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Social Networking Sites Users' Affective Commitment:

A Combined View

By

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SOCIAL NETWORKING SITES USERS' AFFECTIVE COMMITMENT: A COMBINED VIEW

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ABSTRACT

Social networking site has become ubiquitous in just a few years. Their success depends on users' intention to adopt and willingness to continue investing their time and attention in this media in the absence of formal contract. This study investigates the formation of people's affective commitment toward their online communities. Drawing on commitment theory and social network theory, I argue that the users' social network structure, specifically, online offline network overlapping, can influence the formation of their affective commitment toward the online community. Researchers seeking to understand users' behaviors on social networking sites can benefit from this study by considering the effect of network structure in their studies. Sites managers may also use our results to develop better functions for their users.

Key Words: social networking site, social media, affective commitment, network overlapping.

INTRODUCTION

Among all interesting social media applications, social networking sites (henceforth, SNSs) by far carried the most intense discussions. Facebook, Twitter, and LinkedIn, just name a few, enjoyed explosive diffusion among various groups of people. They consecutively ranked as top sites on Alexa.com. If technologies such as electronic mail systems and instant message systems are enriching the way people communicate with each other, the SNSs are trying to move people's entire social network online. With the advanced technologies, online social networking activities may actually be more enchanting in SNSs.

However, just as any buzz in the business world, hype and truth, intervening each other, are pushing the business forward. As the initial flame cooling down, business critiques began to question about the valid business model behind the user generated "popularity" of SNSs. Some argue that all these fancy Internet applications may only be something that matter hugely until, very suddenly, they don't matter at all (25). For example, while the number of Facebook user exceeds 800 million by the end of September 2011 (50), MySpace are keeping losing their users and traffic. For SNSs to survive and finally pay back to their investors, one of the major questions the vendor needs to answer is how to retain their current users. Without the ability to sustain website traffic at the post-adoptive stage, the SNSs will inevitably become something "hot today and gone tomorrow" (32). Despite this emerging need for seriously looking into the post-adoptive behavior of SNSs users, little theoretical discussion has been laid to this area.

Indeed, extensive investigations about individuals' post-adoptive usage behaviors have been done in information systems research (e.g. (2); (29); (30)). However, the literature mostly focused on individuals' behavior in traditional work organizations. The usage of the IT system in such a context is mandatory and benefit oriented. Those studies have limited relevance for the vendors who aim at understanding the behavior of SNSs users and trying to find valid strategies to sustain the growth of these websites. Recently, post-adoptive research began to investigate the repeated usage of online services. Kim et al. (31) investigated how automated usage of online news sites could weaken the evaluation-intention-usage relationship. Kim et al. (31) proposed and empirically tested a dual model which specified dedication and constraint as main drives of consumer post-adoptive behavior. Drawing on organizational commitment theory, Bateman et al. (7) explained how commitment to a virtual community affects the likelihood that a member will engage in particular behaviors. These recent studies significantly enhanced our understanding about customers' post-adoptive behaviors in the online context. However, they are still not specifically designed for SNSs which are typically characterized by the intensive peer-to-peer interactions on the websites. The existing models failed to capture an important aspect of SNSs, that is, the virtual communities formed by those people who interact with each other in both offline and online environment. Thus they cannot give a complete view of the issues about SNSs post-adoptive usage.

Interacting through computer mediated communications, people form various virtual communities in SNSs (65). As an emerging platform for virtual communities, SNSs allow rich online communication experiences. Through online activities such as sharing personal experience, playing games, and providing and receiving social supports, SNSs users develop affective attachment to their virtual communities built-up in the SNS they are using. This affective attachment or commitment in turn will influence their usage of the SNS. Therefore, we would like to investigate this phenomenon from the commitment perspective.

Although some studies of online communities (e.g. (7)) have proved that members

will develop affective commitment to a particular online community and therefore increase their intention to stay and participate in the community, the question why and how people develop this emotional attachment remains. In order to further investigate the factors that can influence the formation of affective commitment, combining with the social network theory, we propose a research model to state that users' affective commitment toward the online community are determined both by the online and offline network overlapping and the focal user's perception of the blurring of the two networks.

THEORETICAL DEVELOPMENT

In this section, we describe two related yet distinct theoretical lenses used in this study. While the commitment theory provides us the reason that an individual stay in an online community, the social network theory explains the factors that affect the formation of such commitment.

COMMITMENT THEORY

Commitment has been generally described as a psychological bond that "stabilizes individual behavior under circumstances where the individual would otherwise be tempted to change that behavior" (11). Commitment reflects individuals' enduring desire to be a part of the organization or community (47). It is a psychological bond that characterizes an individual's relationship with an organization or community (42). In general, an individual's commitment to a community or an organization is expected to affect his or her intention to stay in the community (63).

Though commonly applied to employment relationships in the management literature, commitment research originally sought to explain why volunteers at nonprofit organizations varied in their level of dedication (8). Thus, it is a particularly appropriate theory base for understanding individuals' voluntary behavior in the online context (7).

While formal organizations manage employee commitment through economic incentives, formal training and contracts, established routines for performance ratings, and formal supervision procedures; voluntary community must rely on noneconomic incentives to maintain volunteer members. In the context of SNSs, individual's usage of the website is primarily voluntary rather than mandatory (19), and switching from one website to another similar site is relatively easy and involves low costs (12). As a result, the bonds between the users and their online communities are mostly affective. Thus, in this study, we focus on affective commitment that a member may have toward the online community.

Affective commitment has been defined as "the degree to which people experience an emotional attachment with their organization" (42). It enables a person to remain with a relationship because of favorable attitudes, affect, emotion, and perceptions (28). Previous studies suggested that community members develop such feelings of attachment and identification with a community (9) and in turn come to feel a sense of belonging (39). Members who have developed a strong affective bond towards a community generally like that community (9), are more likely want to be a part of the conversations that occur in that community (54), and therefore are inclined to stay in the community (7). Due to the importance of affective commitment in terms of retaining community members, in this study we use it as a dependent variable and then identify the antecedents that can influence the formation of this commitment.

SOCIAL NETWORK THEORY

Since SNS is an online platform for social networking activities among peers from the focal user's social network, social network approach is another appropriate lens for

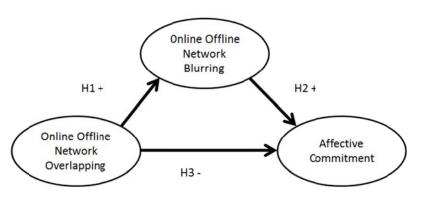
this study. A social network is "a specific set of linkage among a defined set of persons, with the additional property that the characteristics of these linkages as a whole may be used to interpret the social behavior of the persons involved" (44). A network approach describes pattern of interaction between persons as a graph of connections between persons (48), whereas individual actors within the network are called nodes, and relationships between actors are called ties. Nodes and ties form the structure of the network and the network structure is the resource of social actions (6; 10; Burt 1992; 14; 15; 27; 37). The social network approach argues that the structure of the network will explain an individual's behavior in a social framework beyond what is explained by the characteristics of the individual, as most behavior is closely embedded in networks of interpersonal relations (22).

The patterns of a network will have a significant impact on how people interact with each other (35; 55; 69). The pattern of a typical community built-up in SNSs is that part of the online community is formed by those people who interact with the focal user in both offline and online environment. Therefore, in this study, we investigate the effect of network structure, specifically, online/offline network overlapping, on the formation of the individual's affective commitment.

MODEL AND HYPOTHESES

Although the positive influence of affective commitment on member's intention to stay in an online community has been proved by previous study (e.g. (7)), we need to further investigate the antecedents of this commitment. To produce such a model, by combining with the social network perspective, we consider two constructs to describe the pattern of an individual's social network that can influence the focal user's affective commitment toward the online community. They are online/offline network overlapping and online/offline network blurring. Figure 1 shows the conceptual model.





ONLINE/OFFLINE NETWORK OVERLAPPING

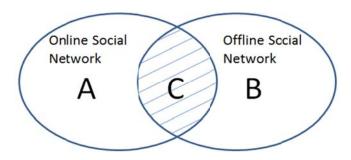
Online/offline network overlapping is defined as the extent to which a focal user's peers in his/her online social network are also peers in his/her offline social network.

Online communities are extensions of people's offline social relationships. They cannot be separated from individuals' offline social life. In the community embodiment model, Fox (18) proposed that individual's interactions with their virtual community peers are characterized by a continuum of virtuality. It means some peers of online community also communicate each other offline. Users of SNSs tend to contact their offline acquaintances on the websites. This is also a strategy adopted by some SNS vendors to facilitate a quick diffusion among the potential users. For example, SNS users are encouraged by SNS vendors to send invitations to their

offline peers by emails to let them register to the site. Meanwhile, users of SNSs make new friends online as well. These new online relationships are developed either through common participations in online social networking activities or through the links of current peers. As a result, part, if not most, of the online friends in the focal user's online community are also friends in his/her offline social network. Consequently, the online social network overlaps with the focal user's offline social network.

Figure 2 shows a demonstration of a SNS user's social network structure. Area A represents pure online peers. Area B represents pure offline peers. Area C represents the overlapping between the online and offline social networks. Peers in this area communicate with the focal user on both online and offline platforms. Area A and area C together form an online community. We will focus on the influence of area C on the focal user's affective commitment toward the online community in the next section.

Figure 2. Network Structure



NETWORK OVERLAPPING AND AFFECTIVE COMMITMENT

As suggested by social network theory, the structure of an individual's social network will influences the individual's perceptions, believes, and behaviors. In the current context, network overlapping as a pattern of individual's social network will affect individual's affective commitment toward the online community. The influences are two folds. Depending on if the focal user perceives the online and offline social networks are different, the influence could be either positive or negative.

Generally speaking, people believe that the influence from this network overlapping is positive. People develop affective commitment toward their offline communities built-up in the offline social network. When the communications among peers in these offline communities are transferred to online, traditional boundaries between online and offline network become blur, and these two networks can be integrated together. Therefore, vendors of SNSs expect people to shift the focus of the affective commitment from their offline network to the online network. In this case, online community can leverage the established affective commitment toward the offline communities when there is an overlapping between the two networks. When the overlapping is increasing, the proportion of offline peers is increasing, and therefore, the chance of the commitment focus shifting is increasing.

Further, previous studies have found that trust is a major determinant of affective commitment (1; 46; 56). Trust is defined as a willingness to rely on an exchange partner in whom one has confidence (45). It reflects one party's belief that its requirements will be fulfilled through future actions undertaken by the other party (67). Generally speaking, if a person feels the environment in a community is trustful, he is more likely to be dependent on and emotionally bonded to the community.

Social presence is an enabler of trust-building cues, and that greater levels of social

presence result in greater development of trust (19; 34). In terms of the ability to transmit social presences, such as multiple cues, immediacy of feedback, language variety and personal focus of the medium, face-to-face communication is a richer media than computer mediated communication (33). Through face-to-face social networking activities, people are able to understand, identify, and then trust their offline peers more easily. In contract, due to the lack of social presentence, trust building among pure online peers is hard and slow. As a result, on average, people trust their offline peers more than their pure online peers (5; 26; 64).

The trust is transferable (36; 57). Trust transference refers to the generalization of impressions about one entity to related entities (23). It has been shown to occur in online contexts (51; 57). Online community can leverage the established trust belief on peers of offline networks when these peers also participant in the focal user's online community. In other words, the trust level towards the online community in general will be enhanced if there is an overlap between the focal person's online and offline social networks. The online community is perceived as trustful in general since there are trustful offline peers also active in the online community. As a result, the online community becomes a more trustful environment for the focal user if there are a large proportion of the online peers come from the focal user's offline social network. In such an environment, it is easy for the focal user to develop affective commitment toward the trustful online community.

It is true that the focus of affective commitment and trust belief can shift or transfer from an offline community to an online community. However, the transference is difficulty if the focal user thinks that the online community is different from the offline community. In this case, users may try to use some mechanisms to maintain the boundaries between the two networks (e.g. creating different friend groups in SNS). Consequently, the transference of affective commitment and trust belief will be blocked. Therefore, the positive effect from online/offline networking overlapping on affective commitment should be mediated by SNSs user's perception of the similarity between their online and offline networks.

ONLIINE/OFFLINE NETWORK BLURRING

Online/offline network blurring is defined as extent to which a focal user's perception that his/her online and offline social networks are the same or inseparable networks. While online/offline network overlapping describes the composition of an individual's social networks, online/offline network blurring describes an individual's perception of the similarities between the online and offline social networks.

According to what can be loosely described as the "boundary theory" (43; 49; 68), individuals create and maintain boundaries as a means of simplifying and ordering the offline social activities. "Home," "office," and "church" are examples of the social domains created by boundaries (49). Therefore, theoretically speaking, online and offline social networks are two different domains. However, with the help of Internet technologies, SNSs can free individuals from the geographical boundary and alter the structure of social interactions. Communications on SNSs are not constrained by temporal and spatial separations. SNS is an efficient platform to maintain relationships with the focal person's offline peers. When more and more offline peers can interact with the focal person in both online and offline environment, the natural boundary of online and offline network become blur. The focal user can share similar information or having similar online social networking activities with both online and offline peers on the platform of SNS. The focal individual's perception of the similarity between these two networks is increasing.

H1: The degree of online/offline social network overlapping increases the focal user's

perception of online/offline social network blurring.

Previous studies suggest that it would be easier for members to shift the focus of their affective commitment from the "old" organization to the "new" one if they do not view the two organizations as fundamentally incompatible (41; 58). Similarly, if the focal user of an online community perceives no differences between the online and offline networks, he or she may shift the focus of affective commitment from the offline network to the online network as well. Further, the established trust belief toward the offline peers can also be transferred to the new entity and then helps to develop affective commitment in the new community. In other words, the online/offline network overlapping can affect the focal user's affective commitment toward the online community positively if and only if the online/offline network overlapping perception of the two networks.

H2: The focal user's perception of online/offline social network blurring increases his/her affective commitment toward the online community.

If online/offline networking overlapping cannot lead to the focal person's perception of the blurring of the two networks, the direct effect from the network overlapping on the focal user's affective commitment toward the online community is negative. The reason is that one of the most important usage of computer-mediated communication platform is to maintain or strengthen their existing offline social network (e.g., (24); (40); (66)). When most of peers in an online community come from the focal user's offline social network, the community becomes a complementary communication tool of the offline social network that the virtual community originated. Although people may interact with one another predominantly in the cyberspace, their relationships are still based on the offline contexts (e.g. classmates, family members, and colleges). In other words, high level of overlapping between online and offline social networks could result in a feeling of triviality of the virtual community. Online community becomes a communication platform or maintaining tool for different sub-networks built-up in the offline network. Thus, the high level of overlapping may impede the users from integrating online and offline networks together.

H3: Online/offline social network overlapping decrease the focal user's affective commitment toward the online community.

METHODS

MEASUREMENTS

Items for affective commitment are adopted from (3) with modifications in the SNSs context where needed. These scales have been shown to have reliability and validity.

Overlapping of online and offline social network is measured by asking the respondents to rate their agreement with the statements like "I knew most of my friends in my virtual community before I joined this community" and "Most of my friends online are also friends nearby in my offline life."

Similarly, online and offline network blurring is measured by asking the respondents to rate their agreement with the statements like "It is often difficult to tell the difference between my online social network and my offline social network" and "There are no clear boundaries between my online social network and my offline social network". Sample items will be listed in the appendix.

PARTICIPANTS AND PROCEDURE

Before finalizing the questionnaire, a pilot study was implemented to get some rough

pictures about SNSs usage among the students. 46 students participated in this pilot. Based on the result of the pilot on students' understanding of SNSs, we provide an introduction about SNSs at the beginning of the questionnaire in the main study as "A social networking site (SNS) refers to a website focusing on building online community of people who share interests and activities, and who are interested in exploring the interests and activities of others. Widely known examples include Facebook, Windows Live Space, Xanga, and so on." After the initial version of questionnaire was developed, we asked two domain experts to review the questionnaire to further insure face validity. Minor changes in wordings were made according to their suggestions.

To test the proposed theoretical model, an online survey was carried out among the undergraduate students from a Hong Kong based university. We selected four classes of student enrolled in some undergraduate course to send out invitations. The online survey last for 14 days and two additional reminders for participation were sent out in the middle of the period. Out of 344 students enrolled in the selected classes, 165 completed the online survey. The respond rate is thus 48%. Table 1 shows the demographics of participants.

Variable	Category	Frequency	Percent (%)
Gender	Male	67	40.61%
	Female	98	59.39%
Age	18	10	6.06%
	19	75	45.45%
	20	65	39.39%
	21	13	7.88%
	22	2	1.21%
Variable	Range	Mean	Std. Dev.
Experiences of Internet (years)	(1, 11)	9.12	1.57
Experiences of SNSs (years)	(1, 7)	3.47	1.79

Table 1. Demographics of Participants (N = 165)

RESULTS

Table 2. Descriptive Statistics, Correlations, and AVEs

Construct	Mean	Std. Dev.	Cronbachs Alpha	Composite Reliability	AC	000	OOB
AC	3.81	1.27	0.91	0.93	0.85		
000	5.27	1.25	0.77	0.89	-0.11***	0.90	
OOB	4.28	1.3	0.75	0.89	0.37***	0.16**	0.89

Notes: 1. AC: Affective Commitment; OOO: Online/offline Network Overlapping; OOB: Online/offline Network Blurring.

2. Diagonal elements are AVEs and off-diagonal elements are correlations.

** p < 0.01; *** p < 0.001

Table 3. PLS	Loadings an	d Cross-Loadings
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Construct	Item	AC	000	OOB
AC	AC1	0.87	-0.09	0.34
	AC3	0.84	-0.09	0.32
	AC4	0.86	-0.11	0.30
	AC7	0.87	-0.12	0.33
	AC8	0.81	-0.05	0.28

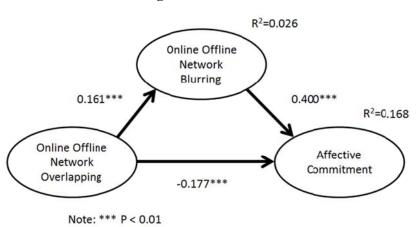
000	0001	-0.07	0.86	0.13
	0002	-0.13	0.93	0.16
OOB	OOB1	0.38	0.08	0.90
	OOB2	0.28	0.22	0.88

MEASUREMENT MODEL

We used SmartPLS 2.0.M3 for assessing both the measurement model and structural model. PLS method for estimating structural models has been shown validity in handling highly complex predictive models and explorative research. All the latent constructs considered in this research are assumed to be reflective. The measurement model was assessed with item reliability, internal consistency, and convergent and discriminant validity (4; 20; 21; 62). Table 2 shows the composite reliability, and square root of the average variance extracted (AVE), as well as the correlations between the constructs. The composite reliability values of all of the constructs are above the recommended level of 0.707, indicating adequate internal consistency. Convergent validity is supported since the AVE values for all constructs are higher than the suggested threshold value of 0.50 (17). Discriminant validity was assessed by (1) items loading on their constructs at .707 or above and not cross-loading, and (2) the square root of the average variance extracted (AVE) for each construct exceeding the construct's correlations with other constructs (13). As can be seen from Tables 2 and 3, our scales meet these guidelines.

STRUCTURAL MODEL

Figure 3 illustrates the results of PLS analyses. To assess the significance of the path coefficients, we use bootstrapping method with 500 iterations. As shown in the figure, we found significant relationship as predicted by H1, H2, and H3.





As expected, the correlation between online/offline network overlapping and blurring is also significant (path coefficient = 0.161, p < 0.01), supporting H1. Online/offline network blurring is found to be significantly related to affective commitment (path coefficient = 0.400, p < 0.01), supporting H2. The direct effect from online/offline network overlapping to affective commitment is negative (path coefficient= -0.177, p < 0.01), supporting H3.

DIAGNOSTICS

Addressing Common Method Bias

Self-reported data may include common method bias that carries the potential to inflate the correlations between variables in a study, particularly when all the data are

collected from a single survey at one point in time with similar Likert scales. We used several techniques to assess the potential impact of common method bias on our results, and found no major cause for concern.

First, we conducted Harman's post hoc single-factor analysis to examine for method bias in the data. If common method variance is a serious issue, a factor analysis would generate a single factor accounting for most of the variance (53). An EFA of all 9 indicators generated three distinct factors, and the first extracted factor explained about 40 percent of the variance. Second, we subsequently applied the procedure specified by Pavlou et al. (52) and examined the correlation matrixes of all data sets. Inter-construct correlations of over 0.9 raise the suspicion of CMV. The correlations ranged from 0.01 to 0.37. The existence of low correlations (several correlations below 0.10) among some of the constructs further indicates that there is no single factor that influences all constructs (52). Third, we followed Malhotra et al.'s (38) approach for the post hoc estimation of CMV and chose the second-smallest positive correlation between two manifest variables (0.02) as a conservative estimate. After the deduction of this value from all correlations, we reran our analysis. No significant difference was found between the original correlation estimates and the adjusted ones. Thus, this test also showed that CMV is less of a concern in our study.

Alternative Model Specification

We tested an alternative model specification by adding more controls for individuals' demographical characteristics, including age, gender, Internet experience, and SNSs experiences. These new controls turned out to be not significant and the PLS estimates for our theoretical variables remained unchanged. Therefore, we did not include them into the model.

We also conducted a post hoc analysis to test the alternative view that online/offline network blurring might act as a moderator in the online/offline network overlapping-affective commitment relationship. Results of this analysis failed to uncover significant moderating effects, indicating that, at least in this context, OOB does not moderate the relationship between OOO and AC.

DISCUSSIONS

Drawing on the commitment and social network theory, we demonstrate the relationships between the focal user's social network structure and his or her affective commitment toward the online community.

Specifically, hypotheses 1, 2, and 3 were supported. The positive effect from network overlapping is mediated by the user's perception of the blurring between the two networks. The direct effect from online/offline network overlapping on user's affective commitment is negative.

The results indicate that the consequence of the strategy used by most SNS vendors to extend their users' online social networks is not always positive. It is positive if and only if the focal user perceives that there is no clear boundary between his or her online and offline networks. In this case, when more and more offline peers were added to online networks, people may have a trustful online environment and then either shift the existing offline affective commitment to the online community or develop new affective commitment toward the trustful online community. However, if the focal user perceives the online and offline network are different and spreadable, the online community become a communication platform of the offline social network. People still have social networking activities based on the sub-networks built-up in the offline social networks mainly. The offline and online social networks will not be integrated together by the focal user. The focus of trust and affective commitment cannot be shifted from the offline community to the online community. As a result, it is difficult for the focal user to develop affective commitment toward his or her online community in general.

LIMITATIONS AND FUTURE STUDY

Our study is limited in that we used student subjects. Nonetheless, we believe the use of student subjects was appropriate, since it was not a contrived setting. Young students use SNSs heavily. The investigation of their behaviors on SNSs is very important. However, the composition of their social network may be a concern, as classmates are the main part of their social network peers. Most of the students have social networking activities with their classmates in both online and offline context. As a result, students may incline to perceive their online and offline network is the same. The negative effect from network overlapping may be under estimated.

Further, the scales for networking overlapping and blurring used in the study are new, and need to be further validated in future studies.

THEORETICAL IMPLICATIONS

We draw from the theoretical perspectives of social network and affective commitment to theoretically acknowledge that users' affective commitment is influenced by both the composition and their perceptions of their social networks. While affective commitment was proved to be an important antecedent of users' post-adoption behavior, we are the first to investigate the relationship between the focal user's social network structure and his or her affective commitment. This study provides a new starting point on which the future research can build more powerful and precise theoretical models of engagement in online communities on.

This study contributes to research in several ways. First, our paper demonstrates that the social network lens is pertinent to understand SNSs users' formation of their affective bond with the online community. As the centerpiece of social network theory, social network structure is the focus of this study. On the one hand, network structure is transformed by online social interactions. On the other hand, network structure influences the focal user's affective commitment to the online community.

Second, we demonstrate that the influence from individual's social network structure on his or her affective commitment is complex. Social network structure affects people's emotions in different ways, depending on how the structure has been changed and how people interpret this change. The effect could be either positive or negative. In this study, we identify that network blurring can mediate the positive effect from network overlapping to the focal user's affective commitment. Based on this funding, future study can focus on other structural properties, such as tie strength and network centrality to identify the pattern of influence from network structure to user's commitment and intention to stay in the community.

Third, our study brought a new perspective for system design and technology adoption research. While prior research has discussed some important factors, such as ease of use and usefulness (16; 59; 60; 61) that affect technology adoption and use and suggested a system should be designed to increase users' perception of ease of use and usefulness, those studies underscore another important factor, pattern of interactions among peers in the social network, that is likely to affect the usage of the system. Conceptualization of network structure advances our understanding of how network structure is correlated with the usage of the system.

PRACTICAL IMPLICATIONS

Our findings have significant implications for vendors who would like to provide

SNS services. Managers of SNS vendors need to understand that asking users to move their offline network online does not necessarily bring positive consequence. When offline peers become a dominant part of online community, the online platform become a communication tool. The focal user may not be able to form affective commitment toward such a community. In other words, the direct effect from network overlapping on the focal user's affective commitment toward the online community is negative. However, when the boundary of online and offline network is blur, the effect become positive. Thus, in order to help SNS users develop affective commitment toward the online community, vendors need to develop functions to help users to integrate their online and offline social networks together. Managers who seek to expand their user group need to consider enhancing members' perceptions of the similarity between the online and offline communities. This could begin with holding an offline party for the online community members.

CONCLUSIONS

To conclude, in this study, we propose a research model to investigate the post adoptive usage of SNSs users. On one hand, the direct effect from network overlapping on user's affective commitment is negative. While on the other hand, the positive effect from network overlapping on user's affective commitment is mediated by user's perception of network blurring. We hope we can provide a complete theoretical treatment of users' post adoptive behavior on SNSs, which is of both theoretical and practical significance. Empirical tests show the promise of the research model proposed. Future direction for development of the study is discussed.

REFERENCES

- (1) Achrol, R. S. 1991. Evolution of the Marketing Organization: New Forms for Turbulent Environments. *Journal of Marketing* (55:4), October, pp. 77-93.
- (2) Ahuja, M. K., and Thatcher, J. B. 2005. Moving Beyond Intentions and Toward the Theory of Trying: Effects of Work Environment and Gender on Post-Adoption Information Technology Use. *MIS Quarterly* (29:3), September, pp. 427-459.
- (3) Allen, N. J., and Meyer, J. P. 1996. Affective, Continuance, and Normative Commitment to the Organization: An Examination of Construct Validity. *Journal of Vocational Behavior* (49:3), December, pp. 252–276.
- (4) Anderson, J. C., and Gerbing, D. W. 1988. Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. *Psychological Bulletin* (103:3), May, pp. 411-423.
- (5) Andrews, D., Preece, J., and Turoff, M. 2002. A Conceptual Framework for Demographic Groups Resistant to On-line Community Interaction. *International Journal of Electronic Commerce* (6:3), Spring, pp. 9–24.
- (6) Baker, W. 1990. Market Networks and Corporate Behavior. *American Journal of Sociology* (96:3), November, pp. 589-625.
- (7) Bateman, P. J., Gray, P. H., and Butler, B. S. 2011. The Impact of Community Commitment on Participation in Online Communities. *Information Systems Research* (22:4), December, pp. 841-854.
- (8) Becker, H. S. 1960. Notes on the Concept of Commitment. *American Journal of Sociology* (66:1), July, pp. 32–40.
- (9) Blanchard, A. L., and Markus., M. L. 2004. The Experienced "Sense" of a Virtual Community: Characteristics and Processes. *ACM SIGMIS Database* (35:1), Winter, pp. 64–79.
- (10) Bourdieu, P. 1986. The Forms of Capital. in Handbook of Theory and Research for the Sociology of Education, J. G. Richardson (Ed.), New York: Greenwood, 1986, pp. 241-258.
- (11) Brickman, P. 1987. Commitment. In Commitment, Conflict, and Caring, B. Wortman, and R. M. Sorrentino, eds. Prentice-Hall, Englewood Cliffs, NJ, 1987,

pp. 1–18.

- (12) Brynjolfsson, E., and Smith, M. D. 2000. Frictionless Commerce? A Comparison of Internet and Conventional Retailers. *Management Science* (46:4), April, 563– 585.
- (13) Chin, W. W. 1998. The Partial Least Squares Approach for Structural Equation Modeling. In Modern Methods for Business Research, George A. Marcoulides (ed.), Lawrence Erlbaum Associates, New York, pp. 295-336.
- (14) Coleman, J. S. 1988. Social Capital in the Creation of Human Capital. *American Journal of Sociology* (94), pp. S95-S120.
- (15) Coleman, J. S. 1990. Foundations of Social Theory, Belknap Press of Harvard University Press, Cambridge, MA, 1990.
- (16) Davis, F. D., Bagozzi, R. P., and Warshaw, P. R. 1989. User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science* (35:8), August, pp. 982-1003.
- (17) Fornell, C., and Larcker, D. F. 1981. Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research* (18:1), February, pp. 39-50.
- (18) Fox, S. 2004. The New Imagined Community: Identifying and Exploring a Bidirectional Continuum Integrating Virtual and Physical Communities through the Community Embodiment Model (CEM). *Journal of Communication Inquiry* (28:1), January, pp. 47-62.
- (19) Gefen, D. and Straub, D. W. 2005. A Practical Guide to Factorial Validity using PLS-Graph: Tutorial and Annotated Example. *Communications of the Association for Information Systems* (16:25), pp. 91-109.
- (20) Gefen, D., Karahanna, E., and Straub, D. W. 2003. Trust and TAM in Online Shopping: An Integrated Model. *MIS Quarterly* (27:1), March, pp. 51-90.
- (21) Gerbing, D. W., and Anderson, J. C. 1988. An Updated Paradigm for Scale Development Incorporating Unidimensionality and Its Assessment. *Journal of Marketing Research* (25:2), May, pp 186-192.
- (22) Granovetter, M. S. 1985. Economic Action and Social Structure: The Problem of Embeddedness. *American Journal of Sociology* (91:3), January, pp. 481-510.
- (23) Hamilton, D., and Sherman, S. 1996. Perceiving Persons and Groups. Psychological Review (103:2), April, pp.336–355.
- (24) Hampton, K., and Wellman, B. 2003. Neighboring in Netville: How the Internet Supports Community and Social Capital in A Wired Suburb. City & Community (2:4), December, pp. 277–311.
- (25) Hirschorn, M. 2007. Web 2.0 Bubbles. from <u>http://www.theatlantic.com/doc/200704/social-networking</u> retrieved on June 5, 2012.
- (26) Hummel, J., and Lechner, U. 2002. Social Profiles of Virtual Communities. in *Proceedings of the 35th Annual Hawaii International Conference on System Sciences* (HICSS).
- (27) Jacobs, J. 1965. The Death and Life of Great American Cities, Penguin Books, London, 1965.
- (28) Jaros, S. J., Jermier, J. M., Koehler, J. W., and Sincich., T. 1993. Effects of continuance, affective, and moral commitment on the withdrawal process: An evaluation of eight structural equation models. The Academy of Management Journal (36:5), October, pp. 951–995.
- (29) Jasperson, J., Carter, P. E., and Zmud, R. W. 2005. A Comprehensive Conceptualization of Post-Adoptive Behaviors Associated with Information Technology Enabled Work Systems. *MIS Quarterly* (29:3), September, pp. 525-557.
- (30) Karahanna, E., Straub, D. W., and Chervany, N. L. 1999. Information Technology Adoption Across Time: A Cross-Sectional Comparison of Pre-Adoption and Post-Adoption Beliefs. *MIS Quarterly* (23:2), June, pp.

183-213

- (31) Kim, S. S., Malhotra, N. K., and Narasimhan, S. 2005. Two Competing Perspectives on Automatic Use: A Theoretical and Empirical Comparison. *Information Systems Research* (16:4), December, pp. 418-432.
- (32) Knowledge@Wharton. 2006. Myspace, Facebook and Other Social Networking Sites: Hot Today, Gone Tomorrow? from <u>http://knowledge.wharton.upenn.edu/article.cfm?articleid=1463</u> retrieved on June 5, 2012.
- (33) Koh, J., and Kim, Y. 2003. Sense of Virtual Community: A Conceptual Framework and Empirical Validation. *International Journal of Electronic Commerce* (8:2), Winter, pp. 75-94.
- (34) Kumar, N., and Benbasat, I. 2006. The Influence of Recommendations and Consumer Reviews on Evaluations of Websites. *Information Systems Research* (17:4), December, pp. 425-439.
- (35) Lawler, E. J., and Yoon, J. 1998. Network Structure and Emotion in Exchange Relations. *American Sociological Review* (63:6), December, pp. 871-894.
- (36) Lim, K. H., Sia, S. L., Lee, M. K. O., and Benbasat, I. 2006. Do I Trust You Online, and If So, Will I Buy? An Empirical Study of Two Trust-Building Strategies. *Journal of Management Information Systems* (23:2), Fall, pp. 233-266.
- (37) Loury, G. 1987. Why Should We Care About Group Inequality? *Social Philosophy and Policy* (5:1), pp. 249-271.
- (38) Malhotra, N. K., Kim, S. S., and Patil, A. 2006. Common Method Variance in IS Research: A Comparison of Alternative Approaches and A Reanalysis of Past Research. *Management Science* (52:12), December, pp. 1865-1883.
- (39) Markus, M. L., Manville, B., and Agres. C. 2000. What Makes A Virtual Organization Work-Lessons from the Open Source World. *Sloan Management Review* (42:1), pp. 13–26.
- (40) Mesch, G. S., and Levanon, Y. 2003. Community Networking and Locally-based Social Ties in Two Suburban Localities. *City & Community* (2:4), December, pp. 335–351.
- (41) Meyer, J. P., Irving, G. P., and Allen, N. J. 1998. Examination of the Combined Effects of Work Values and Early Work Experiences on Organizational Commitment. *Journal of Organizational Behavior* (19), pp. 29–52.
- (42) Meyer, J. P., and Allen., N. J. 1991. A Three-component Conceptualization of Organizational Commitment. *Human Resource Management Review* (1:1), Spring, pp. 61–89.
- (43) Michaelsen, S., and Johnson, D. E. 1997. Border Theory: The Limits of Cultural Politics, Minneapolis: University of Minnesota Press.
- (44) Mitchell, J. C. 1969. The Concept and Use of Social Networks. in Social Networks in Urban Situations, J. C. Mitchell (Ed.), Manchester University Press, Manchester, England, 1969.
- (45) Moorman, C., Zaltman, G., and Deshpande, R. 1992. Relationships between Providers and Users of Marketing Research: The Dynamics of Trust within and Between Organizations. *Journal of Marketing Research* (29), August, pp.314-29.
- (46) Morgan, R. M., and Hunt, S. D. 1994. The Commitment-Trust Theory of Relationship Marketing. *Journal of Marketing* (58:3), July, pp. 20-38.
- (47) Mowday, R. T. 1998. Reflections on the Study and Relevance of Organizational Commitment. *Human Resource Management Review* (8:4), Winter, pp. 387–401.
- (48) Newman, M. E. J. 2002. The Structure and Function of Networks. *Computer Physics Communications* (147:1-2), August, pp. 40-45.
- (49) Nippert-Eng, C. 1996. Calendars and Keys: The Classification of "Home" and "Work". Sociological Forum (11:3), pp. 563-582.
- (50) Ostrow, A. 2011. Facebook Now Has 800 Million Users. http://mashable.com/2011/09/22/facebook-800-million-users/, retrieved June 5,

2012.

- (51) Pavlou, P. A., and Gefen, D. 2004. Building Effective Online Marketplaces with Institution-Based Trust. *Information Systems Research* (15:1), March, pp. 37-59.
- (52) Pavlou, P. A., Liang, H., and Xue, Y. 2007. Understanding and Mitigating Uncertainty in Online Exchange Relationships: A Principal-Agent Perspective. *MIS Quarterly*, (31:1), March, pp. 105-136.
- (53) Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., and Podsakoff., N. P. 2003. Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *Journal of Applied Psychology* (88:5), October, pp. 879-903.
- (54) Preece, J. 1999. Empathy Online. Virtual Reality (4:1), pp. 74-84.
- (55) Reagans, R., and McEvily, B. 2003. Network Structure and Knowledge Transfer: The Effects of Cohesion and Range. *Administrative Science Quarterly* (48:2), June, pp. 240-267.
- (56) Spekman. Robert E. (1988), Strategic Supplier Selection: Understanding Long Term Buyer Relationships. *Business Horizons* (31:4), (July/August), pp. 75-81
- (57) Stewart, K. J. 2003. Trust Transfer on the World Wide Web. Organization Science (14: 1), January-February, pp. 5-15.
- (58) Thompson, J. A., and Van de Ven, A. H. 2002. Commitment Shift during Organizational Upheaval: Physicians' Transitions from Private Practitioner to Employee. *Journal of Vocational Behavior* (60), pp. 382-404.
- (59) Venkatesh, V. 2000. Determinants of Perceived Ease of Use: Integrating Control, Intrinsic Motivation, and Emotion into the Technology Acceptance Model. *Information Systems Research* (11:4), December, pp. 342-365.
- (60) Venkatesh, V., and Davis, F. D. 2000. A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. Management Science (46:2), March, pp. 186-204.
- (61) Venkatesh, V., Morris, M. G., Davis, G. B., and Davis, F. D. 2003. User Acceptance of Information Technology: Toward A Unified View. *MIS Quarterly* (27:3), June, pp. 425-478.
- (62) Venkatesh, V., Thong, J. Y. L., and Xu, X. 2011. Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *MIS Quarterly* (36:1), March, pp. 157-178.
- (63) Wasko, M. M., and Faraj, S. 2005. Social Capital and Knowledge Contribution. *MIS Quarterly* (29:1), March, pp. 35–57.
- (64) Wellman, B., and Gulia, M. 1999. Virtual Communities as Communities: Net Surfers don't Ride Alone. in M.A. Smith and P. Kollock (eds.), Communities in Cyberspace. London: Routledge, 1999, pp. 167–194.
- (65) Wellman, B., Salaff, J., Dimitrova, D., Garton, L., Gulia, M., and Haythornthwaite, C. 1996. Computer Networks as Social Networks: Collaborative Work, Telework, and Virtual Community. *Annual Review of Sociology* (22:1), pp. 213-238.
- (66) Wolak, J., Mitchell, K. J., and Finkelhor, D. Escaping or Connecting? Characteristics of Youth Who from Close Online Relationships. *Journal of Adolescence* (26:1), February, pp. 105-119.
- (67) Zaheer, A., and Venkatraman, N. 1995. Relational Governance as an Interorganizational Strategy: An Empirical Test of the Role of Trust in Economic Exchange. *Strategic Management Journal* (16:5), pp. 373-392.
- (68) Zerubavel, E. 1991. The Fine Line: Making Distinctions in Everyday Life, New York: Free Press.
- (69) Zhang, X., Venkatesh, V., and Huang, B. 2008. Students Interactions and Course Performance: Impacts of Online and Offline Networks. In *Proceedings of 29th Annual International Conference on Information Systems* (ICIS), Paris, France, 2008, Paper 215.