

Inculcating a Sense of Community Among Members of Social Networking Communities *

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ABSTRACT

Social networking communities (SNCs) are media designed to facilitate social interaction using highly accessible and scalable publishing techniques. SNCs can constitute individuals' their own profiles in the online environment and share texts, images and photos in a variety ways. In other words, one of the other motivators is knowledge sharing. Various sites, such as Facebook, Orkut, MySpace, and Hi5 are categorized as SNCs. SNCs have become increasingly popular in recent years among youths, especially students, who use them to build social networks. This study examines whether this usage of SNCs inculcates a sense of community among their members. Several studies have examined the role of a sense of community through increased usage in the context of virtual communities. Although this result may be true of virtual communities, this paper contends that the opposite relationship prevails in the case of SNCs because members interact to build networks and are not obliged to interact. The results reveal that maintaining long-term interactions in the SNCs is helpful in building a sense of community in SNCs. Although short-term usage may not boost the development of a sense of community in SNCs, it does matter if the premise is for a long-term commitment to SNCs. Implications for theory and practice are discussed.

Keywords: Social networking communities, sense of community, usage of social networking communities

* This work was supported (in part) by the Yonsei University Future-leading Research Initiative of 2015 (2015-22-0053). This work was supported by the National Research Foundation of Korea Grant funded by the Korean Government (NRF-2012S1A3A2033291).

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• 논문접수일:2015년 10월 1일; 1차 수정: 2015년 10월 30일; 2차 수정: 2015년 11월 11일; 게재확정:2015년 11월 15일

I. Introduction

Advances in communication technology coupled with the Internet have transformed how people interact. The purpose of internet users is to acquire and share information, and online communities can be considered as the most important motive for knowledge sharing (Lee and Chung 2012). Over the years, computer mediated interactions have led to the formation of new communities, identity expression, and development of social networks (Rheingold 2000; Blanchard and Markus 2004). Virtual communities in which different groups of people communicate via the Internet for social, professional, and other purposes are a good example of the formation of communities (Rheingold 2000). When people carry on online public discussions long enough and with sufficient commitment to form webs of personal relationships, the result is the formation of a virtual community (Rheingold 2000).

Members also express their identity through various cyber accessories, and avatars. For example, Cyworld.com allows its members to purchase digital accessories to decorate their homepages and thus communicate their identity. Members can also post blogs and thus communicate their thoughts, views, and experiences online with other members in what are known as blogging communities. Blogging communities (BCs) are virtual communities (VCs) that allow members to post blogs on their websites.

Over the past few years, computer mediated communication has helped in developing closeknit social networks in which the primary purpose is for making new friends and maintaining relationships with others. People also use social network for their personal happiness and satisfaction (Kim et al. 2015). Some good examples of such networks are Orkut, Facebook, MySpace, Friendster, and Del.icio.us. These communities sometime become more popular than even search engines like Google (Rosenbush 2005). For example, in 2005 MySpace reportedly was getting more page views than Google.

The growing popularity of VCs, BCs and social networking communities (SNCs) has attracted considerable interest from researchers in various fields. For example, some have examined the role of beliefs and feelings on the attitude and commitment toward VCs (Gupta and Kim 2007). Dholakia et al. (2004) investigated both the individual-level and the group-level determinants of members' intention to participate in VCs. Wasko and Faraj (2005) examined the role of individual motivation and social capital on knowledge contribution in electronic networks. Although there are numerous studies on the development of commitment in VCs, relatively few researchers have studied community development in SNCs. Zhang (2009) is one of those few who have examined the development of a sense of community in social networking websites. Zhang (2009) examined the influence of sense of community on frequency of usage.

However, the finding is subject to an endogeneity problem if usage cultivates the sense of community. Moreover, SNCs and VCs are dissimilar because the motivation for members to join them is different. Although VCs are primarily driven by similarity of interests, SNCs are driven by a desire to form networks with one's acquaintances. This difference is crucial to understanding the development of a sense of community in SNCs. Therefore, to address the possibility of an inverse relationship between sense of community and usage, it is necessary to examine usage from the perspective of the intensity of daily usage in SNCs as well as experience in using SNCs instead of focusing on access frequency. Therefore, this study examines whether or not a sense of community develops in SNCs. Our primary research goal is to examine the influence of usage on sense of community in SNCs. Apart from this, we also attempt to classify members of SNCs to identify strategies that owners of SNCs can adopt to make their communities successfully.

Our study has important business implications. The lack of a positive loop between usage and sense of community may suggest that sense of community would be insufficient to drive long-term success in SNCs. Instead, a gap exists between the bond within members before they join the SNCs and the new bond associated with the SNCs after they join. The development of the latter is crucial for commitment to the SNCs and thus deserves further cultivation by providers of SNCs. To maintain long-term interaction via this,

we can consider relative aspect and the function as knowledge acquisition and knowledge source of sharing. We provide managerial suggestions in the discussion and limitation section.

II. Literature Review and Conceptual Background

2.1 Sense of Community

A community is characterized mainly by the relational interactions or social ties that draw people together (Heller 1989). Communities can be either geographical (i.e., based on neighborhood, town, or region) or relational (i.e., involving human relationships without reference to location, such as hobby clubs, religious groups, or fan clubs) (Gusfield 1975). Most VCs fit the relational communities category because their members are not physically bound together.

Sense of community is an individual's feeling of relationship to a community or personal knowledge about belonging to a collective that includes others (Heller et al. 1984; Shneiderman et al. 1977; Newbrough and Chavis 1986). Sometimes sense of community is viewed as a perception of similarity with other members and an acknowledged interdependence with them (Sarason 1974). Sense of community originated in the field of community psychology as a way to study an individual's perception, understanding, attitudes, feelings, etc. about a community, and his or her relationship to both the community and others in the community

(Sarason 1974; McMillian and Chavis 1986). Despite the existence of a large body of literature on sense of community, the term lacks a universally accepted definition. It has been defined as the perception of similarity to others, an acknowledged interdependence with others, a willingness to maintain this interdependence by giving to or doing for others what one expects from them, and the feeling that one is part of a larger dependable and stable structure (Sarason 1974).

One of the seminal works on sense of community was that of McMillian and Chavis (1986). They defined sense of community as the feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to being together. These various views of community identify or imply the most essential elements of sense of community: mutual interdependence among members, connectedness, trust, interactivity, and shared values and goals. According to McMillian and Chavis, sense of community consists of membership, influence, integration and fulfillment of needs, and shared emotional connection.

- Membership indicates that people experience feelings of belonging to their community.
- Influence implies that people feel they can make a difference in their community.
- Needs fulfillment suggests that members of a community believe that the resources

available in their community will meet their needs.

- Emotional connection is the belief that community members have and will share history, time, places, and experiences.

2.2 Research on Sense of Community

A number of studies have applied and empirically tested the model of sense of community proposed by McMillian and Chavis. The community test sites have included traditional neighborhoods, university settings, workplaces, and communities of interest (Chipuer and Pretty 1999; Obst et al. 2002; Obst and White 2004; Proescholdbell et al. 2006). With the rapid growth of Internet use and the increasing popularity of various online services, McMillian and Chavis' model has also been applied to virtual communities in which members interact via computer mediated communication tools (Blanchard and Markus 2004; Koh and Kim 2003). For example, in a study of an online newsgroup for people interested in participating in multiple sporting events, Blanchard and Markus (2004) confirmed the existence of sense of community among members. The dimensions of the sense of community were also found to be quite close to those in McMillian and Chavis, with the exception of influence. In a separate study, Koh and Kim (2003) defined and measured the sense of virtual community as a 3-D construct in which two dimensions (membership and influence) were adopted from McMillian and Chavis, and another dimension

(immersion) was adopted as an emergent property of virtual community. A few other researchers (Teo et al. 2003; Yoo et al. 2002; Chiu et al. 1888) have also examined the sense of community construct in an online context, but their empirical measurement of the construct was primarily limited to the sense of belonging (or membership) component.

According to Zhang (2009), despite the aforementioned empirical research on sense of community in virtual communities, the results on its dimensionality, determinants, and relationships with other constructs are often incomplete and inconsistent. One ongoing debate is about whether or not members develop a sense of community during online interactions. According to Zhang (2009), the literature lacks coherency on whether the this development occurs. Blanchard and Markus (2004) argued that the feelings of influence do not figure predominantly in online communities because of the internalized norms, the lack of visual and auditory cues, and the lack of hierarchies. Addition to, in recent studies about sense of community, Mamonov (2013) drew antecedents and consequences of sense of community for SNCs, and Lim (2014) researched the effect of sense of community in VCs. Oh et al. (2014) also performed the research about whether supportive interactions affects sense of community and life satisfaction in SNCs. However, the recent studies mostly covered the components of sense of belonging or membership for the dimension of sense of community. On the other hand, Abfalter

et al. (2012) suggested membership, influence, integration and fulfillment of needs and shared emotional connection as the dimensions for sense of community, and developed measurement items for the suggestions.

2.3 Sense of Community in SNCs

Our contention is that the development of sense of community is very well tied in with the nature of a virtual community. Although the members of a number of VCs do develop a sense of community, many others struggle to retain their members. For example, TimeZone.com, a virtual community of watch enthusiasts, earned good success in developing a sense of community among watch lovers. Similarly, gardenflower.com was successful in instilling a community spirit among its members. These communities are primarily based on interest or relationship building (Gupta and Kim 2007). That is, communities play a role as a social network that enables users to share and acquire knowledge by using internet technology (Park et al. 2011). The same is true of BCs in which members post their views and experiences online and allow passersby to view their blogs and post their comments. Sometimes these BCs develop into small communities of people having common interests coming together and sharing their views and experiences and also helping each other. However, numerous VCs (particularly those based on transactions) never instill a sense of community in their members (Shan et al. 2005). The common thread that creates a sense

of community among members is a shared purpose or a common interest. This is also true of offline communities in which members are drawn together based on a common purpose

or a shared goal. The development of sense of community in SNCs is, therefore, an issue worth examining. We measured usage from both the perspective of the intensity of daily usage in

<Table 1> Comparison among Various online communities

Dimension	Virtual Communities (Koh et al. 2007; Andrews 2002; Luet al. 2010)	Blogging Communities (Shen and Chiou 2009)	Social Networking Communities (Arnold and Paulus 2010; Strater and Lipford 2008)
Context	Online	Online	Online
Motivation to Join	Interest and forming new relationships	To share one's views with everyone	To find old friends
Nature of Interaction	Personal	Impersonal	Personal
Community Size and Number	Usually big communities	A few small communities	Many small groups
Nature of Community Memberships	Close interaction	Less close as compared with VCs	Less close interaction
Impersonation	High	High	Low
Nature of Friendships	People are strangers	People are strangers	People are previously acquainted with each other
Membership	Open to all	Open to all	Requires invitation and usually open only to known friends
Privacy	Low	Low	High

a SNC as well as experience in using it (the number of years in which one has interacted with others in a social networking community).

We divided online communities into VCs, BCs and SNCs, and found out that each community has different characteristics. First, in VCs, community members basically share critical information and knowledge (Koh et al. 2007). VCs can be as a group in which individuals come together around a shared purpose and interest (Andrews 2002). That is, in VCs, many online users are connected by similar interests (Lu et al. 2010). This is the most important

features in VCs is that those who have common interest and goals, share knowledge and opinions without time and space limit (Park et al. 2011). Next, BCs start with providing messages on the board of blogs, which means community users leave comments or discussion messages to each other. Especially, VCs let users make hyperlinks to other related blogs to update new posts with each other (Shen and Chiou 2009). Though this, users share their views about specific subjects with other people on BCs. Lastly, SNCs covered in this study, which are communities that are based on social networking sites, have features

as individual profile page and group interaction tools (Arnold and Paulus 2010). In other words, each individual has their own profile pages, so participating in SNCs requires them to share disclose their personal information. Besides, members of SNCs are composed of those who know each other only online or those who are friends or acquaintances offline (Strater and Lipford 2008). Even though all the three communities in this study are based on online, they have different motivation, nature of friendships and characteristics of membership.

The SNCs and VCs are fundamentally different because in VCs people with no relationship with each other come together and share their interests. So, there is some freshness in relationships and a curiosity to know each other and help each other. In the case of SNCs, the formation of a group is based on one's old acquaintances and friends. Moreover, because members have long known each other, there is a certain familiarity in such relationships. They start with a few postings from friends or relatives and after a short period they die away. One may expect to receive a comment or two after many months. Although one's friends list grows, the interaction with each friend is ephemeral and limited to sharing of photos and posting comments and sometimes sharing a short poem or something similar. However, the time spent on SNCs for each member increases because the search for old friends is always going on and is also time consuming. Therefore, in one sense, SNCs are online version

of geographical communities formed based on one's acquaintances and not on shared interests. We can infer the crucial differences that exist among the three communities. SNCs lack shared interests. Moreover, intensity of usage is based on short-term usage of the community. Because a social networking community is established based on previous friendship but not on a momentum of interest, short-term usage is less likely to affect sense of community. Hence, we hypothesize that:

H1: More intensive daily usage in SNCs does not imply development of a sense of community

Users also differ in their total experience with participating in a social community. Although some users may have been using the social networking community for years, others members might be beginners. However, after interacting for a long period, it may so happen that members develop a community based on common interests. It has been observed that even in VCs, members develop a sense of belonging with increased usage of the community. The difference between VCs and SNCs, however, is that in VCs, strangers come together to form a community of interest and then develop ties, and in SNCs, the members are already friends and may form a community if their interests coincide. Hence, we hypothesize:

H2: Experience in using a social networking community is positively related to a sense of

community toward the community

Although we do not expect a compelling linkage between short-term usage and sense of community, intensive usage may boost it if through long-term usage friends develop a common interest in a social networking community. Hence, we hypothesize:

H3: Experience in using a social networking community is related to a higher sense of community toward it when its daily usage is more intensive.

III. Research Methodology

The data for this study was collected using survey methodology because its results can be generalized. The survey instrument was developed by adapting existing validated questions to the context of this study. The items were adapted from the McMillian and Chavis (1986) scale for sense of community in the context of SNCs. The instrument, along with the source of items, is shown in Appendix. All the items were measured on a seven-point Likert scale.

In this study, we selected Orkut as the target service for data collection. Orkut is Google’s social networking site, similar to Facebook and Myspace. The main purpose of this service is to help users make friends and maintain the relationships, which is the characteristics of SNCs. This is one of the most used SNS in India

and Brazil. Because data for this study were collected in India, Orkut, which is mostly used in India, was selected as the target service for data collection. The data were collected from students at a large institute in central India. Because students are the broadest group of users, especially in small cities, they constitute the best respondents for the study. In big cities, many white-collar professionals also constitute a large group of users of SNCs. However, they may not find as much as time as students to keep abreast of their social networks. The survey was administered for approximately a month. A total of 300 responses were collected using the questionnaire survey. Of these, 25 responses were deleted because of missing data. Table 2 shows the demographic characteristics of the customers.

<Table 2> Descriptive Statistics of Respondent Characteristics

Measure	Item	Frequency	Mean
Age (Years)	<20	132	18.56 Yrs
	20-29	124	
	30-39	17	
	>=40	2	
Daily Usage (Min.)	<30	97	57 Mins
	30-60	81	
	60-120	58	
	> 120	35	
	Not answered	4	
Gender	Male	102	----
	Female	173	
SNCs Experience (Months)	< 3	22	18 Months
	3-6	28	
	6-12	40	
	12-24	77	
	>24	104	
	Not answered	4	

Reason for interacting in Social Networking Sites	Meeting old friends	46.27%	---
	Making new friends	39.93%	
	Gathering knowledge	16.04%	
	Sharing information	28.36%	
	Sharing pictures	7.46%	
Total		275	

Table 2 shows that the 93.1% of the respondents were younger than 30 years of age. The male to female ratio was 1:2. An average user used the SNCs for about an hour daily and had about 1.5 years of experience using them. We also asked the respondents to indicate all social networking sites with which they had an account. The results revealed that 91% respondents had an account with Orkut, with Facebook the second most popular. The other SNCs were shared by comparatively lower percentages of respondents.

IV. Data Analysis and Results

The data analysis was conducted to (i) ascertain the reliability and validity of the sense of community construct; (ii) to examine the role of usage on sense of community in social media; and (iii) to classify members who interact in social media.

4.1 Principal Component Analysis

Before analyzing the data, we used factor analysis to examine convergent and discriminant validity. The factor analysis used SPSS 16.0 and the principal component method with VARIMAX rotation (Table 3). The analyses reveal four neatly loaded factors with eigen-values greater than 1.0 in the initial solution (without rotation), the

minimum being 1.05. The means (μ), standard deviations (σ) and reliabilities (α) of the research variables are shown in Table 3. The Cronbach alpha was slightly low for fulfillment of needs and influence. The high Cronbach's alpha is also an indicator of convergent validity, which is the extent to which the scale correlates positively with other measures of the same construct. The ratio of observations to variables is about 19.6:1, which is much higher than the lower limit (5:1). Also, the sample size of 275 provides an adequate basis for the calculation of the correlations between variables. All the items were loaded on a distinct factor and explained a total variance of 59.4%. Because there are no cross loadings, it can be ascertained that the measurement scale shows discriminant validity (the extent to which a measure does not correlate with other constructs from which it is supposed to differ).

<Table 3> Principal Component Analysis Using VARIMAX Rotation

Items	α	μ	σ	1	2	3	4
MEM1	0.77	4.14	1.22	0.08	0.01	0.88	0.08
MEM2				0.17	0.10	0.83	0.05
MEM3				0.19	0.35	0.61	0.19
INF1	0.67	4.07	1.06	0.02	0.65	0.26	0.16
INF2				0.19	0.69	0.22	0.05
INF3				0.18	0.66	0.05	0.25
INF4				0.29	0.64	-0.14	0.08
FON1	0.58	4.27	1.06	0.30	0.11	0.19	0.62
FON2				-0.02	0.28	0.17	0.65
FON3				0.12	0.08	-0.05	0.80
SEC1	0.75	4.36	1.09	0.78	0.11	0.21	0.02
SEC2				0.73	0.26	-0.02	0.15
SEC3				0.61	0.33	0.21	0.02
SEC4				0.70	0.05	0.09	0.21

Eigen Values	2.3	2.2	2.2	1.6
% of Variance	16.7	15.5	15.4	11.8
Cumulative %	16.7	32.2	47.6	59.4

4.2 ANOVA Analysis

Because the independent variable (SNCs usage: Time spent on SNCs) was categorical in nature, we used ANOVA analysis to ascertain whether the categories (i.e., <30 mins, 30-60 mins, 60-120 mins, >120 mins) of SNCs usage differ from

<Table 4> Results of ANOVA Analysis

Source	DV	SS	DF	MS	F	Sig.
Corrected Model	MEM	33.039a	20	1.652	1.121	.328
	INF	34.614b	20	1.731	1.593	.055
	FON	33.155c	20	1.658	1.537	.070
	SEC	32.934d	20	1.647	1.411	.117
Intercept	MEM	1087.126	1	1087.126	737.763	.000
	INF	1063.739	1	1063.739	978.994	.000
	FON	1046.391	1	1046.391	970.356	.000
	SEC	1267.615	1	1267.615	1.086E3	.000
Usage	MEM	2.622	4	.656	.445	.776
	INF	3.632	4	.908	.836	.504
	FON	6.427	4	1.607	1.490	.206
	SEC	4.672	4	1.168	1.001	.408
Exp	MEM	3.231	4	.808	.548	.700
	INF	2.624	4	.656	.604	.660
	FON	13.821	4	3.455	3.204	.014
	SEC	1.830	4	.457	.392	.814
USAGE * Exp	MEM	18.279	12	1.523	1.034	.418
	INF	24.675	12	2.056	1.892	.036
	FON	27.002	12	2.250	2.087	.018
	SEC	23.870	12	1.989	1.704	.066
Error	MEM	365.439	248	1.474		
	INF	269.468	248	1.087		
	FON	267.433	248	1.078		
	SEC	289.470	248	1.167		
Total	MEM	4967.778	269			
	INF	4747.188	269			
	FON	5165.778	269			
	SEC	5439.562	269			
Corrected Total	MEM	398.477	268			
	INF	304.081	268			
	FON	300.588	268			
	SEC	322.404	268			
a. R Squared = .083 (Adjusted R Squared = .009)						
b. R Squared = .114 (Adjusted R Squared = .042)						
c. R Squared = .110 (Adjusted R Squared = .039)						
d. R Squared = .102 (Adjusted R Squared = .030)						

one another. This analysis was conducted using SPSS 16.0. The results of the analysis are shown in Table 4.

The results of ANOVA analysis show that membership, influence, fulfillment of needs, and shared emotional connection do not differ significantly for different usage categories, thus supporting H1. In other words, increased usage of SNCs does not imply that a member will develop a sense of community toward SNCs. Only experience influences fulfillment of needs at the 5% significance level (p -value = 0.014). This partially supports H2 and implies that the increased experience only helps members in fulfillment of their needs but not in the other aspects of sense of community. Impressively, the interaction of usage and experience has significant influence on influence (INF), fulfillment of needs (FON), and sharing emotional connections (SEC), providing partial support for H3.

The findings on the significant effects of experience and its interaction term with the intensity of daily usage on FON have important implications. As discussed in Section 2.3, social network communities are rooted in previously established friendships. Thus, the sense of community in SNCs is less likely catalyzed by intensive interaction over a short period than what may occur in VCs based on common interests. However, maintaining a long-term interaction in an social networking community is helpful toward building up a sense of community

in the sense of FON. Intensive usage may further strengthen the linkage between experience and FON. In other words, intensity of daily usage is positively associated with a sense of community only because of a long-term commitment to a social network.

4.3 Cluster Analysis

Next, we conducted cluster analysis to segment various groups of members according to their characteristics in SNCs. To identify the number of clusters in the data, we first ran hierarchical clustering. The results from the agglomeration schedule show that the maximum difference occurs in the fourth cluster. Hence, we ascertained that the data contains four clusters. Next we ran k-means cluster analysis. The results of cluster analysis are shown in Table 5.

<Table 5> Results of Cluster Analysis

Attributes	1	2	3	4	ANOVA	
					F-test	Sig
Cluster Size	54	56	70	89	---	---
MEM	4.1	3.5	5.3	3.6	48.48	0.00
INF	4.5	3.4	4.9	3.6	45.09	0.00
FON	4.5	3.7	4.9	4.0	19.78	0.00
SEC	4.8	3.6	5.2	3.9	48.03	0.00
Usage	4	2	2	2	105.16	0.00
Experience	4	2	4	5	97.59	0.00

Table 5 shows the appearance of four clusters in the data. The four aspects of sense of community, usage, and experience are responsible for significant differences among the clusters. The analysis reveals the following findings:

1. For those who used SNCs 2-3 hours and have

been using SNCs 1-2 years, the aspects of sense of community were almost neutral. This group constituted about 20% (cluster size = 54) of the respondents.

2. For those who spent 30 minutes to an hour in SNCs and are relatively new (3-6 months), the aspects of sense of community were below the neutral value. This group constituted about 20% (cluster size = 56) of the respondents.
3. For those who spent 30 minutes to an hour in the SNCs but had been using them for 1-2 years, the aspects of sense of community were much above the neutral value. This group constituted about 26% (cluster size = 70) of the respondents.
4. For those who spent 30 minutes to an hour in the SNCs, but had been using them for more than 2 years, the aspects of a sense of community again are less than the neutral value. This group constituted about 33% (cluster size = 89) of the respondents.

In other words, those respondents who use SNCs steadily develop some sense of community over a long period. However, those who use SNCs for longer hours over a number of years do not develop as much sense of community as those who spend less time each day. It stands to reason that one who uses SNCs for a long period might not value them, and a person who uses them for a slightly shorter period might not consider it as a waste of time.

V. Discussion

The results of various analyses do not yield any concrete evidence that the members who use social networking sites develop any sense of community. We also asked some general questions to validate our findings (see Table 2). Table 2 shows that the most important reason for joining social networking sites is to meet old friends and make new ones. Other reasons like sharing information and pictures and gathering knowledge score relatively low. Gupta et al. (2010) asserted that sharing and gathering knowledge is one of the most important activities in virtual communities that lead to the formation of a sense of community. Because the findings of this study show that these reasons are rated low in the case of SNCs, it is inevitable that sense of community will also be low.

The results of this study together with those of previous studies (Zhang 2009) suggest that although sense of community influences the usage of a social networking community, the reverse relationship does not hold true, at least in the initial stages of one's interaction in the community. Although the previous studies found a positive loop between usage and sense of community (Koh and Kim 2003) in the context of virtual community, usage in the beginning stages apparently does not strengthen sense of community in a social networking site. This divergence can be traced back to the fundamental difference between a VC and a

social networking community as listed in Table 1. Secondly, the items (I frequently use ___; I regularly visit ____; I log into my ____ account very often) used by previous studies (Zhang 2009) to measure usage actually measure frequency rather than the time spend on the website. Even if the sense of community is low, people may visit social networking websites often. The real key is how much time they spend on these websites. Virtual communities and SNCs, however, share similar relationships with usage in the long run.

We also acknowledge the limitations of the study. The collection of data from students may bias the study toward those who have ample time for social networking. The results may be different for working people. However, in view of the results of this study, the results may also be the same for working people who spend even less time on SNCs. Another limitation of this study is that the dependent variable was self-reported, which may distort the real scenario. Moreover, cultural context may play a significant role in influencing the results of this study. In America, people may have ample time to be devoted to these SNCs because the formal social networks are very poor. In India, where people have strong bonds outside the virtual world, the commitment to social networking websites would not be as strong. Future studies may examine the role of culture on development of sense of community in a social networking site. Future studies may also look into how introduction of similar interest groups (as in VCs) may influence a sense

of community. Some social networking websites, like Orkut, provide for interest groups (based on caste, creed, religion, denomination, etc.) to get together, but they are not so successful. This may be because the websites are not promoting these interest groups as prominently as the VCs. The promotion of interest groups might increase the membership and commitment of members to a social networking website, and its managers may then use various other modes of revenue generation, such as selling virtual accessories and displaying advertisements.

In this study, SNCs usage was divided into four categories, but in the future study, it can be considered that SNCs usage is categorized into high SNS usage and low SNS usage. In addition, by designing membership (MEM), influence (INF), fulfillment of needs (FON) and sharing emotional connections (SEC) that constitute sense of community as structural equation model and considering experience and usage as moderating variables, we can perform additional research.

VI. Implications for Research and Practice

This study offers several implications for research. First, our findings contribute to the literature related specially to online communities in general. This is the study about SNCs among online communities. The previous studies about online communities were performed without division of communities. Most of the studies were done without division

of the features that SNCs and VCs have. Therefore, there is significance that this study divided online communities, and especially researched sense of community in SNCs.

Second, we confirmed that the application methods to develop sense of community are different according to the characteristics of communities. The previous studies about online communities, mostly researched the effects that sense of community has on usage of community. However, there were few studies that researched the effects that usage of community has on sense of community. In addition, they did not show that this could be applied differently according to the characteristics of communities. In this research, we described how usage of community affects sense of community in SNCs of online communities. In other words, we explained that how daily usage and experience that is the number of years affects sense of community. Through this study, we proved that in SNCs daily usage does not affect development of sense of community simply. Instead, we discovered that daily usage has a positive effect on sense of community through interaction with the experience of SNCs.

Lastly, we analyzed the usage of SNCs by dividing into four categories. In this analysis, we found out that usage itself does not affect sense of community regardless the intensity of daily usage on SNCs. Unlike VCs, which is composed of strangers who have common interests, on short term period of SNCs, whose members are friends or acquaintances in offline,

usage does not affect development of sense of community. However, when it comes to long-term commitment on SNCs, intensity of usage has a positive effect on sense of community. That is, each community has different features that affect sense of community, and especially, conceptual division period and combination of community usage, have different results.

The findings in this study carry several practical implications. First, the result of this study showed that daily usage does not simply affect sense of community on SNCs. Instead, there is experience that SNCs is used for a long time, and the more daily usage is, the higher sense of community. From this fact, providers of social networking sites can consider offering various services that enable users to interact with long term members on SNCs. In other words, they need a strategies to improve SNCs users' sense of community in a practical way.

In addition, this study recommends providers of online communities to establish differentiated strategies to improve sense of community according to the characteristics of each community. That is, the positioning of SNCs differs from the positioning of VCs. Although SNCs position themselves primarily to develop social networks, they do not create strong bonds between members. It is like two old friends greeting each other. The result of the study suggest that mere social networking does not develop into a commitment of members toward the community except after a long period of interaction. Previous studies (Gupta et al. 2010) have shown that

commitment to a virtual community is effected when members develop strong bonds between them. Based on previous studies and the results of this study, we suggest that providers of social networking sites should look into the possibilities of developing strong bonds between members by providing not just social networks but also places where members with similar interests can come together and share their views and experiences. That is, they can provide services that can play a role as a relative aspect and the medium for knowledge sharing by maintaining long-term interaction and making users share their thoughts and ideas.

VII. Conclusion

In this study, we attempted to examine whether a sense of community exists in social networking websites. Through this study, we discovered simple usage of SNCs does not affect sense of community. Instead, when long-term interaction of users maintains, high usage has a positive impact on sense of community. In other words, unlike the positive relationship of sense of community and usage in the existing VCs, in SNSs, usage itself does not affect sense of community. Because in VCs, sharing ideas and knowledge is more focused on than relationships among people, they can acquire information they want in short term interaction, which can affect sense of community. On the other hand, in SNCs, the relationships between individuals

are more focused on than information or knowledge sharing, so short term usage cannot affect development of sense of community. Our results suggest that such websites have a weak sense of community. Most members come to meet old friends and make new ones, and the networking does not last very long. Because of people's busy lives, they have less time to work with many friends and contacts, and as such, these social networking websites become a sort of online contact diary. Therefore, to increase the membership and commitment of members to social networking websites, this study indirectly suggests that these websites incorporate the model of VCs by encouraging and promoting interest groups on the website. This would be particularly good for those members who have been interacting in the community for a long time. The results of these recommendations are, however, subject to empirical validation. In conclusion, by maintaining long-term interaction in SNCs, users can share their thoughts and ideas, and thus SNCs can function as a medium for relation aspect and knowledge sharing.

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<Appendix> Survey Instrument

Construct (Source)	Items	Scale	Reference
Membership	MEM1	I am proud to be a member of this website	McMillian and chavis 1986
	MEM2	I enjoy being the member of this website	
	MEM3	I feel a strong sense of belonging to the community of this website	
Influence	INF1	Members on this website influence my thoughts and activities	McMillian and chavis 1986
	INF2	I am able to influence the actions and feelings of other members on this website	
	INF3	My opinions matter to other members on this website	
	INF4	I care about what other members think of my actions on this website	
Fulfillment of Needs	FON1	I feel my needs (such as social and recreational) are met on this website	McMillian and chavis 1986
	FON2	I can get help on this website if I need it	
	FON3	Participation on this website is worth my time	
	FON4	People on this website look out for me	
Shared Emotional Connection	SEC1	I feel I am well understood by other members on this website	McMillian and chavis 1986
	SEC2	I have the feeling of closeness on this website	
	SEC3	I get along with other members on this website	
	SEC4	I feel other members on this website are friendly toward me	

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