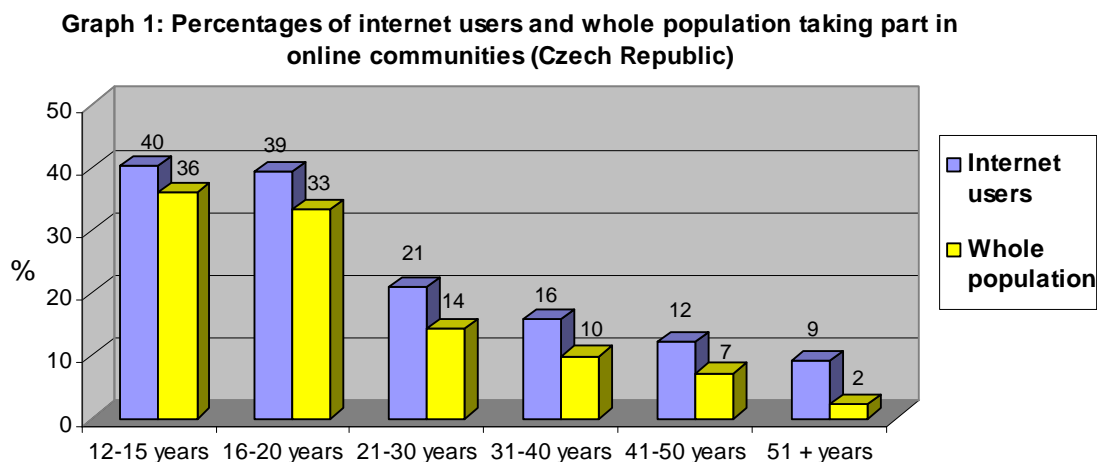
likely to be men (54.8 % of community members, or 12 % of male Internet users) than women (45.2 %, or 10 % of female Internet users); however, this difference was not significant (Pearson Chi-square = 1.216, sig. = 0.270). There was no difference between men and women in how long they have been participating in the group (t= 0.723, df = 196, sig. = 0.471), nor how much time they have been spending there per week (t= 0.135, df = 197, sig. = 0.893). Also, no relationship was found between gender and the frequency of communication in the group (Pearson Chi-square = 4.027, sig. = 0.259).[3] Therefore, **our hypothesis H1 about the independence of participation in online communities and gender was confirmed**.

However, a couple statistically significant gender differences were found in type of the community visited and in activities performed there. Men participate slightly more often in communities related to hobbies (47.7 % of men vs. 32.2 % of women; Phi = 0.157, sig. = 0.027) and also tend to search for information more often (52.3 % of men vs. 32.2 % of women; Phi = 0.20, sig. = 0.004). Other types of community activities (talking to people; inserting information; requesting advice) and community orientations (work or school; entertainment; relationship seeking) did not show any significant gender differences.

In the next step, we examined the influence of age factor on the participation in online communities. The mean age of those who stated they attend some online group was 26.4 years (SD = 13.12). However, the median (20) and mode (14) point to the fact that majority of participants are to be found among the younger Internet users. This is confirmed by looking at the distribution of community members according to age groups. In absolute figures, most participants are 16-20 year old (31 %), followed by people aged 21-30 years (21 %) and 12-15 years (19.5 %). Internet users in the youngest age group (12-15), however, display the highest participation rate (40.2 % of them attend an online group), followed closely by the second youngest age group (16-20), 39.2 % of which attends online communities, while among the group aged 21-30 years, the percentage of participants is only 21 %. The association between age group and online community participation is statistically significant (Cramer's V = 0.281, sig. = 0.000) as is the difference of mean age of participants and non-participants (t= -8.230, df = 357.918, sig. = 0.000). As the following graph demonstrates, the age differences in community membership (clearly "favouring" the younger groups) are even higher when comparing representation of people from the whole population:

---

[3] Frequency of communication in the online group was measured by the question "How often do you actively take part in communication within the group?" with the choice of answers "always", "sometimes", "seldom" and "never".

**Graph 1: Percentages of internet users and whole population taking part in
online communities (Czech Republic)**

Regarding differences in the thematic orientation of the community and the preferred types of activities, we found out that age plays a role only in communities focused primarily on entertainment (Cramer's V = 0.254, sig. = 0.024), where there is significantly higher involvement of the youngest age group (12-15 years, adj. res. = 2.0) and lower involvement of the oldest respondents (over 51 years, adj. res. = -2.0), while in other types of community orientations (hobbies, relationship, work/school) the age factor did not show any significant difference. The types of activities inside the community, as presented in the previous section of our analysis, were also not associated with the age of their members. There was no correlation between age and the time spent either within the group (r = -0.004, sig. = 0.951), or with the frequency of visits per week (Spearman's rho = -0.054, sig. = 0.450). The **hypothesis H2 was therefore only partially confirmed**; the age is significant in the involvement in online communities (young respondents, particularly adolescents, tend to become involved more often than older ones) but in other participation-related factors (frequency, intensity, type of activity) age does not play an important role.

Moving on to the second research question, concerning the (dis)connection between the "online" and "offline" social communities, we first examined the hypothesis that members of online communities have more friends in their real life than the non-members (H3). We discovered that respondents who participate in online communities have on average a greater number of friends in the real world (26.41; SD = 33.93) than those who do not belong to any online community (19.69; SD = 25.37). This difference is statistically significant (t = 3.012, df = 258.601, sig. = 0.003), **which allows us to confirm our H3 hypothesis**. When interpreting these results, though, we have to take the age factor in consideration. Even though we did not find significant correlation between age and the number of offline friends among Internet users (r = -0.050, sig. = 0.135), there are significant differences in number of friends between particular age groups

(F = 3.658, sig. = 0.003), suggesting that younger users (who, as it was demonstrated above, are also more likely to participate in online communities) have on average more offline friends than older age groups. On the other hand, this relationship is not influenced by gender, as male and female community participants report to have the same average number of offline friends (27).

Not surprisingly, it also turned out that there is a strong association between participation in an online community and the number of *online* friends (Eta = 0.516) and the difference in these numbers (participants have on average 10 more online friends than non-participants) is also significant (t = 6.978, df = 211.161, sig. = 0.000).

The **related hypothesis (H4)** that the time spent in online communities will negatively correlate with the time spent with offline friends and families **was not confirmed**. We found virtually no correlation between the amount of time devoted to communities and offline friends (r = -0.066, sig. = 0.355). However, we discovered that there is a significant difference (t = 3.124, df = 260.612, sig. = 0.01) in the average time spent with offline friends between respondents who participate in online communities and those ones who do not. The mean time for the former group was 11.51 hours a week (SD = 12.42); for the latter group it was only 8.58 hours (SD = 9.01), suggesting that that members of online communities in our sample spend on average almost 3 hours more with their offline friends a week than the non-members. Nevertheless, as in the previous hypothesis, the age factor intervenes with this relationship as well. There is a significantly negative correlation between age and the time spent with offline friends (r = -0.232, sig. = 0.000), pointing to the fact that the younger respondents are, the more time they have for their friends. For the sample of Internet users (N = 918) which are skewed towards younger age, the correlation is even higher (r = -0.290, sig. = 0.000).

The analysis confirmed that time spent in online communities has also no effect on the amount of time spent by the members with their families, as there was no significant correlation between the variables (r = 0.053, sig. = 0.452). There was also no significant difference between community participants and non-participants in the amount of time spent with their families (t = -0.556, df = 905, sig. = 0.578,); in both cases, it was substantially higher than the time spent in online community (on average 40.9 hours a week for members and 42.1 for non-members).

The last hypothesis (H5) examined the issue of self-perceived benefits of participation in an online community and stated that respondents who participate in an online community more frequently and intensely will see more psychological benefits from their participation. The perception of benefits was measured by agreement/disagreement with five statements: a) "I have a feeling of self-importance", b) "I feel I belong somewhere", c) "I feel somebody is listening to me", d) "I can say something I would not dare

to say elsewhere" and e) "I can talk about things people are not interested outside of this group".[4] Distribution of answers was as follows:

Tab.1: Psychological benefits from participation in online community

	Agree	Neither agree nor disagree	Disagree	Total
I have a feeling of self-importance	38.4 %	40.4 %	21.2 %	100 %
I feel I belong somewhere	59.6 %	24.7 %	15.7 %	100 %
I feel somebody is listening to me	62.1 %	22.7 %	15.2 %	100 %
I can say something I would not dare to say elsewhere	47.2 %	23.9 %	28.9 %	100 %
I can talk about things people are not interested outside of this group	55.6 %	23.7 %	20.7 %	100 %

N = 198

As is clear from the table, respondents tended to agree with the given statements (the only exception being the statement about the self-perceived importance within the online group, which the most participants were not sure about). Respondents identified most strongly with the statement concerning the feeling of being listened to (62.1 % agreed to it), followed by the feeling of belonging somewhere (59.6 %). These results indicate that the general need for being included in a group and finding an emotional support there might be somewhat stronger than the very content of the communication (which was reflected in the last two statements); however, the differences in distribution of responses are rather small, calling for a certain reserve in interpretation.

Since all the questions in table 1 displayed satisfactory level of inter-reliability (Cronbach's Alpha = 0.83), we transformed them into a composite index ranging from 1 (strongest benefits perception) to 5 (weakest benefits perception). The mean value of the index was 2.59 (SD = 0.85). Then, we examined its correlation with the frequency of visits of the online group and the time spent there. For the first measure, we attained positive correlation, however rather weak one (r = 0.148, sig. = 0.038), indicating that the more often respondents visit the group, the more psychological benefits they tend to gain from that membership. Analyzed separately, three statements showed little stronger correlations than the composite index itself –

---

[4] The answers formed a five-point Lickert scale (1) "I definitely agree", (2) "I rather agree", (3) "I neither agree nor disagree", (4) "I rather disagree", (5) "I definitely disagree". For the purposes of the analysis, the values (1) and (2) as well as (4) and (5) were collapsed into one category ("agree", "disagree").

the feeling of self-importance (Spearman's rho = 0.196, sig. = 0.006), the feeling of belonging somewhere (Spearman's rho = 0.189, sig. = 0.008) and the feeling somebody is listening to me (Spearman's rho = 0.186, sig. = 0.009). The second measure (the amount of time per week spent in an online group) correlated neither with the composite index (r = -0.053, sig. = 0.462) nor with any of its components. Therefore, **we confirmed our hypothesis H5 only partially**. We can conclude that the tendency to gain psychological benefits from membership in an online community (particularly the benefits associated with the need to belong to a group, to communicate with his/her peers and to feel important in their virtual presence) rises with the frequency of visits, but not with the amount of time spent there. This leads to a more general explanation that it is probably the regularity of interaction within the community rather than the ability of spending there as much time as possible that plays a more decisive role in developing a group identity and in gaining certain psychological benefits from the membership. However, these conclusions we express with a great deal of caution, given the relatively weak statistical support for them.

Discussion and Conclusions

In this paper we examined the presence of online communities in the Czech Republic and selected characteristics of their participants. We found out that every fifth Czech Internet user (22 %) can be regarded as a member of an online community. This proportion is similar to the one which was found in the case of U.S. Internet users in 1995 (25.5 %), but significantly higher than the same figure from a survey conducted five years later, which found only 10.4 % (Rice et al. 2007: 15). Certainly we cannot draw any major conclusion from this comparison, as it clearly reflects different time and cultural settings, and very likely also different methodologies. However, from a longitudinal point of view, it would be interesting to see whether or not we will witness in the future the same kind of development from a more community-oriented towards relatively more individualised patterns of Internet use in the Czech Republic, as the data from the USA suggest.

In our analysis, we did not find any significant relationship between online community involvement and gender of the Internet users. Contrary to gender, age proved to be an important demographic factor, significantly stratifying community members and non-members. According to our data, Czech online communities consist primarily of young people, as over a half of participants are younger than 20 years of age and 71.5 % younger than 30 years. However, with only a few exceptions, neither age nor gender plays a major role in choosing the type of community or the preferred communication activity within it.

Concentrating on the possible (positive or negative) influence of spending time in online communities and the respondent's "real" social lives, we first determined that there is a positive relationship between

participation in online communities and the number of friends in an "offline" world. Even though this relationship is by no means causal and can in fact be ascribed to the age factor, the finding still provides a contribution to the debates about the social effects of Internet use, as it does not support the overtly pessimistic hypothesis about the replacement of personal bonds with virtual ties. A similar conclusion was reached in the testing of hypotheses concerning time spent by respondents with their online community members and the time devoted to their offline friends and to their families. According to the results of our survey, there is no significant correlation between these variables; and although we measured time spent in online communities and not the time spent on Internet as such (as was the case of studies presented in the opening chapter, namely Nie – Erbring, 2002; Shklovski – Kraut – Rainie, 2004), we still think these data can be interpreted in line with the argument that the effects of Internet use on social life are rather supplementary/complementary than compensatory (Wellman et al., 2001).

Finally, we investigated what kind of psychological benefits Internet users gain from their participation in an online community. We discovered that the benefits associated with group belonging and emotional support slightly prevail over the benefits connected with the particular content of communication in the group. Apart from that, we determined that respondents tend to see more benefits from their membership if they visit the community more often, strengthening thereby their group identity; nevertheless, the amount of time spent online does not itself increase the perception of benefits.

Having presented these findings and interpretations, we are aware of the limitations caused mainly by the relatively small sub-sample of Czech online community participants, thereby preventing a more detailed analysis. For this reason we see our research as rather exploratory, opening the doors to further investigations of this still new but growing research territory.

Bibliography

Bakardjieva, M. (2003). Virtual togetherness. In: *Media, Culture & Society*, Vol. 25: 291–313.

Boase, J.; Horrigan, J.; Wellman, B. and Rainie, L. (2006). The strenght of Internet ties: the Internet and email aid users in maintaining their social networks and provide pathways to help when people face big decisions. *Pew Internet and American Life Project*, retrieved 03/03, 2008, from http://www.pewInternet.org/pdfs/PIP_Internet_ties.pdf.

Cavanagh, A. (2007). *Sociology in the Age of the Internet*. Open University Press.

Cox, A. M. (2008). An exploration of concepts of community through a case study of UK university web production. In: *Journal of Information Science*, 0: 0165551507084354v1.

Fernback, J. (2007). Beyond the diluted community concept: a symbolic interactionist perspective on online social relations. In: *New media & society*, Vol9(1):49–69

Fox, S. (2004). The New Imagined Community: Identifying and Exploring a Bidirectional Continuum Integrating Virtual and Physical Communities through the Community Embodiment Model (CEM). In: *Journal of Communication Inquiry* 2004; 28; 47.

Gochenour, P. H. (2006). Distributed communities and nodal subjects. In: *New media & society*, Vol8(1):33–51.

Haythornthwaite, C. (2007). Social networks and online community. In: Joinson, A. et al. (eds.): *The Oxford Handbook of Internet Psychology*. Oxford: Oxford University Press.

Kavanaugh, A., Carroll, J. M., Rosson, M. B., Zin, T. T., and Reese, D. D. (2005). Community networks: Where offline communities meet online. *Journal of Computer-Mediated Communication, 10*(4), article 3, retrieved 28/02, 2008, from http://jcmc.indiana.edu/vol10/issue4/kavanaugh.html.

Matei, S. – Ball-Rokeach, S.J. (2001). Real and Virtual Social Ties: Connections in the Everyday Lives of Seven Ethnic Neighborhoods. In: *American Behavioral Scientist* 2001; 45; 550.

Meyrowitz, J. (1985). *No sense of place. The impact of electronic media on social behaviour.* Oxford: Oxford University Press.

Nie, N.H. – Erbring, L. (2002). Internet and Society: a preliminary report. In: *IT&Society*, Vol.1 (1), Summer, pp. 275-283, retrieved 01/03, 2008,
from http://www.stanford.edu/group/siqss/itandsociety/v01i01/v01i01a18.pdf

Ren, Y.; Kraut, R.; Kiesler, S. (2007). Applying Common Identity and Bond Theory to Design of Online Communities. In: *Organization Studies*, 28(03): 377–408.

Rice, R.E. et al. (2007). Social interaction and the Internet. A comparative analysis of surveys in the US and Britain. In: Joinson, A.N. et al. (eds.): *The Oxford Handbook of Internet Psychology*. Oxford: Oxford University Press.

Ridings, C.M. – Gefen, D. (2004). Virtual Community Attraction: Why People Hang Out Online. In: *Journal of Computer-Mediated Communication* 10 (1), Article 4, November 2004, retrieved 27/02, 2008, from http://jcmc.indiana.edu/vol10/issue1/ridings_gefen.html.

Smith, M.A. – Farnham, S.D. – Drucker, S.M. (2000). *The Social Life of Small Graphical Chat Spaces*. retrieved 03/03, 2008, from http://research.microsoft.com/~sdrucker/papers/chisoclife.pdf.

Šmahel, D. – Machovcová, K. (2006). Internet use in the Czech Republic: Gender and Age differences. In Sudweeks, F. – Hrachovec, H. – Ess, Ch. (eds.) *Cultural Attitudes Towards Technology and Communication 2006*, Perth: Murdoch University, pp. 521-533.

Thompson, J. B. (1995). *The Media and Modernity. A Social Theory of the Media*. Oxford: Polity Press.

Tönnies, F. (1920). *Gemeinschaft und Gesellschaft: Grundbegriffe der Reinen Soziologie*. Berlin: Carl Kurtius.

Wellman, B.; Haase, A.Q.; Witte, J.; Hampton, K. (2001). Does the Internet Increase, Decrease, or Supplement Social Capital?: Social Networks, Participation, and Community Commitment. In: *American Behavioral Scientist* 2001; 45; 436.