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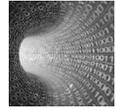
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Abstract

This research investigates various factors of social capital, media use and demographics that may have an influence on online community use. Although some have argued that internet use may erode an individual's social capital, this study found that people who access the internet for online community use tend to have more sociability and higher levels of generalized norm than do online community non-users. When important socio-psychological factors of social capital, such as trust and life contentment, were considered, however, social capital was not fully related to online community use. In this regard, it is suggested that online communities may enhance the communication ability of individuals due to technological advantages, but face-to-face communication in the form of the traditional community is still essential to ensure the quality of community as a whole.

Key words

life contentment, media use, norm, online community, sociability, social capital, trust

Introduction

The internet is a vast and rapidly growing channel available to the computer-mediated communication network. The population of internet users has grown so dramatically that its size in the USA grew from 86m in 2000 to 126m in 2003 and to about 220m in March 2008, about a 72.3 percent penetration rate of the population (Nielsen, 2008). Such a

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widespread internet use in the USA and throughout the world has made computer-mediated communication easier in that all the advantages of previous information and communication technologies are converged into the characteristics of the internet.

One of the effects that the internet has on people's lives is that it changes the way in which they communicate with others. The internet has cemented its place as an avenue of communication by using a variety of different methods, such as email, listserv, instant messenger, online chatting, electronic bulletin board and web blogs. These interpersonal interactive functions enable people to actively go online and communicate with others, particularly at a high speed with a relatively low cost regardless of time and distance. For this reason, the internet is now becoming a part of everyday life, not only in advanced societies, but in core activities and dominant social groups throughout most of the world (Castells, 2002).

As a result of the rapid growth of online populations and the development of the internet's interactive applications, a great amount of attention has been paid to the question of how the internet will transform and reshape a variety of social connectedness. Consistent with the change of notions of time and distance due to the asynchronous and synchronous attributes of the internet, the proliferation of internet use has also transformed the concept of place from local to non-local communities, namely online or virtual communities without physical or geological support. A large number of online communities already exists on the web, uniting people beyond the barriers of time, distance, place and even culture (Preece, 2002).

A subject that is sparked by such a development in the internet's ability to forge various types of social groups is the relationship between the production of social capital and online community use. While individuals are located in the web of social networks, they hold a certain position in this structure, which can benefit or sometimes harm them. In this sense, a virtual community can be involved in engendering and maintaining or even weakening individual levels of social capital, such as networks, trust, social interaction, the generalized norm and life contentment. Accordingly, the main aim of this article is to investigate the extent to which individual levels of social capital can be interwoven with online community use.

Traditional community to online community

According to Jonassen et al. (1998), community is defined as a social organization of people who share knowledge, values and goals. Group members come to depend upon each other for the accomplishment of certain goals (Wilson and Ryder, 1996). Then groups become communities when the interaction and togetherness between group members last long enough to form a set of habits and conventions.

With the rise of new media, however, the concept of traditional communities has been challenged by that of online communities. Communities no longer exist only in the physical world but also in the virtual world that operates through the internet. Due to its characteristics, it allows individuals to connect with people in distant places virtually. It facilitates the creation of networks of people who have similar characteristics including race, socio-economic status and religious or political affiliation, as well as the establishment of networks of people who have different backgrounds (Saguaro Seminar, 2000). It provides opportunities to bring a variety of people together from different backgrounds and allows them to find common ground in their beliefs and interests. Individuals in

online communities not only provide knowledge and information resources to the group related to certain agreed topics of shared interests, but also interact with group members (Hunter, 2002). In this sense, Owston (1998) defined the concept of the online community as a group of people who regularly interact online and share common goals, ideas and values, and thus extended the concept of community to the online realm.

Along with the attention given to social relationships, an issue raised here is why people use online communities. They use them for certain purposes. They participate in order to garner mutual benefits between group members, for example, strengthening social ties, circulating information, archiving experiences and exchanging opinions. Online relationships also help to create norms. People transfer the norms of real-life social relations into online relations and create new local norms, which make it easier for people to know how to behave online and to gain a sense of belonging in communities (DeSanctis and Poole, 1994; Haythornthwaite, 2000; Wellman et al., 1996). In this sense, online community use is closely related to accessing diverse resources that help individuals achieve their societal goals. From this point of view, it is highly probable that the use of the internet for online communities could be a way to facilitate social capital-building activities.

Social capital

The term 'social capital' was popularized by Putnam's work *Bowling Alone: The Collapse and Revival of American Community* (2000). In this work, Putnam (2000: 19) referred to social capital as 'connecting among individuals ... social networks and norms of reciprocity and trustworthiness that arise from them'. However, there had already been many attempts to define social capital among scholars. According to Bourdieu and Wacquant (1992: 14), social capital is 'the sum of the resources, actual or virtual, that accrues to an individual or group by virtue of processing a durable network'. Coleman (1988) defined social capital by its function as 'a variety of entities with two elements in common: they all consist of some aspects of social structures, and they facilitate a certain action of actor within the structure' (S98). He further refined social capital with relevance to physical and human capital. He stated that social capital helps accomplish certain goals that may not be possible in its absence. In this manner, social capital is productive like other forms of capital, such as physical and human capital. Also, similar to these forms of capital, social capital is not completely substitutable with others.

Although the definition of social capital varies somewhat from scholar to scholar, there is an agreement that social capital is derived from relations with other people in a social structure, which allows social relationships among individuals and helps them create a competitive advantage to achieve their social goals. People must relate to one another in order to create social capital and the advantages come from these relations rather than oneself (Portes, 1998). As a result, social capital is embedded in social structure and only exists when shared with others (Narayan, 1997, 1999). From this perspective, social capital emphasizes the social network and interaction, which promote norms of shared responsibility and reciprocity among people (Coleman, 1988; Putnam, 2000).

Social capital is a multidimensional concept, which includes diverse aspects of social structure. It is, however, composed mainly of two categories: network structure and its content. Network in social capital identifies the structure of social relations and the content, which operates within these structures (Nadel, 1957; Stone, 2001). While network

tells one how people link to one another and what the nature of their relations is, the content of these networks, such as generalized norm, trust and life contentment, indicates how information flows among people as well as among norms governing such exchanges of information (Stone, 2001).

According to Patulny (2005: 3), generalized norms provide 'the motivational basis for social interaction through ritual and evolve over time through interaction of individuals and societies; they are thus historically located with structural properties'. He also argued that the most appropriate norm for social capital is trust. However, generalized norms and trust are distinguished as two different concepts of trust: generalized trust and particularized trust (Uslaner, 1999a, 1999b). Generalized trust, related to faith in strangers, refers to emotional-normative trust and it is 'linked negatively to information in that subscribers to this kind of trust may trust in a "moral" altruistic sense, above and beyond what their rational calculations tell them is appropriate' (Patulny, 2005: 3). Particularized trust, on the other hand, is rational trust which is linked positively to information (Patulny, 2005; Uslaner, 2002). It is related to the expected sanction and rewards from associating and trusting those specific others (Coleman, 1994; Patulny, 2005).

Along with norms and trust, life contentment is another critical individual-level socio-psychological factor that indicates the quality of network (Brehm and Rahn, 1997; Shah, 1998; Shah et al., 2001; Sullivan and Transue, 1999; Uslaner, 1998). Life contentment provides motives for social activities as well as benefit from those activities among individuals. In some recent research, it was discovered that social capital centered on civic participation brings individuals more satisfaction with their life. Helliwell (2001), in his survey on social capital and happiness, showed that social capital influences a number of non-economic outcomes that increase people's life contentment, such as social contact. This finding suggests that having positive relationships with people leads to an improvement in life contentment and eventually to an increase in social capital among individuals.

Many studies have been conducted on the role of the media in maintaining the social relationships of communities. Some of the earlier research in this field focused on the negative effects of the media on social capital. These studies argued that media use decreases sociability and face-to-face communication and loosens social networks (Kraut et al., 1998; Nie, 2001; Nie and Erbring, 2000; Putnam, 2000). People brought their work home, did the work through the internet and spent more time on it than on other social activities (Nie, 2001). As a result, the advent of the internet caused people to stay indoors, resulting in reduced social interaction with other people. Consistent with this, Kraut et al. (1998) posited that a greater use of the internet is significantly associated with the decline in social involvement as measured by communication within the family and the size of people's social networks. Moreover, they stated that the great amount of internet use increases loneliness as it decreases socialization.

In contrast to the studies mentioned above, however, some researchers argue that internet use improves relations between individuals with advanced technology and strengthens social networks (Cole, 2000; Hampton and Wellman, 1999; Papacharissi, 2002; Wellman, 2001; Wellman et al., 1996). They claim that society can benefit from the information distributed online and that the information makes society more effective and connected (Wellman et al., 1996). One of the greatest merits of the internet is that it goes beyond the limits of time and space and provides a virtual meeting place through which people can maintain their social

relations with others (Papacharissi, 2002). The internet allows people to encounter mass audiences by extending the boundary of social networks in real life to virtual places, and therefore fosters global interaction with people who have common interests (Wellman, 2001).

Wellman and his colleagues (2001) also contend that the internet has had a positive role in people's lives. They assert that the internet not only promotes primary relationships with friends and kin online, but also enhances offline relationships, such as face-to-face and telephone communication. The internet strengthens relationships between networked members as they exchange more email, pictures and information, and as they become more aware of each other's needs (Wellman et al., 2001). Cole's findings (2000) also support the central role of the internet in people's lives: many internet users are socialized people who spend a great deal of time with their families and friends and who participate in a variety of outside activities. Additionally, Hampton and Wellman (1999) confirm that online activities promote people's local awareness, increase interpersonal activities and stimulate political mobilization.

The inconsistent results of studies on internet use and social capital may imply how difficult it is to measure the effects of the internet on social networks. However, a conclusion that may also be deduced from these controversial results is that researchers often fail to consider the needs and tasks of individuals in internet use. Individuals go online for specific purposes. One of the many reasons is to communicate with others. The internet confers the ability to communicate with various technological features, such as email, chat room and instant messaging, and those features further provide a fundamental ground for virtual groups (Preece, 2002). In this way, people use the internet to create, extend and maintain their social network. Thus, research on internet use should consider more specifically individuals' purposes in using the internet.

However, little empirical research has been done to date on the relationship between social capital and online communities. The representative study conducted by Kavanaugh et al. (2005) examined the impact of online networks on social capital of a physical community, Blacksburg Electronic Village, and found that the computer-mediated network has a positive influence on strengthening social contact, community engagement and the attachment of local community members. However, the research was examined based on the pre-existing local communities rather than the communities created and formed online.

Meanwhile, Norris (2003), one of the few early researchers in this field, focused only on the network aspects of social capital rather than social capital as a whole, while examining the relationship between online communities and social capital, particularly bonding and bridging groups. Since other aspects of social capital, such as trust and reciprocity, lie at the core of social capital, it is also important to know how trust inheres within networks and to understand the relationship with the norm of reciprocity.

From this perspective, the present study focuses on the diverse aspects of social capital and attempts to explore the effect that social capital has on online community use, addressing the following research question:

RQ1: How are social capital factors, such as sociability, trust, generalized norm, and life contentment, associated with the likelihood of online community use?

Media use

The emergence of online community use may have an influence on traditional media use, directly or indirectly. Internet users either seek information or enjoy entertainment programs that the existing media have provided. In addition to the use of informative and entertainment sources, they employ various interactive applications for communicative activities, creating or participating in online groups. The point is that when the existing media and internet usage are taken into account, online community use may lead to changes in overall media use.

Media displacement and supplementation models are representative perspectives on the relationship between a new medium and old media use. Prior studies have shown the conflicting or mixed results in terms of the two perspectives. The media displacement model assumes that the relationship between a new medium and old media is mutually competitive and, thus, each is interchangeable with the other. The audience decides which media better gratify their specific needs and motives. This assumption supports the idea that old media use tends to have a high probability of decreasing in time because a person's limited time is devoted to the new medium as well as the old media (Robinson and Godbey, 1999). Thus, the displacement function of the new medium can facilitate its role of being a functional alternative to old media (Dimmick et al., 2004; Heikkinen and Reese, 1986; Lin, 1994).

But the media supplementation perspective emphasizes that the relationship between both existing and new media is mutually complementary. Many studies found a weak or little relationship between old media and internet use (Cai, 2005; Coffey and Stipp, 1997; Robinson et al., 1997; Shapiro, 1998; Stempel et al., 2000). This line of research also revealed that internet and computer use complement other media activities (Lin, 1999, 2001; Robinson and Kestenbaum, 1999; Robinson et al., 1997, 2002). Robinson and Kestenbaum's (1999) exemplary study found that home computer users tend to use art-related contents and print media as much as non-users.

Meanwhile, the emergence of the converged new media has made it more difficult for researchers to predict the direction of overall media consumption. As respective audio, video and data functions of old media have been integrated into the converged functions of new media, the mixed results of the effect of traditional media use patterns on internet use may depend on specific contexts of media use behaviors. For example, dial-up users tended to be heavier TV viewers and radio listeners than broadband users, yet the two groups showed no difference in their activities of movie-going and newspaper reading (Sung et al., 2005). Bearing the conflicting results of the related research in mind, the present study focuses on the relationship between online community use and other media consumption. Assuming that participation or non-participation in online community activities may be related to changes in different media use, this study addresses the following research question:

RQ2: How are media use factors, such as TV use, newspaper use, and internet use, associated with the likelihood of online community use?

Demographics

Several studies have found that new media use is influenced by the socioeconomic status of users (Hughes and Hill, 1998; Uslander, 1998). Hughes and Hill (1998) argued that

gender differences contribute to the social stratification of new media use, with males usually over-represented among internet users. Uslaner (1998) has also found that demographic factors, such as age and education, are positively related to social capital. Meanwhile, the first as well as the second access issue of digital divide, focusing on the disparity of demographics and dimensions of social capital in internet and/or ICT use (de Haan and Rijken, 2002; van Dijk, 2004), may also form a contextual condition of different online community use. Since the use of online communities is enabled by the internet, it is probable that the usability of new media is related to online community use. Thus, the following research question is suggested:

RQ3: How are socio-demographic factors, such as gender, ethnicity and income, associated with the likelihood of online community use?

Research methodology

This study conducted an online survey of college students at University at Buffalo, the State University of New York. The online survey was posted on the web for five days, from 6 April to 10 April 2005, for collecting the data.

In this study, social capital questionnaire items included sociability, trust and generalized norm developed by Narayan and Cassidy (2001), and life contentment developed by Shah et al. (2001). The 13 items of the social capital scale were subjected to principal component analysis (PCA). Prior to performing PCA, the suitability of data for factor analysis was assessed. An inspection of the correlation matrix revealed the presence of many coefficients of .3 and above.

Table 1. Factor analysis of social capital variables

Variables	Factor loadings			
	1	2	3	4
Trust				
People in other religious group	.865			
People in your race or ethnic group	.851			
People in other race or ethnic group	.830			
People in your religious group	.783			
People in your community	.686			
Life contentment				
Control over life		.835		
Do something entirely different		.824		
Do things differently		.766		
Satisfied with my life		.603		
Generalized norm				
People can be trusted			.837	
People are trying to be fair			.829	
People are trying to be helpful			.826	
Social participation				
Getting together with a group of people				.961

A PCA revealed the presence of four components with Eigenvalues exceeding 1, explaining 30.7 percent, 17.4 percent, 11.8 percent and 9.6 percent of the variance respectively. To aid in the interpretation of these four components, varimax rotation was performed (see Table 1).

Independent and dependent variables

Online community use, the dependent variable, was measured by asking 'Are you participating in any online community?' Online community includes online clubs, groups, organizations, communities or any other kinds of online groups of people who get together regularly for similar interests or activities.

Sociability measured sources of social capital, which refers to personal contact and interaction made by meeting groups of people through clubs, organizations, communities, etc. (Stone, 2001).

Trust was measured by questionnaires suggested by Narayan and Cassidy (2001). Respondents were asked to what extent they felt they could trust people in each of following groups: 'People who belong to the same clubs, organizations, or groups as you', 'People of your race or ethnic group', 'People in your religious group', 'People in other racial or ethnic groups' and 'People in other religious groups' (Cronbach's alpha = .87). Factor analysis combined these items as one factor.

Generalized norm was measured by items recommended by Narayan and Cassidy (2001). Respondents were asked what they thought about the following statements: 'You can't be too careful when dealing with people, or that most people can be trusted', 'Most of the time people are just looking out for themselves, or they are trying to be helpful' and 'Most people would try to take advantage of you if they got the chance, or they would try to be fair' (Cronbach's alpha = .81). Factor analysis combined three items into a single factor.

Life contentment was operationalized on the basis of four statements: 'I am very satisfied with the way things are going in my life these days', 'I wish I could leave my present life and do something entirely different', 'If I had my life to live over, I would surely do things differently' and 'Sometimes I feel that I don't have enough control over the direction my life is taking' (Cronbach's alpha = .76).

Media use: with open-ended questions, each item measured the overall use of television, newspapers and the internet on an average day.

Demographics: demographic variables were also used as predictors for online community use. Respondents were asked to identify their age, gender, ethnic background and the income level of their family. The item asking about educational background was excluded since all the participants were college students.

Results

The survey yielded a final response from 327 survey participants: 133 online community users and 194 non-users. The gender of the participants was 51.1 percent female and 48.9 percent male, and the age of the participants ranged from 17 to 40, with 18- to 21-year-olds accounting for 81.9 percent of the participants. The mean age for participants

was 20.3. The majority of the participants were white (71.5%) with the remainder of participants reporting their race or ethnicity to be Asian or Pacific Islander (10.5%), black or African-American (5.9%), Hispanic (3.4%), mixed (3.4%), other (2.5%) and Don't know or refused (2.8%). The participants' incomes ranged from up to and including \$15,000 (5.2%), \$15,001–35,000 (8.6%), \$35,001–50,000 (8.6%) and \$50,001–75,000 (11.9%).

The chi-square test indicates whether a participant's gender, ethnicity or income has significantly different distributions regarding the decision to use online community. Gender ($\chi^2(1, N = 323) = 6.706, p < .05$) and race ($\chi^2(6, N = 323) = 29.171, p < .01$) had a statistically significant influence on online community use, whereas income did not ($\chi^2(6, N = 323) = 4.047, p < .670$).

A logistic regression analysis was conducted to test for the significance of predicting online community use from social capital, media use and demographics. The overall percentage of cases that were correctly predicted by the model was 69.1 percent, an improvement over the 59.6 percent in Block 0, which is the result of the analysis without any of the independent variables used in this model. This serves as a baseline for comparing the model with our predictor variables included. Therefore, Block 0, as a null model, is improved when a set of predictor variables are entered in the next step. The chi-square value was 63.796 ($p < .001$) with 13 degrees of freedom (d.f.). This result gives us an overall indication that the model performs quite well in this study.

Table 2 shows the results of logistic regression. In social capital variables, the relationship between online community use and social capital indicators was small but statistically significant. Sociability ($W = 5.714, p < .05$) and generalized norm ($W = 2.742, p < .05$) had a significant influence on online community use, whereas trust and life contentment were not related. Online community users tended to have higher levels of sociability ($OR = 1.040, p < .05$) and generalized norm ($OR = 1.014, p < .05$) than did non-users.

Table 2. Logistic regression predicting online community use

	B	S	Wald	d.f.	Sig.	Exp(B)
Media use						
TV	-.088	.066	1.786	1	.181	.916
Newspaper	.113	.079	2.028	1	.154	1.120
Internet	.151	.046	10.678	1	.001**	1.163
Social capital						
Sociability	.039	.017	5.714	1	.017*	1.040
Trust	-.010	.008	1.658	1	.198	.990
Generalized norm	.014	.009	2.742	1	.048*	1.014
Life contentment	-.006	.006	1.130	1	.288	.994
Demographic						
Age	.049	.052	.902	1	.342	1.050
Gender	.715	.264	7.326	1	.007**	2.044
Race	1.592	.302	27.771	1	.000***	4.914
Income	-.432	.328	1.727	1	.189	.649

Notes: * $p < .05$ ** $p < .01$ *** $p < .001$.

Thus, the first research question about social capital (RQ1) was partially supported. RQ2 was also partially supported since internet use ($W = 10.678, p < .01$) was a significant predictor of online community use, while the use of TV and newspaper was not related. In the case of RQ3, gender ($W = 7.326, p < .05$) and race ($W = 27.771, p < .001$) were significant predictors of online community use among demographics. The results indicate that online community users were more likely to be male ($OR = 2.044, p < .01$) and white ($OR = .4914, p < .001$) than non-users.

An independent samples *t*-test was conducted to compare the differences between the two groups (see Table 3). In terms of social capital variables, there were significant differences in sociability ($t(325) = 1.845, p < .1$) and life contentment ($t(325) = -2.154, p < .05$) between the two groups. Online community users ($M = 5.94, SD = 9.981$) tended to have more association with a group of people than did non-users ($M = 4.28, SD = 6.287$). In contrast, online community users ($M = 54.01, SD = 21.111$) were less satisfied with their life than non-users ($M = 59.18, SD = 21.509$).

Traditional media use was not significantly differentiated between the two groups. Although online community users had slightly higher media consumption than did non-users, no significant differences were found between the two groups. Conversely, there was a significant difference in internet use time ($t(325) = 3.55, p < .001$) between the two groups. Online community users ($M = 4.75, SD = 3.15$) spent more time using the internet than did non-users ($M = 3.59, SD = 2.72$).

Discussion

In terms of social capital predictors, sociability and generalized norm had a significant influence on online community use. The results give meaningful evidence that online community users tend to have higher social participation in general groups or communities than do non-users. It seems that social networks, which were based in physical space before the introduction of the web, are now also located online and reshape the social relationships between individuals. With the help of ICT, people create, maintain and expand social

Table 3. Mean for media use and social capital between online community users and non-users

	Users (<i>n</i> = 133)	Non-users (<i>n</i> = 194)	<i>t</i>	Sig.	<i>SD</i>
	Mean	Mean			
Media use					
TV	2.67	2.27	.036	.971	.235
Newspaper	.78	.59	1.044	.297	.181
Internet	4.75	3.59	3.550	.000	.326
Social capital					
Sociability	5.94	4.28	1.845	.066	.900
Trust	48.44	49.34	-.436	.663	2.051
Generalized norm	48.77	45.84	1.570	.117	1.870
Life contentment	54.01	59.18	-2.152	.032	2.403

Note: d.f.=325.

relationships that exceed the locally based network and enhance their communication ability by adding the internet to the means of communication, such as telephone and face-to-face communication (Quan-Haase and Wellman, 2004). For example, online community use facilitates social contacts among people by helping them organize meetings and social events and by filling communication gaps by making the connection of geographically dispersed people easier (Wellman and Haythornthwaite, 2002). From this point of view, internet use, specifically online community use, does not seem to have the problematic effect of reducing sociability that some research on social capital and the internet has concluded (Kraut et al., 1998; Nie, 2001; Nie and Erbring, 2000).

In parallel with previous studies of the creation and transfer of norms among the community members (DeSanctis and Poole, 1994; Haythornthwaite, 2000; Wellman et al., 1996), this study also found that online community users have higher levels of generalized norm than do non-users. Online community users are more likely to think that people are generally trustful, helpful and fair than non-users, on the basis of emotional-normative trust (Patulny, 2005). This suggests that online community users share norms of cooperation and obligation among community members when participating in the online community, build mutual understanding among community members and also get actual benefits from community members in diverse ways, such as communicative, informational or emotional support.

In this study, however, the online community does not seem fully associated with social capital, particularly its socio-psychological components, trust and life contentment. Although online community users tend to get along better with groups of people than non-users do, the results of interpersonal trust or life contentment are irrelevant to online community use. The results confirm what Uslaner (2000) found in the analysis using the 1998 survey of technology use conducted by the Pew Research Center for the People and the Press (1999): for most types of internet use, such as getting email, getting information on health, business, sports and stocks, expressing personal views online and buying goods online, trust either does not matter at all or does not matter much. Meanwhile, another study done by Shah et al. (2001) reports negative effects of the internet on social capital; for example, the use of the internet for social recreation diminishes social capital, especially trust and life contentment. Thus, from the above it is concluded that people who use online communities benefit from entertainment and the informational functions of online communities or receive emotional support while participating in online communities; however, the matter of trust caused by anonymous socialization still remains a weakness of such relationships.

In general terms, therefore, it is safe to conclude that online community use neither decreases nor increases social capital. Rather, depending on the nature of the internet use, the online community may supplement the traditional community's accrual of social capital. This conclusion also implies that despite the evolution in people's relationships with the help of ICT, the online community by itself does not ratify the role of the traditional or local community, and face-to-face communication between community members is still required in order to fully benefit from communities.

The second research question (RQ2) explored the changes of overall media consumption – TV viewing, newspaper reading and internet use – in relation to online community use. In redistributing the time spent on media use vis-a-vis online community use, the time devoted to traditional media tends not to be displaced by online community use.

Interestingly, online community users are more likely to do heavier TV viewing and newspaper reading than non-users, even though traditional media use between the two groups is not statistically significant. However, in the investigation of the relationship between internet use and online community use, a strong difference in the amount of internet usage is observed between the two groups. Online community users are found to be more likely than non-users to access the internet.

Consideration of traditional media and internet use reveals which media usage between the two groups can be integrated into characteristics of online community use. For example, the configuration of internet use shows the differences of the two groups. Online community users engaged in more communication with others (e.g. chatroom) ($\chi^2(1, N = 327) = 10.993, p < .001$) and researched their hobbies ($\chi^2(1, N = 327) = 10.10, p < .001$) than other online use such as entertainment (e.g. playing a game) ($\chi^2(1, N = 327) = 4.344, p < .037$), web surfing ($\chi^2(1, N = 327) = 3.236, p < .072$) and gathering product or store information ($\chi^2(1, N = 327) = 2.811, p < .094$).

These results have some implications for the media and internet use of online community users. For online community users, the socially interactive role played a more important part than did the entertainment and information-seeking role. Accordingly, entertainment and information-seeking behaviors over the internet appear to be less motivated for online community use. Moreover, it should be noted that newspaper reading for more specific information-seeking (Althaus and Tewksbury, 2000; Perse and Dunn, 1998; Robinson et al., 1997; Stempel et al., 2000) was still not being substituted by the online community use. The results suggest that people use the internet not as an alternative to traditional media, but for particular purposes which they cannot fulfill with the old media. Therefore, online community use seems to serve not as a functional competitor but rather as a functional complement to existing media.

The third research question (RQ3) examined how demographic variables affect online community use. The results are consistent with those of some of the early studies about internet use, which found that whites and males tend to use the internet more than blacks and females do (Althaus and Tewksbury, 2000; Hughes and Hill, 1998). One notable finding in the demographics is that while Asians and Pacific Islanders account for only 10.5 percent of the participants, they use online communities the most. As the findings indicate, the likelihood of online community use among Asian and Pacific Islanders is 73.5 percent, which is the highest rate among all the races/ethnicities. The reason for this is probably due to the fact that many international students or immigrants use the internet as a means of communication with their homeland.

Income was not related to online community use. This may be due to the unique situation of college students: most students can access the internet for free at school whether or not they own a personal computer or have internet access. Also, the penetration of the internet and online population has been growing so enormously that income may no longer be a factor in internet usage.

Taken together, it can be inferred from the findings that sociability, generalized norm, internet use, race and gender are the important predictors of using the online community. Among other things, it should be emphasized that online communities may enhance the communication ability among individuals due to technological advantages, but face-to-face communication in the form of traditional community activities is still essential to ensure the

quality of community. Although online community users have a trusting attitude towards others generally in terms of fairness, trust and helpfulness, the fact that they have no particular trust in specific individuals indicates that the online community lacks creating deep affection or attachment among members, which can be naturally formed in physical communities. Despite the internet's possibility of being connected to diverse social relations, it is worth noting Sonnemans et al.'s assertion (2006: 189) of the orientation to attitudinal difference between 'a generalized other and a specific individual' and the dynamic of the changing attitude between them through 'prolonged interaction between individuals'.

Conclusion

Although numerous studies have been conducted regarding the internet and social capital (Cole, 2000; Hampton and Wellman, 1999; Kraut et al., 1998; Nie, 2001; Nie and Erbring, 2000; Papacharissi, 2002; Putnam, 2000; Wellman, 2001; Wellman et al., 1996), many of them centered on how internet use fosters social capital and did not take the various purposes for internet use into consideration.

On this point, the present study takes an important step in the area of social capital by focusing mainly on the very concrete purpose of a particular online activity, online community use. This study contributes to the existing studies in the areas of social capital and online community by empirically investigating their relationship, and also provides a framework for effective intervention, utilizing both online and traditional communities, for building social capital.

Despite such contributions, however, this study has several shortcomings. First, it simply distinguished online community use as a dichotomous subject. It did not consider the different levels of online community use and simply assumed all users to be equivalent. Thus, the measurement of more precise effects of social capital and media use is likely to be concealed or diluted.

Another potential weakness of this study is its lack of generalizability. The use of a convenience sample of college students, rather than the use of a systematic randomized sample, may cause underestimates of the empirical range of error, having the defect of concealing potential biases. However, the sample of university students of a relatively more networked community at least provides a clue for capturing a forthcoming direction of differential online community use.

Consequently, the implications of the study make way for related future studies which need to take the limitations of the present study into account. As the results of this study may indicate only a tentative and causal relationship, future research should be conducted by employing more various systematic methods such as social network analysis and qualitative methodology, in order to replicate and rectify the findings of the current study.

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