

Association for Information Systems AIS Electronic Library (AISeL)

PACIS 2014 Proceedings

Pacific Asia Conference on Information Systems
(PACIS)

2014

Driving Individuals' Subjective Wellbeing in Virtual Communities through Interpersonal and Impersonal Mechanisms

Chao-Min Chiu

National Sun Yat-Sen University, cmchiu@mis.nsysu.edu.tw

Hsiang-Lan Cheng

Department of Information Management, National Sun Yat-Sen University, Kaohsiung, Taiwan, R.O.C., slcheng0001@gmail.com

Follow this and additional works at: <http://aisel.aisnet.org/pacis2014>

Recommended Citation

Chiu, Chao-Min and Cheng, Hsiang-Lan, "Driving Individuals' Subjective Wellbeing in Virtual Communities through Interpersonal and Impersonal Mechanisms" (2014). *PACIS 2014 Proceedings*. 177.
<http://aisel.aisnet.org/pacis2014/177>

This material is brought to you by the Pacific Asia Conference on Information Systems (PACIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in PACIS 2014 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

Driving Individuals' Subjective Wellbeing in Virtual Communities through Interpersonal and Impersonal Mechanisms

Chao-Min Chiu, Department of Information Management, National Sun Yat-Sen University, Kaohsiung, Taiwan, R.O.C., cmchiu@mis.nsysu.edu.tw

Hsiang-Lan Cheng, Department of Information Management, National Sun Yat-Sen University, Kaohsiung and Centers for Disease Control Ministry of Health and Welfare, The Executive Yuan, Taipei, Taiwan, R.O.C., slcheng0001@gmail.com

Abstract

In this study, we integrate different research streams—attachment, social identity, and organizational citizenship behavior—to have a better understanding of determinants of individual subjective wellbeing in the context of a virtual community (VC). Attachment is an emotion-laden, target-specific bond between a person and a specific object. Attachment is an important predictor of citizenship behavior, and therefore an important aspect to understand and to enhance in order to promote citizenship behavior. We identify two broad categories of virtual community citizenship behavior: citizenship behaviors directed toward benefitting other individuals (VCCBI), and citizenship behaviors directed toward benefitting the VC (VCCBC). We also identify two distinct attachments: emotional bonds among community members and emotional bonds to the community identity. This study proposes a dual attachment model in which subjective wellbeing is driven mainly by two mechanisms: (1) the interpersonal-based mechanism which relates common bond attachment to VCCBI and subjective wellbeing, and (2) the impersonal-based mechanism which relates common identity attachment to VCCBC and subjective wellbeing. In order to understand the two proposed mechanisms, the research model was tested with data collected from members of a VC.

Keywords: Common bond attachment, Common identity attachment, Social Identity Theory, Social support, Subjective wellbeing, Virtual community citizenship behaviors.

1. INTRODUCTION

As the role of the virtual community (VC) is getting more attention than before, understanding the factors influencing the success of such communities becomes important. The success of VCs depends on each individual member's involvement and behavior that benefits the group as a whole. Such discretionary conduct is called *virtual community citizenship behavior* (VCCB). Following Organ's (1988) definition of *organizational citizenship behavior* (OCB), this study defines VCCB as member behaviors that are discretionary, not directly monetarily rewarded by the VC, and that—in aggregate—promote the effective functioning of the VC. Recently, researchers (e.g., Yoon and Wang, 2011) have begun to understand the role of VCCB in professional VCs. However, those studies do not provide a complete understanding of the consequences of performing VCCB for those who perform VCCB, e.g., subjective wellbeing.

Williams and Anderson (1991) suggested classifying OCBs into two broad categories: those directed toward benefitting other individuals (OCBI), and those directed toward benefitting the organization (OCBO). OCBI emphasizes the interpersonal aspects of citizenship behaviors, whereas OCBO focuses on impersonal citizenship behaviors (Spitzmuller et al., 2008). They argued that this important conceptual distinction implies that there should be key differences in the respective nomological networks. Sub-dimensions of OCB differ in their relationships with antecedents and consequences only if they differentiate between OCBI and OCBO (Spitzmuller et al., 2008). Following Williams and Anderson (1991), we identify two types of VCCB to examine their relative importance in determining individual subjective wellbeing. VCCBI is VCCB directed toward benefitting other individuals, while VCCBC is VCCB directed toward benefitting the VC.

In this study, attachment refers to members' emotional bond to a VC or other members. Prior research has suggested that attachment fosters OCB through interpersonal mechanisms (Dovidio et al., 2006) and impersonal mechanisms (Van Dick et al., 2006). Attachment entails a strong motivation to commit personal resources and engage in specific behaviors that will serve the relationship maintenance needs (Park et al., 2006). Members who feel a strong sense of attachment to a VC or to other members are crucial to community success because they are most likely to engage in helping behaviors (Blanchard and Markus, 2004) and community building activities (Butler et al., 2007). However, the linkage between attachment and VCCB has received very little attention.

Following Prentice et al.'s (1994) distinction between common-bond attachment and common-identity attachment, we propose a dual attachment model to study and explain individual performance in the VC. Common bond attachment refers to the emotional bonds among community members while common identity attachment refers to direct emotional bonds to the community identity. In particular, our model predicts that individual subjective wellbeing is driven mainly by two mechanisms: (1) the interpersonal-based mechanism that relates common bond attachment to VCCBI and individual subjective wellbeing, and (2) the impersonal-based mechanism that relates common identity attachment to VCCBC and individual subjective wellbeing.

2 LITERATURE REVIEW

2.1 Dimensions of VCCB

Although there are a number of ways in which OCBs have been conceptualized over the years (e.g., Organ, 1988; Van Dyne et al. 1994; Williams and Anderson, 1991), the two most popular conceptualizations are those developed by Organ (1988) and Williams and Anderson (1991). Organ (1988) identified five conceptual dimensions of OCB: altruism, conscientiousness, sportsmanship, courtesy, and civic virtue. Williams and Anderson (1991) classified citizenship behaviors into two broad categories: OCBI (e.g., altruism, courtesy) and OCBO (e.g., conscientiousness, civic virtue, sportsmanship). Recent research also supports their notion that the dimensionality of OCB is better captured on the basis of the target or direction of the behavior (LePine et al., 2002). The five dimensions of Organ's (1988) OCB framework can

be captured by Williams and Anderson's (1991) conceptual scheme. This parsimonious conceptualization has also been reviewed favorably in other conceptual studies of OCB dimensions (Lee and Allen, 2002).

Recent studies have applied the concept of OCB to the VC context and measured VCCB with two approaches: unidimensional (e.g., Xu et al., 2012) and multi-dimensional (e.g., Yoon and Wang, 2011). The unidimensional approach uses some items of a multi-dimensional OCB scale as the manifest indicators of the VCCB construct. The multi-dimensional approach treats existing OCB dimensions as separate constructs. The unidimensional approach would result in considerable loss of information regarding the associations between dimensions of OCB and other variables, while the multi-dimensional approach leads to a complex research model. Prior VCCB studies do not adequately separate behavior based on beneficiary. Thus, this study adopts Williams and Anderson's (1991) conceptual scheme of OCB and identifies two types of VCCB: VCCBI and VCCBC.

2.2 Attachment Theory

Attachment is a target-specific emotional bond that reflects the emotional bond connecting an individual with an object (either another human being or a material object) (Bowlby, 1979). Emotional attachment has been found to be extendable beyond the person-to-person relationship context to the person-to-VC context (e.g., Ren et al., 2012). Emotional attachment can be used to explain the relationship between human beings and the VC since a VC is an online (virtual) object through which people interact with each other. Ren et al. (2012) suggested that members may develop attachment to the VC as a whole, and feelings of attachment increase member participation and retention.

Prentice et al. (1994) identified two types of attachment: common-bond and common-identity. Ren et al. (2007) argued that the theories describing these forms of attachment help us to understand important outcomes in VCs. They developed a conceptual framework of identity vs. bond in online communities, examined these two theories of group attachment, and linked these theories with design decisions for online communities. However, their conceptual framework did not explore the relationships between common bond and common identity attachments and VCCBI and VCCBC.

2.3 Social Identity Theory

Tajfel (1972) defined social identity as "the individual's knowledge that he belongs to certain social groups together with some emotional and value significance to him of this group membership" (p. 292). Social identity involves the process of self-categorization in which individuals classify themselves in various social categories in order to define their self-concepts within their own social environment (Tajfel and Turner, 1985). In other words, people perceive themselves as belonging to a particular group or category and strive for positive self-esteem, attempting to accomplish this by enhancing their social identity (Homburg et al., 2009). Thus, group identification occurs when an individual's self-concept is tied to his or her group membership (Dutton et al., 1994).

The extent to which individuals identify with a particular social group determines their inclination to behave in terms of their group membership (Ellemers et al., 1999). Social identification is a sense of emotional bonding (attachment) to the group. One critical factor reflecting the conceptual property of social identity theory is group-self connectedness, which is similar to the parent-infant relationships of attachment theory, and the brand-self connectedness of brand attachment. Prior research considers attachment to be closely related to identification (e.g., Riketta and Van Dick, 2005).

2.4 Subjective Wellbeing

Wellbeing refers to optimal psychological functioning and experience (Ryan and Deci, 2001). Subjective wellbeing focuses on hedonic perspectives such as positive affect (happiness), lack of negative affect, and life satisfaction (Diener, 1984). Subjective wellbeing is "a person's cognitive and affective evaluations of his or her life" (Diener et al., 2002, p. 63). The cognitive element refers to an individual's conscious evaluative judgments about his or her satisfaction with life as a whole, or

evaluative judgments about specific aspects of his or her life, such as work, recreation, relationships, etc. The affective element refers to emotions, moods and feelings in reaction to an individual's life. Diener (1984) postulates that subjective wellbeing is gained when some state, such as a goal, has been achieved. Prior research has suggested that personality represents one of the strongest predictors of subjective wellbeing (Diener and Lucas, 1999), and external circumstances hold the potential to affect subjective wellbeing (Diener et al., 1999). Diener and Seligman (2002) suggested that the ability to build close personal relationships may have a profound impact on wellbeing. However, little research has been done to examine the relationship between citizenship behaviors and subjective wellbeing.

3 RESEARCH MODEL AND HYPOTHESES

The research model (Figure 1) is based on attachment theory, social identity theory, and organizational citizenship behavior. The dependent variable, subjective wellbeing, refers to an individual's cognitive and affective evaluations of his or her quality of life in the VC (virtual life).

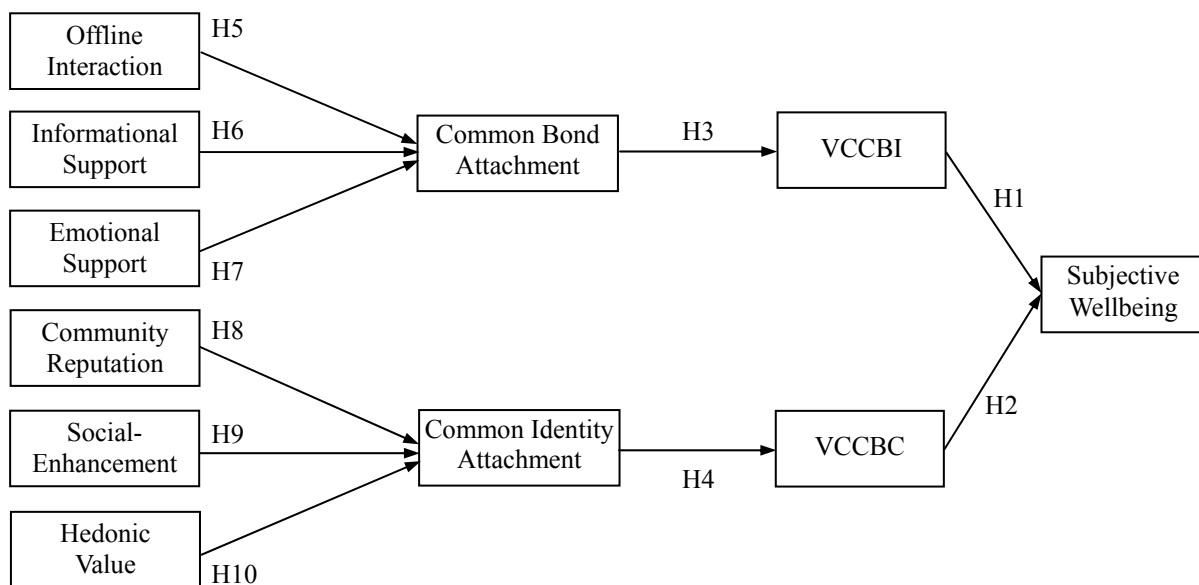


Figure 1. Research Model

3.1 Virtual Community Citizenship Behavior

Helping behavior (altruism) is a typical OCBI behavior. For intrinsic and extrinsic reasons, helping others is the way to higher levels of individual wellbeing (Meier and Stutzer, 2008). People's wellbeing increases because they enjoy helping others, per se. The internal reward is caused by an intrinsic motivation to care for the welfare of others (Meier and Stutzer, 2008). Brown and Ryan (2003) have also suggested that helping is associated with positive emotions, including the relief of negative states such as sadness and distress. In addition, engaging in citizenship behaviors directed toward benefitting other members can lead to increased feelings of goodwill from other members. In the end, this can lead to feelings of being valued and respected by other members. Therefore, the following hypothesis is proposed.

H1: An individual's VCCBI is positively associated with his or her subjective wellbeing.

When a person engages in organizational citizenship, it likely results in him/her having feelings of accomplishment (Lambert, 2010), and a more positive feeling about the job (Williams and Anderson, 1991). Spitzmuller et al. (2008) argued that performing OCBO should have the positive consequence of a positive mood because of the enhanced sense of contributing to the organization and making a difference. According to Lambert (2010), participation in VCCBC can lead to positive responses from

other members and managers of the VC, which, in the end, can lead to the person feeling good about himself/herself. The positive interactions and feelings experienced during participation in the VC activities are likely to spill over to other domains of the person's life, and, in the end, satisfaction with virtual life should rise.

H2: An individual's VCCBC is positively associated with his/her subjective wellbeing.

3.2 Common Bond Attachment

In this study, common bond attachment refers to the strength of the emotional bond connecting the members in the VC with the self. Richards and Schat (2010) argued that organizational citizenship behavior directed at individuals (OCBI) may represent a means of proximity seeking, suggesting a positive association. Accordingly, an individual seeking to attain the proximity of other individuals in the VC may engage in citizenship behaviors toward them. The literature has also suggested that when attachment to others is high, individuals are willing to make sacrifices and personal investments so as to support the continuation of those relationships (Van Lange et al., 1997). In a VC context, one would anticipate that individuals would make sacrifices of their personal resources—time and effort—to continue their relationships with other members in the VC. Time and effort investments include willingness to engage in citizenship behavior. Thus, helping others through acts of citizenship behavior makes sense as it is effectively contributing to helping oneself.

H3: An individual's common bond attachment is positively associated with his or her VCCBI.

3.3 Common Identity Attachment

In this study, common identity attachment refers to the strength of the emotional bond connecting the VC with the self. Common identity theory is consistent with social identity theory. Social identity theory (Tajfel and Turner, 1979) posits that individuals not only adopt a personal identity as unique persons, but also form a social identity which is reflected in the various groups to which they belong. Individuals classify themselves in various social categories in order to facilitate self-definition within their own social environment (Tajfel and Turner, 1985). Utz and Saaenber (2002) argued that members of common-identity groups should be willing to sacrifice their own outcome for the sake of the common group outcome; that is, they should display altruistic pro-group behavior. Van Dick et al. (2006) showed that organizational identification is positively associated with OCB.

H4: An individual's common identity attachment is positively associated with his or her VCCBC.

3.4 Offline Interaction

In this study, offline interaction refers to face-to-face meetings among members of the VC. Suh (1999) says "Face-to-face is considered the richest medium, because it allows rapid mutual feedback, permits the simultaneous communication of multiple cues (e.g., body language, facial expression, tone of voice), uses high-variety natural language, and conveys emotion" (p. 296). Nardi and Whittaker (2002) noted that face-to-face activities allow individuals to engage in mutually meaningful experiences in a common physical space, and thus facilitate emotional bonding among the participants. Offline meetings can complement the low social presence inherent in most computer-mediated environments (Lombard and Ditton, 1997). Through offline interaction, VC members are able to understand, trust, and identify other members more easily (Koh et al., 2007). Matei (2004) noted that offline communication can foster strong Internet and computer-mediated social relationships.

H5: Offline interaction is positively associated with common bond attachment.

3.5 Informational and Emotional Support

Informational support refers to the provision of knowledge or information that may be useful for solving problems. Emotional support refers to the availability of members who listen sympathetically

and communicate care and acceptance when an individual is undergoing difficulties. According to attachment theory, giving and seeking care or support are viewed as core elements of emotional bonds at all stages in the lifespan. Individuals become attached to any support giver who is sensitive and responsive in social interactions with them. In addition, social support can be explained by social exchange theory. People's affective attachment is governed by the entity with which they are exchanging support (Flynn, 2005). Social exchange theory (Blau, 1964) posits that positive, beneficial actions directed at individuals by other parties create an impetus for individuals to reciprocate in positive and beneficial ways to avoid becoming indebted to the exchange parties. This study theorizes that individuals who receive informational and emotional support from other members in the VC may build up their satisfaction and reciprocate by translating it into emotional bonds with other members.

H6: Informational support is positively associated with common bond attachment.

H7: Emotional support is positively associated with common bond attachment.

3.6 Perceived Community Reputation

Perceived community reputation is concerned with an individual's assessment about what other people outside the VC think it stands for or represents. March and Simon (1958) proposed that people are more likely to identify with a social group when they feel that the group is held in high esteem by people outside the group. To the extent that an employee believes that outsiders view the organization positively, he or she "basks in the reflected glory" of the firm (Cialdini et al., 1976). Furthermore, in line with social identity theory, an organization's external image is attractive to an individual, in part, to the extent that it is similar to his or her self-concept. If people see that outsiders consider their organization to be prestigious or highly respected, organizational identification is more likely to take place, because the organization's construed external image helps them to maintain a consistent and coherent sense of who they are and could increase their self-esteem (Dutton et al., 1994).

H8: Perceived community reputation is positively associated with common identity attachment.

3.7 Social-enhancement

Social-enhancement refers to the value that one derives from gaining acceptance and approval of other members, and the enhancement of one's social status within the VC on account of one's contributions to it. Social identity rests on intergroup social comparisons that seek to confirm or to establish positive, in-group favoring, evaluative distinctiveness between in-group and out-group, motivated by a basic human need for self-esteem (Turner, 1975). It implies that self-esteem motivates social identification and group behavior, and social identification satisfies the need for self-esteem (Abrams and Hogg, 1988). Once an individual's need for social-enhancement is satisfied through a boost in self-esteem, an enhancement of reputation, and a sense of self challenge by engaging knowledge sharing activities in the VC, he/she will have a strong emotional bond or identification with the VC.

H9: Social-enhancement is positively associated with common identity attachment.

3.8 Hedonic Value

Hedonic value reflects the value received from the multisensory, fantasy and emotive aspects of the experience in participating and sharing knowledge in the VC. Since an individual's social identification represents the emotional and evaluative significance of membership within a group (Dholakia et al., 2004), the more an individual enjoys the social interaction and knowledge sharing experience and obtains hedonic value, the more he/she will be inclined to define her/himself through affiliation with other members, thus increasing his/her level of identification with the VC. Prior research has distinguished pleasure (or enjoyment) as a reason to consider a product as special, cherished, or treasured, which indicates the presence of an emotional bond (e.g., Richins, 1994). Dholakia et al. (2004) found that pleasure had a positive effect on social identity in the VC context.

H10: Hedonic value is positively associated with common identity attachment.

4 RESEARCH METHODOLOGY

4.1 Measurement Development and Survey Administration

Measurement items were adapted from the literature wherever possible. We invited 20 graduate students to assess the relevance and clarity of the questions. All measures adopted a seven-point Likert scale with anchors ranging from strongly disagree (1) to strongly agree (7). The research model was tested with data collected from members of a forum within a VC called Mobile01. This VC is dedicated to sharing knowledge about consumer electronics products, cars, sports, etc. The Web survey yielded a total of 464 complete and valid responses for data analysis. Table 1 lists the demographic information related to the respondents.

Measure	Items	Freq.	Percent	Measure	Items	Freq.	Percent
Gender	Male	248	53.4	Gender	Female	216	46.6
Age	< 20	27	5.8	Education	~ High school	48	10.3
	20-24	117	25.2		College	29	6.3
	25-29	124	26.8		University	293	63.1
	30 ~	196	42.2		Graduate school~	94	20.3
Usage Frequency	Less than once/month	36	7.8	Membership (in years)	< 1	67	14.4
	Once/month	58	12.5		1-2	194	41.8
	Several times/month	155	33.4		3-4	113	24.4
	Several times/week	110	23.7		4 ~	90	19.4
	Once/day	105	22.6				

Table 1. Demographic Information of Respondents (N = 464)

4.3 Data Analysis

4.3.1 Measurement Model

The model was assessed by using SmartPLS 2.0.M3. The adequacy of the measurement model was evaluated by the criteria of reliability, convergent validity and discriminant validity. Reliability was examined using the composite reliability values. Table 3 shows that all the values were above 0.7, the commonly accepted level. The convergent validity of the scales was assessed by two criteria (Fornell and Larcker, 1981): (1) all indicator loadings should be significant and exceed 0.7, and (2) average variance extracted (AVE) should exceed 0.50. As shown in Table 3, all items exhibited a loading higher than 0.7 on their respective construct, and, as shown in Table 2, all the AVEs ranged from 0.62 to 0.92, thus satisfying both conditions for convergent validity.

Constructs	Items	Composite Reliability	Mean (STD)	AVE
Common Bond Attachment (CB)	4	0.955	4.734 (1.512)	0.842
Common Identity Attachment (CI)	4	0.931	5.200 (1.171)	0.771
Community Reputation (CR)	4	0.950	5.220 (1.190)	0.827
Emotional Support (ES)	5	0.945	4.883 (1.296)	0.776
Informational Support (IS)	5	0.949	5.422 (1.053)	0.788
Hedonic Value (HV)	4	0.952	5.290 (1.129)	0.833
Offline Interaction (OI)	3	0.973	3.495 (2.992)	0.923
Social-Enhancement	5	0.951	4.897 (1.239)	0.795
VCCB directed toward Individuals (VCCBI)	8	0.941	5.422 (1.119)	0.666
VCCB directed toward Communities (VCCBC)	8	0.929	5.138 (1.262)	0.623
Subjective Wellbeing (SW)	4	0.935	4.761 (1.406)	0.782

Table 2. Descriptive Statistics of Constructs

Discriminant validity was tested using the following two tests. First, the loading of each measurement item on its assigned latent variable is larger than its loading on any of the other constructs, indicating the existence of good discriminant validity (Chin, 1998). Second, the square root of the AVE from the construct is much larger than the correlation shared between the construct and other constructs in the model (Table 3) (Fornell and Larcker, 1981).

	CB	CI	CR	ES	HV	IS	OI	SE	SW	VCCBI	VCCBC
CB	0.918										
CI	0.596	0.843									
CR	0.510	0.737	0.909								
ES	0.623	0.612	0.564	0.881							
HV	0.584	0.755	0.652	0.545	0.913						
IS	0.401	0.709	0.637	0.571	0.665	0.888					
OI	0.609	0.224	0.252	0.542	0.216	0.053	0.961				
SE	0.692	0.674	0.604	0.669	0.657	0.580	0.446	0.892			
SW	0.769	0.716	0.635	0.724	0.685	0.549	0.506	0.743	0.884		
VCCBI	0.575	0.786	0.632	0.583	0.725	0.687	0.215	0.680	0.694	0.816	
VCCBC	0.722	0.757	0.622	0.695	0.727	0.619	0.409	0.753	0.793	0.788	0.789

Note: Diagonal elements (in bold) are the square root of the average variance extracted.

Table 3. Correlations among Constructs and the Square Root of the AVE

4.3.2 Structural Model

In PLS analysis, examining the structural paths and the R^2 scores of endogenous variables assesses the explanatory power of a structural model. Figure 2 shows the results of the structural path analysis. All paths exhibited a P-value less than 0.05. The significance of all paths was assessed with 500 bootstrapping runs. Overall, the research model accounted for 64.1% of the variance of subjective wellbeing (Figure 2). Thus, the fit of the overall model is good.

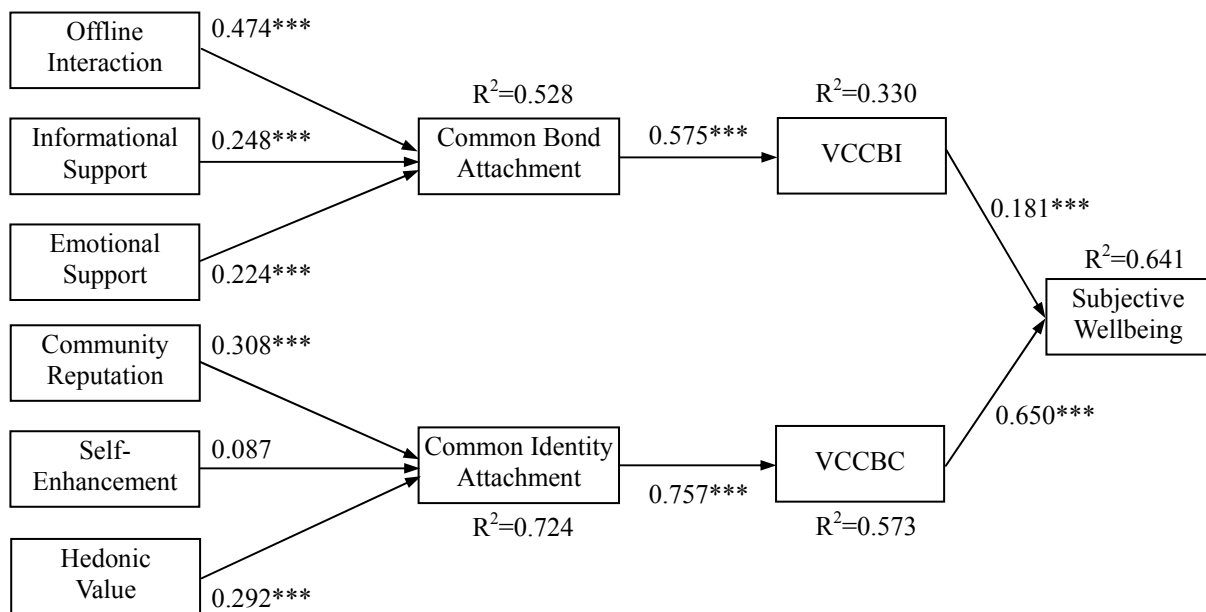


Figure 2. SEM Analysis of the Research Model

5 DISCUSSION AND IMPLICATIONS

The results suggest that the proposed model exhibits sufficient explanatory power to predict an individual's subjective wellbeing (satisfaction and happiness regarding one's online social life). The data from our survey provided strong support for the proposed model, with the exception of H9 (the relationship between social-enhancement and common identity attachment).

Perceived community reputation is more important than offline interaction, informational support, emotional support, social-enhancement, or hedonic value within the context of users' subjective wellbeing. We assessed the importance by using indirect effects. The indirect effect of perceived community reputation on user subjective wellbeing through common identity attachment and VCCBC is 0.152 ($0.308 * 0.757 * 0.650$). The indirect effects of offline interaction, informational support, emotional support, social-enhancement, and hedonic value are 0.049, 0.026, 0.023, 0.043, and 0.144, respectively.

Offline interaction ($\beta=0.474$) is more important than information support ($\beta=0.248$) or emotional support ($\beta=0.224$) in shaping common bond attachment with a VC. The results suggest that users like to interact with members of the VCs through offline activities. In the context of social support groups, informational support and emotional support are important resources to help individuals cope with personal problems. However, they may not be the most influential factors in shaping a common bond attachment (interpersonal bond) in the context of professional VCs.

Perceived community reputation and hedonic value significantly affect common identity attachment. However, social-enhancement has an insignificant impact on a member's common identity attachment ($\beta=0.087$), which conflicts with H9. One possible explanation is that its impact is suppressed by perceived community reputation and hedonic value. Another possible explanation is that common identity attachment will increase an individual's social-enhancement, contrary to the hypothesized relationship that social-enhancement will shape an individual's common identity attachment.

Common bond attachment has a strong effect on VCCBI ($\beta=0.575$) and common identity attachment has a strong effect on VCCBC ($\beta=0.757$). Our findings suggest that when emotional attachment to other members is high, individuals are willing to reciprocate by engaging in citizenship behaviors that benefit other members. Common identity attachment represents a positive emotional response to the positive appraisal of the VC. An emotional response such as this will drive individuals to reciprocate by engaging in citizenship behaviors that benefit the VC as a whole.

Finally, VCCBC ($\beta=0.650$) is more important than VCCBI ($\beta=0.181$) in shaping users' subjective sense of wellbeing. The results suggests that the positive interactions and feelings experienced during participation in VC activities are likely to spill over to other domains of the person's life, and, in the end, satisfaction with virtual life should rise. Although engaging in citizenship behaviors directed toward benefitting other members can lead to feelings of being valued and respected by other members, such feelings cannot build a strong subjective sense of wellbeing.

Theoretical Implications

Our results reinforce previous findings regarding OCB suggesting a distinction between citizenship behaviors directed toward individuals and those directed toward the organization. In addition, the mean values of VCCBI and VCCBC are 5.422 and 5.138, respectively, suggesting that knowledge contributors do engage in citizenship behaviors in professional VCs. VCCBI has the higher mean value (5.422), suggesting that helping others is the major characteristic of open professional VCs. In other words, open professional VCs are more helping-oriented in nature. Knowledge sharing is a helping behavior and the main reason for open professional VCs to exist. Our findings imply that individuals who share their knowledge in a VC are also likely to perform other beneficial behaviors (i.e., VCCBI and VCCBC) because of their common bond attachment (interpersonal attachment) and common identity attachment (attachment to the VC).

The simultaneous consideration of both VCCBI and VCCBC accounts for a substantial amount of the variances in subjective wellbeing ($R^2 = 0.641$). Thus, both concepts are best taken into account when

explaining individuals' happiness and satisfaction with online social life (subjective wellbeing) in communities in general and in VCs in particular. Furthermore, the magnitudes of the path coefficients of VCCBI and VCCBC ($\beta = 0.181$ and $\beta = 0.650$, respectively) imply that they are indeed critical drivers of subjective wellbeing. The study therefore extends the citizenship behavior literature from employee-organization relationships to member-VC relationships, shedding new light on the potential of VCCBI and VCCBC in triggering subjective wellbeing.

Prior studies on social support have indicated that informational support and emotional support are two important reasons for individuals to participate online support groups (communities). However, our results indicate that offline interaction has more influence on members' attachment to other members in the professional community than does either informational support or emotional support. It appears that the context may determine the relative salience of the three key aspects of common bond attachment. As suggested by Koh et al. (2007), offline interactions help VC members understand, trust, and become emotionally attached to one another, providing a stronger base for VC activity.

Our results indicate that perceived community reputation has more influence on members' attachment to the professional community than does social-enhancement or hedonic value. It suggests that when people see their VCs are considered by outsiders to be more respected or prestigious, identification with the VCs is more likely to take place. Individuals participate in VCs not only for fun but, more importantly, for maintaining a consistent and coherent sense of who they are via the reputation of the VC.

Implications for Practice

A finding of potential interest to the managers of VCs is the dominant role of VCCBC in shaping subjective wellbeing. However, it would be especially unfortunate to interpret our results as implying that VCCBI may be paid less attention. The appropriate interpretation should be that, given the situational context of our sample, further increases in the members' VCCBI may be less potent than similar increases in VCCBC. The importance of VCCBI still cannot be overlooked.

Offline interaction, informational support and emotional support have strong effects on common bond attachment, which in turn has a strong effect on VCCBI. Offline interaction can strengthen emotional bonds and encourage community members to engage in behaviors beneficial to other members. Managers of VCs should develop strategies to stimulate offline interaction among members. They should also promote the offering of informational and emotional support. They should hold activities to encourage individuals to share their own experiences in dealing with stressful situations. They should also encourage community members to listen sympathetically and communicate care and acceptance when other members are undergoing difficulties.

Perceived community reputation and hedonic value strongly affect common identity attachment, which in turn has a strong effect on VCCBC. Managers of VCs should develop strategies to maintain or promote the external image of their VCs. They should focus more on social responsibility and ethical issues in order to grow their external reputation. In order to fulfill their social responsibility and build a more positive image, VCs can link themselves to worthwhile causes. These kinds of campaign can greatly assist VCs to build a more positive public image. Developers and designers of VCs can create a more enjoyable knowledge-sharing environment in different ways. First, they can incorporate innovative multimedia tools and techniques to make the knowledge sharing process and interactions between members more interesting and entertaining. Second, hosts or managers of VCs should encourage their members to provide content that is more interesting.

Limitations

Even though we made every effort to design and implement this research effectively, there are still some limitations. First, our study may have been impacted by self-selection bias. The sample for this research consists of active users. Users who have already stopped using Mobile01 may have different perceptions about the constructs in this study. Thus, our findings should be interpreted as only explaining the subjective wellbeing of current Mobile01 users. Second, as the data are cross-sectional,

the causal relationships presented here can only be inferred rather than proven. Finally, the data was collected from a single VC. Although Mobile01 is one of the most popular VCs in Taiwan, the generalizability of the model and findings to other VCs requires additional research.

References

- Abrams, D. and Hogg, M. A. (1988). Comments on the motivational status of self-esteem in social identity and intergroup discrimination. *European Journal of Social Psychology*, 18, 317-334.
- Blanchard, A.L. and Markus, M.L. (2004). The experienced sense of a virtual community: Characteristics and processes. *The Data Base for Advanced in Information Systems*, 35(1), 64-71.
- Blau, P. M. (1964). *Exchange and Power in Social Life*, New York, NY: John Wiley and Sons.
- Bowlby, J. (1979). *The Making and Breaking of Affectional Bonds*, London: Tavistock.
- Butler, B., Sproull, L., Kiesler, S., and Kraut, R. (2007). Community effort in online groups: Who does the work and why? in S. Weisband. (Ed.), *Leadership at a distance*. (pp. 171-194). Lawrence Erlbaum Associates, Hillsdale, NJ.
- Chin, W.W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.) *Modern Methods for Business Research*, Mahwah: Lawrence Erlbaum Associates, pp. 295-336.
- Cialdini, R.B., Borden, R.J., Thorne, A. Walker, M.R., Freeman, S., and Sloan, L.R. (1976). Basking in Reflected Glory: Three (Football) Field Studies. *Journal of Personality and Social Psychology*, 34, 366-375.
- Dholakia, U.M., Bagozzi, R.P. and Pearo, L.K. (2004). A social influence model of consumer participation in network-and small-group-based virtual communities. *International Journal of Research in Marketing*, 21(3), 241-263.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95(3), 542-575.
- Diener, E. and Lucas, R. (1999). Personality and subjective well-being. In D. Kahneman, E. Diener and N. Schwarz (Ed.), *Well-being: The Foundations of Hedonic Psychology*. New York: Russell Sage Foundation.
- Diener, E., Suh, M., Lucas, E., and Smith, H. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125, 276-302.
- Diener, E., Oishi, S., and Lucas, R.E. (2002). Subjective well-being: The science of happiness and life satisfaction. In C.R. Snyder and S.J. Lopez (Ed.), *Handbook of Positive Psychology*. Oxford and New York : Oxford University Press.
- Diener, E. and Seligman, M.E.P. (2002). Very happy people. *Psychological Science*, 13, 81-84.
- Dovidio, J.F., Piliavin, J.A., Schroeder, D.A. and Penner, L. (2006). *The Social Psychology of Prosocial Behavior*, Erlbaum, Mahwah, NJ.
- Dutton, J.E., Dukerich, J.M., and Harquail, C.V. (1994). Organizational images and member identification. *Administrative Science Quarterly*, 39(2), 239-263.
- Ellemers, N., Kortekaas, P., and Ouwerkerk, W. (1999). Self-categorization, commitment to the group and group self-esteem as related but distinct aspects of social identity. *European Journal of Social Psychology*, 29(23), 371-389.
- Fornell, C. and Larcker, D.F. (1981). Evaluating structural equation models with unobservable and measurement error. *Journal of Marketing Research*, 18, 39-50.
- Homburg, Ch., Wieseke, J., and Hoyer, W.D. (2009). Social identity and the service-profit chain, *Journal of Marketing*, 73(2), 38-54.
- Koh, J., Kim, Y.G., Butler, B. and Bock, G.W. (2007). Encouraging participation in virtual communities. *Communications of the ACM*, 50(2), 69-73.
- Lambert, E. (2010). The relationship of organizational citizenship behavior with job satisfaction, turnover intent, life satisfaction, and burnout among correctional staff. *Criminal Justice Studies: A Critical Journal of Crime, Law, and Society*, 23(4), 361-380.
- LePine, J.A., Erez, A. and Johnson, E.D. (2002). The nature and dimensionality of organizational citizenship behavior: A critical review and meta-analysis. *Journal of Applied Psychology*, 87 (1), 52-65.
- Lee, K., and Allen, N.J. (2002). Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *Journal of Applied Psychology*, 87(1), 131-142.

- Lombard, M. and Ditton, T. (1997). At the heart of it all: The concept of presence. *Journal of ComputerMediated Communication*, 13 (3).
- Matei, S. (2004), “. The impact of state-level social capital on the emergence of virtual communities. *Journal of Broadcasting and Electronic Media*, 48(1), pp. 23-40.
- March, J. G. and Simon. H. A. (1958). *Organizations*. New York, NY: Wiley.
- Meier, S. and Stutzer, A. (2008). Is volunteering rewarding in itself? *Economica*, 75, 39–59
- Nardi, B. and Whittaker, S. (2002) The place of face to face communication in distributed work. In P. Hinds and S. Kiesler (eds), *Distributed Work*. Cambridge: MIT Press.
- Organ, D.W. *Organizational Citizenship Behavior: The Good Soldier Syndrome*, Lexington Books, MA: Lexington, 1988.
- Park, C.W., MacInnis, D.J., and Priester, J. (2006). Beyond attitudes: Attachment and consumer behavior. *Seoul National Journal*, 12 (2), 3-36.
- Prentice, D.A., Miller, D.T., and Lightdale, J.R. (1994). Asymmetries in attachments to groups and to their members: Distinguishing between common identity and common-bond groups. *Personality and Social Psychology Bulletin*, 20(5), 484-493.
- Ren, Y., F. M. Harper, S. Drenner, L. Terveen, S. Kiesler, J. Riedl, and R. Kraut (2012). Building member attachment in online communities: Applying theories of group identity and interpersonal bonds. *MIS Quarterly*, (36) 3, 841-864.
- Richards, D.A. and Schat, A.C.H. (2010). Attachment at (not to) work: Applying attachment theory to explain individual behavior in organizations. *Journal of Applied Psychology*, 96, 169-182.
- Richins, M.L. (1994). Special possessions and the expression of material values. *Journal of Consumer Research*, 21(3), 522-533.
- Riketta, M. and Van Dick, R. (2005). Foci of attachment in organizations: A meta-analytic comparison of the strength and correlates of workgroup versus organizational identification and commitment. *Journal of Vocational Behavior*, 67, 490-510.
- Spitzmuller, M., Van Dyne, L, and Ilies, R. (2008). Organizational citizenship behavior: A review and extension of its nomological network. In J. Barling & C.L. Cooper (Eds.), *The SAGE handbook of organizational behavior* (pp. 106-123). Thousand Oaks, CA: Sage.
- Suh, K.S. (1999). Impact of communication medium on task performance and satisfaction: An examination of media richness theory. *Information and Management*, 35(3), 295-312.
- Tajfel, H. (1972). Social categorization (English translation of “Lacatégorisation sociale”). In S. Moscovici (Ed.), *Introduction à la Psychologie Sociale* (Vol. 1,). Paris: Larousse, pp. 272-302.
- Tajfel, H. and Turner, J.C. (1985). The social identity theory of intergroup behavior. In S. Worchel and W.G. Austin (Eds.), *Psychology of intergroup relations*, Chicago, IL: Nelson-Hall, pp.7-24.
- Turner, J.C. (1975). Social comparison and social identity: Some prospects for intergroup behaviour. *European Journal of Social Psychology*, 5(5), 5-34.
- Utz, S., and Sassenberg, K. (2002). Distributive justice in common-bond and common-identity groups. *Group Processes & Intergroup Relations*, 5(2), 151-162.
- Van Dick, R., Grojean, M, Christ, O., and Wieseke, J. (2006). Identity and the extra mile: relationships between organizational identification and organizational citizenship behaviour. *British Journal of Management*, 17(4), 283-301.
- Van Dyne, L., Graham, J.W., and Dienesch, R.M. (1994). Organizational citizenship behavior: Construct redefinition, measurement and validation. *Academy of Management Journal*, 37(3), 765-802.
- Van Lange, P.A.M., Rusbult, C.E., Drigotas, S.M., Arriaga, X.B., Witcher, B.S., and Cox, C.L. (1997). Willingness to sacrifice in close relationships. *Journal of Personality and Social Psychology*, 72(6), 1373-1396.
- Williams, L.J. and Anderson, S.E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17 (3), 601-617.
- Yoon, C., and Wang, Z-W. (2011). The role of citizenship behaviors and social capital in virtual communities. *The Journal of Computer Information Systems*, 52(1), 106-115.