

## Chapter 9

# Sense of Community in Professional Virtual Communities

**Anita Blanchard**

*University of North Carolina at Charlotte, USA*

**David A. Askay**

*University of North Carolina at Charlotte, USA*

**Katherine A. Frear**

*University of North Carolina at Charlotte, USA*

### ABSTRACT

*Sense of virtual community (feelings of identity, belonging, and attachment) is an essential component of virtual communities. In this chapter, we develop a model of how sense of virtual community develops in professional virtual communities. Based on sense of virtual community models in social virtual communities, we expect that the exchange of support, development of a group identity, and group norms will lead to a stronger professional sense of virtual community. Unlike social virtual communities, we also predict that employee/members occupational identification will increase professional sense of virtual community, particularly when the virtual community can provide support and information not available in the employee/member's face-to-face life. Finally, we propose that increased occupational commitment, professional networks, and employee performance are outcomes of sense of virtual community in professional virtual communities.*

### INTRODUCTION

Virtual communities are groups of people who interact primarily through information and communication technologies (ICT). Virtual communities and other virtual groups have existed since the mid

1980's for people both at work (Finholt & Sproull, 1988; Sproull & Kiesler, 1986) and in their social lives (Rheingold, 1993). They exist over a wide variety of ICT, including forums such as bulletin boards and newsgroups, listservs, and even blogs (Blanchard, 2004a; Ren, Kraut, & Kiesler, 2007). Even newer social networking sites (e.g., Facebook,

DOI: 10.4018/978-1-61520-979-8.ch009

Twitter) have the potential to support virtual communities and other forms of virtual groups.

An essential characteristic of virtual communities is the members' sense of virtual community (SOVC) (Blanchard, 2008; Blanchard & Markus, 2004; De Koster & Houtman, 2008; Koh & Kim, 2003). SOVC is defined as the member's feelings of identity, belonging, and attachment with each other in their online groups. The SOVC construct is based on the sense of community (SOC) in face-to-face (FtF) groups (McMillan & Chavis, 1986). SOC has a long history as an essential component of community psychology research (Chavis & Pretty, 1999; Obst & White, 2007; Sarason, 1974) and has strong theoretical support and growing empirical base of research. Researchers have also found that SOC is important in organizations and may have a positive relationship with organizational commitment and job satisfaction (Burroughs & Eby, 1998). SOVC, therefore, may have high relevance to organizational virtual communities.

SOVC is considered a positive development for a group and its members. Like SOC, SOVC is believed to lead to outcomes such as longer membership tenure in the group, more problem-focused coping behavior, more activity, and greater social capital both in the virtual community and in members' FtF communities (Blanchard, 2004b; Burroughs & Eby, 1998; McMillan & Chavis, 1986).

SOVC, therefore, can help distinguish virtual communities from mere virtual groups. Virtual communities, as opposed to virtual groups, should have members who participate longer and more frequently, who work to solve the community's problems and who are more likely to share support and trust both in and outside of the virtual community. As will be discussed below, virtual communities should have many-to-many communications in which members continually share information and support. Virtual groups are more likely to have one-to-many communications or have more limited group interactions. The key

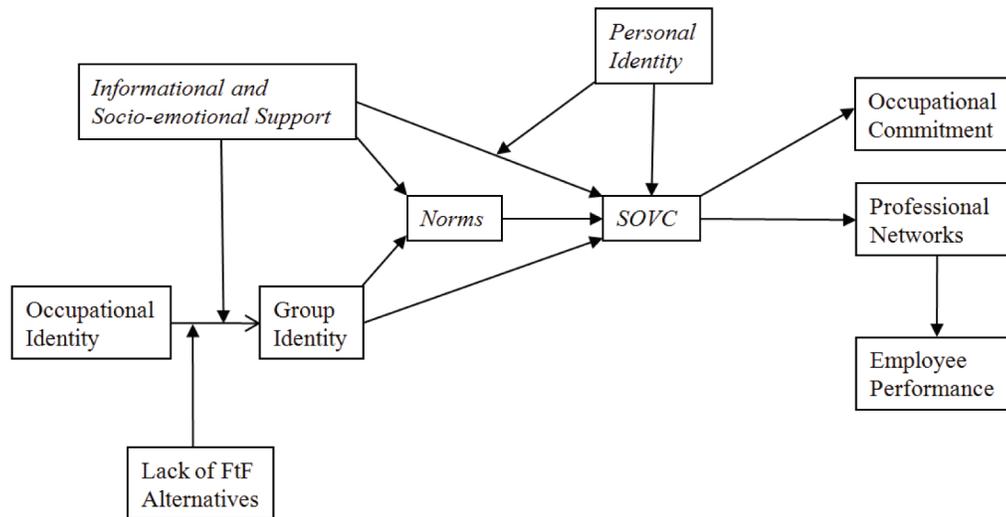
difference remains the development of a sense of virtual community (or not) for the members.

Previous research has primarily examined SOVC in social virtual communities. These virtual communities focus on a wide variety of topics including hobbies (e.g., gardening, Honda motorcycles, marathon training), special interests (e.g., movie reviews, parenting), or even health issues (e.g., cancer, infertility). While this line of research is informative, it may not be entirely applicable to the growing number of professional virtual communities.

Professional virtual communities are composed of employees or free-lance professionals who interact through ICT about topics related to their paid work. Professional virtual communities include employees of particular companies (e.g., Disney, Radio Shack) who discuss employment policies, problems, and experiences at their particular company as well as employees from a broad range of organizations employed in a particular profession (e.g., bankers, human resource professionals, freelance writers and even medical doctors). They likely differ from social virtual communities because of the members' valid concerns about their participation affecting their professional reputations (Constant, Sproull, & Kiesler, 1996)—either in general or coming back to their employing organization—or members' increased potential to interact FtF in professional conferences.

This chapter will focus on the latter type of professional virtual communities: virtual communities that support employees who identify with a particular profession. First, these virtual communities are likely to discuss particular topics unique to their professions making them more similar to the social virtual communities which have been more extensively researched. For example, virtual communities of bankers will focus on banking issues like virtual communities of marathon trainers that focus on training issues. We suggest that models of the antecedents and outcomes of SOVC for social virtual communities

*Figure 1. Model of sense of virtual community in professional virtual communities*



Note: Variables in italics indicate the previous SOVC model for social virtual communities.

should be more easily transferrable to these types of professional virtual communities.

Second, these professional virtual communities may have significant yet under-studied benefits to the employing organization. For example, the information and support exchanged within these professional virtual communities could provide new and innovative work practices that the employee-members can use in their own jobs (Constant, et al., 1996; Haythornwaite, 2002; Pickering, 1995). This development of social capital in the professional virtual community could have quite positive effects for the organization (Adler & Kwon, 2002; Bergquist & Ljungberg, 2001; Nahapiet & Ghoshal, 1998; Wasko & Faraj, 2005).

The goal of this chapter will be to extend the research on SOVC to properly account for professional virtual communities. We develop a model that will build upon theories and research which have examined SOVC in social virtual communities and will expand this model to account for the particulars of professional virtual communities. In particular, this model will give attention to the stronger professional identities that members of professional virtual communities may have as well

as how these virtual communities affect employees and their employing organizations.

## BACKGROUND

Previous research on the antecedents of group outcomes similar to SOVC in social groups has demonstrated the importance of (a) the exchange of information and socio-emotional support, (b) the development of identity within the virtual community including both group identity and personal identity; and (c) the perception of norms (Blanchard, 2008; Blanchard & Markus, 2004; De Koster & Houtman, 2008; Michinov, Michinov, & Toczec-Capelle, 2004; Ren, et al., 2007; Spears, Lea, & Postmes, 2007). This section will review that literature and advance it to account for professional virtual communities.

### Informational and Socio-Emotional Support

Exchanging informational and socio-emotional support is an important—if not essential—be-

havior in virtual communities (Baym, 1997; Rothaermel & Sugiyama, 2001; Wellman & Gulia, 1999). Members exchange support in a variety of ways in these groups. Support may be actively exchanged publicly in posts for the entire group to read or may occur privately through emails exchanged behind the scenes. Support may also be passively exchanged when members read others' exchanges, but do not participate in exchange the support themselves. Wellman and Gulia (1999) have argued that the public exchange of support may increase members' perceptions of being a supportive group when, in fact, few people are actually involved in the supportive exchange. Thus, there is a perception that the group is very supportive, even if only a few of the members actually help each other. Yet, because everyone can read the message, all group members benefit from the support exchange even if they were not active in creating it.

Using social exchange theory and theories about the norms of reciprocity, previous research has demonstrated that both participating in the exchange of support and observing the exchange of support by others are positively related to SOVC in social virtual communities (Blanchard, 2008; Blanchard & Markus, 2004; De Koster & Houtman, 2008). The relationship between actively participating in the exchange of support and SOVC has been stronger than SOVC's relationship with passively observing support exchanges, but both relationships are independently related to SOVC in social virtual communities.

We expect that the exchange of socio-emotional and informational support will also be important for professional virtual communities (Ridings & Gefen, 2004). There may, however, be a shift in both the prevalence and importance of the types of support. For example, in some social virtual communities (e.g., health virtual communities), socio-emotional support may be as important or even more important than informational support. In professional groups, we expect informational support to be the primary form of support exchanged.

This reliance on informational support could have slightly detrimental effects on professional SOVC. Socio-emotional support may more easily create emotional bonds that tie the members together in a virtual community. However, some social virtual communities (e.g., gardening, Honda motorcycle enthusiasts) are also likely to put a premium on informational support over emotional support. They nonetheless remain virtual communities. For example, a virtual gardening community member may be less interested in receiving sympathy that aphids have destroyed his or her garden and more interested in receiving information about how to kill them. Similarly, a human resources professional will be more in learning about particular interpretations of employment law instead of sympathy for dealing with a difficult employee. Therefore, we expect social exchange of support, particularly informational support, to continue to have a positive relationship to professional SOVC. Exchanges of socio-emotional support will play an important—if somewhat weaker—role in professional virtual communities as compared to social virtual communities.

## **Identity**

Identity issues have always had a prominent role in online research. Two important identity issues that often arise are (1) group identity, the feelings of belonging and membership in a group, and (2) personal identity, the ability to recognize and feel recognized by other members of the group. We will first consider group identity in the development of SOVC and then personal identity.

### **Occupational vs. Group Identity**

To begin our discussion of group identity, we first want to present the differences between a super-ordinate identity (i.e., a social identity) and a sub-ordinate identity (i.e., a group identity). Although there are similarities between these two forms of identity (Hogg, Abrams, Otten, &

Hinkle, 2004), there are also differences which are important to our model.

Super-ordinate identities involve societal level groups. This can include identity with diffuse individual characteristics (e.g., gender, ethnicity, college alumnus), identity with a particular professional or occupational group (e.g., human resource professional, doctor, freelance writer), identity with hobbies and interests (e.g., marathoner, Harley Davidson rider, gardener), or even with health or family issues (e.g., cancer survivor, new mother, diabetic). The distinguishing feature of super-ordinate groups is that the members do not generally interact with each other and cannot interact with other as a whole. Nonetheless, these groups are very important to an individual's social identity (Hogg, et al., 2004; Meyer, Becker, & Van Dick, 2006), that is, her or his super-ordinate identity. For professional virtual communities, the super-ordinate identity is their members' occupational identity. This is defined as the set of central and distinctive characteristics that individuals use to define themselves in terms of their work (Ashforth & Kreiner, 1999). When we refer to super-ordinate identity in professional virtual communities, we mean the shared occupational identity for the members of the group.

Sub-ordinate identity is related to specific groups where the members interact with one another. These groups may be focused around the same super-ordinate groups listed above (i.e., individual characteristics, professional groups, hobbies and health concerns), but the members of these groups can and do interact with each other. A main difference, then, is that sub-ordinate identity is attached to a particular interacting group, even though it is likely to be related to the super-ordinate identity. For example, a doctor may feel like a member of a local professional group, but his or her overall identity as a "doctor" has not diminished. On the other hand, freelance writers may identify as a people who seeks writing assignments from a group of publications, but also be attached to

the regular, local writing group that helps them improve their writing and networking skills.

In this chapter, we focus on the sub-ordinate identity of professional virtual communities, that is, group identity. We highlight this because we have noted that researchers often use the term "identity" when they are referring both to non-interacting groups (i.e., super-ordinate identity) as well as interacting groups (i.e., sub-ordinate identity). We are interested in interacting groups in order to understand what contributes to their group's professional SOVC.

In addition, the members' shared occupational identity may benefit professional virtual communities in comparison to social virtual communities. Members of social virtual communities may share little beyond the group's topic of interest. These virtual community members may over-interpret cues and perceive more similarity than is actually there, creating hyperpersonal relationships which may not last over time (Walther, 1996). Members of professional virtual communities, on the other hand, are more likely to share real educational, socio-economical, and even knowledge, skills, and abilities, as well as day-to-day work experiences. Thus, their shared occupational identities will increase the development and perception of shared norms of behavior (Hogg, et al., 2004), a very important component of SOVC (Blanchard, 2008; McMillan & Chavis, 1986). Thus, members' occupational identity should be an important antecedent to group identity in professional virtual communities.

However, this relationship is likely to be more complex than a simple, direct antecedent. Otherwise, everyone who has a strong occupational identity would likely to have a strong group identity with the professional virtual community. This is obviously not true. Many members who identify strongly with their occupation are not strongly identified with any professional virtual community. We propose two moderators to this relationship. First, we consider whether the individual has FtF alternatives for which he or she

can draw upon professional advice and information. The lack of FtF alternatives has played an important role why people become involved in social and virtual communities (McKenna & Green, 2002; Weis, et al., 2003). The lack of FtF support and interaction for a professional could explain why members move from a super-ordinate to an online group specific identity. Indeed, it may play a more important role for professional virtual communities because of the flexibility of participation in the online groups. For example, members may be able to participate in the online group while still working during work hours as opposed to having to leave work for a few hours to attend a monthly luncheon or dinner.

In addition, we also suggest that the usefulness of the group, particularly, the value of the informational and socio-emotional exchange, will moderate the relationship between occupational identity and group identity. Optimal matching theory suggests that certain types of support are more beneficial for certain types of stressors (Cutrona & Russell, 1990). This theory applies here when professionals view the support from the group to be appropriate to their needs. Then they are more likely to identify with the group starting the process by which they develop a professional SOVC.

Research on optimal matching theory in health virtual communities supports both our moderators. First, it suggests that members participate more in an online group if they receive specific support that they value, but particularly when they cannot find that support FtF (Turner, Grube, & Meyers, 2001). If professionals find that the group provides the information and support they need, they are more likely to find the group attractive and to identify with the group. If the group does not meet the professional's needs, then he or she is less likely to develop a subordinate identity from his or her super-ordinate identity.

Now that we have proposed a relationship between occupational identity and group identity within professional virtual communities, we turn

our attention to the outcomes of group identity. There is a substantial amount of empirical and theoretical research which considers group identity as the antecedent to other group outcomes; it finds that as members develop a stronger identity with each other in the group, they will experience stronger positive group outcomes, such as commitment, and group trust. (Postmes, Spears, Lee, & Novak, 2005; Ren, et al., 2007; Spears, et al., 2007; Tanis & Postmes, 2005). Previous researchers have not explicitly examined SOVC or professional SOVC. Nonetheless, we think it is reasonable that like group identity and SOC in FtF groups (Omoto & Malsch, 2005), there should be a strong positive relationship between group identity and professional SOVC.

Some of the research on online group identity outcomes, particularly by Postmes and his colleagues, has previously argued that online group members must remain completely anonymous in order to develop a group identity; otherwise individuation of group members will occur and the salience of group identity will break down. While this may have been true in laboratory experiments conducted in chatrooms, this mode of reasoning is no longer appropriate. Today's technologies have a wide variety of anonymity reducing technological features that indicate personalization in the virtual community (e.g., profiles, photos, signature files). Indeed, people who interact in FtF groups are not anonymous by definition and yet these groups still have a group identity. Other researchers (Ren, et al., 2007) and even Postmes himself (Postmes, et al., 2005) has started to examine group identity with the use of technology identity cues that contribute to personal identity.

## Personal Identity

The lack of cues to communicators' identities was one of the first areas of research that focused on group relations (Constant, et al., 1996; Sproull & Kiesler, 1986). While cues to personal identity still remain of interest, technological features

have changed so that communicators are much less likely to be anonymous to each other (Ren, et al., 2007; Walther, Slovacek, & Tidwell, 2001). Communicators are more likely to have avatars—pictures which may be real pictures of themselves or feature some characteristic about themselves; signature files—which can contain personal information relevant to the group and witticisms, their real names, and other ways to contact the communicator in “real life.” All of these cues allow for communicators to make impressions of others in the group as well as allow them to make impressions about themselves to project to others.

Information about others’ identities can also come from the messages that members write and exchange (Blanchard & Markus, 2004). These messages, separate from the cues provided by the technology, allow members to determine others’ stances on the issues, their sense of humor, and their position or role in the professional virtual community. While members may purposefully attempt to craft their image to have a certain stance, to be witty or to have a particular place in the group, it still implies that members develop perceptions of each other apart from their available technological cues.

Previous research has proposed a direct relationship of personal identity to SOVC in social virtual communities (Blanchard, 2008). This research predicted a positive relationship for both learning others’ identity and creating one’s own identity to SOVC. However, the results were mixed. Only members’ perceptions of creating an identity were directly related to the members’ SOVC. This was interpreted to mean that when members felt “known” by and “accepted” in the group, they had a stronger SOVC. Paradoxically, there was no direct relationship from knowing others’ identity to SOVC. This may provide some support to Postmes and other’s arguments that the individuation of members breaks down group processes. However, as the Blanchard study was the first examination of this hypothesis in “real” virtual communities, more research needs to be

conducted. This may be particularly true in professional virtual communities in which professional reputations may be more important than simply being known or identified.

In this paper, we build upon the previous research. We argue that perceptions of knowing others’ will be positively related to SOVC. However, perceptions of knowing others will also moderate the relationship between exchanging support and SOVC. That is, forming positive opinions of others in the group and perceiving them as similar to the group will increase these individuals’ trustworthiness. Therefore, it should strengthen the relationship between exchanging support and SOVC. The opposite is also true. Perceiving other members of the group as having negative roles and attitudes will decrease their trustworthiness as members of the group and weaken the relationship between exchange of support and SOVC. This will build on the previous research and expand our understanding of how personal identity affects SOVC.

## **Norms**

A final important antecedent of SOVC in social virtual communities is norms. In general, norms within online groups have attracted a great deal of research attention since researchers have recognized virtual groups as a new social entity (Kollok & Smith, 1996; Kraut & Rice, 1998; Postmes, Spears, & Lea, 2000; Postmes, et al., 2005; Sassenberg, 2002). Norms provide members with implicit rules of behavior. These rules of behavior may be more important in online groups because of the novelty of these groups and the ease with which members can sometimes violate these norms.

Norms are important in FtF SOC (McMillan & Chavis, 1986). In their original model of FtF SOC, McMillan and Chavis (1986) posited that community norms play a significant role in the development of SOC. They argue that as the community becomes more cohesive, there is a greater pressure on the community members to conform.

This pressure creates a consensual validation among the community members, essentially a feeling that “we are alike.” This feeling develops into members’ SOC. As members more closely adhere to the norms of the community, their bond to the community increases. Thus, development and adherence to norms closely precede SOC in FtF communities.

Previous research demonstrates that the perception of norms within a group has a strong, positive relationship to SOVC in social virtual communities (Blanchard, 2008). This research then supports that SOVC and norms have a similar relationship online as they do FtF. We expect that this relationship will hold in professional virtual communities, too.

We propose that norms will partially mediate the relationship between exchanging support and group identity with professional SOVC. That is, while there is still a direct relationship between social exchanges and SOVC, part of that relationship is also mediated by norms. Past research suggests that social identity processes, as well as social exchange processes, lead to the formation of group norms. In online research on identity and norms, members of naturally forming online groups create and then adhere to group specific norms of behavior (Postmes, et al., 2005). In particular, through learning other members’ identity, they inductively create a social identity, and subsequently develop norms about what this group does and what its particular characteristics are (Postmes, et al., 2005).

Similarly, Cropanzano and Mitchell (2005) argue that one of the basic tenets of social exchange theory is that people develop and then are constrained by certain rules of exchange, norms that serve as guidelines for people’s interactions. These norms of behavior can develop as people participate in the exchange (Cropanzano & Mitchell, 2005) or by merely watching other people interact (Postmes, et al., 2005). Thus, as members observe and also participate in the exchange of support, they are developing norms of behavior.

Blanchard (2008) found that norms serve as a mediator from exchanging to SOVC. Although the relationship between group identity and norms has been tested (Postmes, et al., 2000; Postmes, et al., 2005; Sassenberg, 2002), norms have not been examined as a mediator between group identity and SOVC. This research will, therefore, expand on our knowledge of group identity, norms and SOVC.

## **OUTCOMES OF PROFESSIONAL SOVC**

In social virtual communities, outcomes include trust for other members of the virtual community and social capital both within the group and extending to members’ FtF groups and communities (Blanchard, 2004b). What about the outcomes of interest for SOVC in professional virtual communities? We suggest that there are several positive outcomes that could benefit the employee, the profession, and the organization.

### **Occupational Commitment**

First, members of professional virtual communities may have an increased occupational commitment. Occupational commitment is defined as the commitment to the actual work an employee does (Meyer, Allen, & Smith, 1993). Occupational commitment is independent of organizational commitment and is related to the job an employee performs. Meyer et al., (1993) argue that all employees, not just professionals, can be committed to the work they do above and beyond whatever commitment they feel to their organization.

We suggest that participating in a professional virtual community in which the employee develops feelings of community is likely to lead to higher levels of occupational commitment. By interacting with others in the same occupation (or profession) and developing a professional SOVC, professional virtual community members strengthen their

occupational identity and, therefore, strengthen their occupational commitment. In a sense, we are proposing that the group identity and the resulting professional SOVC mediate and amplify the members' occupational commitment. There is currently still some lively debate about the relationship of identity and commitment (Meyer, et al., 2006; Redman & Snape, 2005; Ritekka, 2005; Van Knippenberg & Sleebos, 2006). Nonetheless, experts in the area generally believe that identity comes before commitment. We suggest occupational commitment is also mediated by SOVC.

### **Professional Networks**

There are also benefits to the employee in relation to the profession. Professional virtual community members could also significantly increase their professional social networks through their online activities. Professional social networks are the other employees that an employee can call upon to help with problems or to share work issues. Without participating in a professional virtual community, employees are limited in developing their professional social networks to co-workers or members of their local city or regional professional groups such as the Society for Human Resource Managers (SHRM) local groups. This may be augmented by attending national conferences for their profession (e.g., SHRM's annual national conference).

However, by participating in a professional virtual community, members have the potential to interact with other similar professional from around the country. This could widely increase the contacts a professional has to provide information for his or her job. For some highly active members, this could enhance their professional reputation and improve their prominence in their field. These core members are likely to have their identity known by other group members. They may rise to prominence in a way not possible through traditional FtF professional groups. Indeed, improving one's reputation has been found to be

a strong motivator for engaging in knowledge exchange in professional communities (Stewart 2005; Wasko and Faraj, 2005).

### **Employee Performance**

The outcomes of a larger social network are important. However, there are positive outcomes for the employee and the organization beyond just reputation enhancement. Members can increase their professional social capital through these networks (Oh, Chung, & Labianca, 2004; Putnam, 1996; Wellman, Haase, Witte, & Hampton, 2001). This suggests that knowledge and support will travel through the virtual community and improve the employees' performance. The weak ties, that is, the other members of the professional virtual community, can provide additional information that can be used on the employee's job (Constant, et al., 1996; Pickering, 1995). The employee learns of perspectives and solutions that are outside the organization's culture and standard operating procedure. These novel approaches may be especially beneficial to the organization.

Professional virtual communities are, therefore, important for employees and their organization. This is an understudied area despite the growing number of and reliance on professional virtual communities by employees today.

### **FUTURE RESEARCH DIRECTIONS**

Our model implies several streams of research to empirically test it. We suggest the most pressing areas for future research are as follows:

- How does group identity develop from super-ordinate/occupational identity for professional virtual communities? Which potential moderator has the strongest effect on this relationship?
- How strong are the relationships of support, group identity, and personal identity

to SOVC in professional virtual communities? How do these relationships compare to previous research in social virtual communities? Does informational support play a stronger role than socio-emotional support? How strong is the moderating effect of personal identity on the relationship between support and SOVC?

- How does SOVC in professional virtual communities affect employee outcomes? How strong is the mediating effect of group identity and SOVC on the relationship between occupational identity and occupational commitment? How strong is the relationship from SOVC to employee performance through the mediator of professional networks?

Researchers may also want to pursue multi-level theories and research methods in studying SOVC in different virtual groups. These theoretical and methodological approaches may be able to take advantage of the contextual features of the virtual communities while still engaging in quantitative methods.

## CONCLUSION

We have developed and presented a model which extends the theoretical and empirical research on sense of virtual community in social virtual communities to sense of virtual community in professional virtual communities. Professional virtual communities and the sense of community which develops within them are under-studied yet highly important areas of research in communications, relations, and virtual work.

## REFERENCES

Adler, P. S., & Kwon, S.-W. (2002). Social capital: prospects for a new concept. *Academy of Management Review*, 22(1), 17–40. doi:10.2307/4134367

Ashforth, B. E., & Kreiner, G. E. (1999). “How can you do it?”: Dirty work and the challenge of constructing a positive identity. *Academy of Management Review*, 24(3), 413–434. doi:10.2307/259134

Baym, N. (1997). Interpreting soap operas and creating community: Inside an electronic fan culture. In Keisler, S. (Ed.), *Culture of the Internet* (pp. 103–120). Mahwah, NJ: Lawrence Erlbaum Associates.

Bergquist, M., & Ljungberg, J. (2001). The power of gifts: Organizing social relationships in open source communities. *Information Systems Journal*, 11(4), 305–320. doi:10.1046/j.1365-2575.2001.00111.x

Blanchard, A. L. (2004a). Blogs as Virtual Communities: Identifying sense of community in the Julie/Julia Project. In Gurak, L., Antonijevic, S., Johnson, L., Ratliff, C., & Reyman, J. (Eds.), *Into the Blogosphere: Rhetoric, Community and Culture*.

Blanchard, A. L. (2004b). The effects of dispersed virtual communities on face-to-face social capital. In Huysman, M., & Wulf, V. (Eds.), *Social Capital and Information Technology* (pp. 53–74). Cambridge: MIT Press.

Blanchard, A. L. (2008). Testing a model of sense of virtual community. *Computers in Human Behavior*, 24(5), 2107–2123. doi:10.1016/j.chb.2007.10.002

Blanchard, A. L., & Markus, M. L. (2004). The experienced “sense” of a virtual community: Characteristics and processes. *The Data Base for Advances in Information Systems*, 35(1), 65–79.

- Burroughs, S. M., & Eby, L. T. (1998). Psychological sense of community at work: A measurement system and explanatory framework. *Journal of Community Psychology*, 26(6), 509–532. doi:10.1002/(SICI)1520-6629(199811)26:6<509::AID-JCOP1>3.0.CO;2-P
- Chavis, D. M., & Pretty, G. H. (1999). Sense of community: Advances in measurement and application. *Journal of Community Psychology*, 27(6), 635–642. doi:10.1002/(SICI)1520-6629(199911)27:6<635::AID-JCOP1>3.0.CO;2-F
- Constant, D., Sproull, L., & Kiesler, S. (1996). The kindness of strangers: On the usefulness of electronic weak ties for technical advice. *Organization Science*, 7(2), 119–135. doi:10.1287/orsc.7.2.119
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874–900. doi:10.1177/0149206305279602
- Cutrona, C. E., & Russell, D. W. (1990). Type of social support and specific stress: Toward a theory of optimal matching. In Sarason, I. G., Sarason, B. R., & Pierce, G. R. (Eds.), *Social support: An interactional view* (pp. 319–366). Oxford, England: John Wiley & Sons.
- De Koster, W., & Houtman, D. (2008). ‘Stormfront is like a second home to me’: On virtual community formation by right-wing extremists. *Information . Communication and Technology*, 11(8), 1155–1176.
- Finholt, T., & Sproull, L. (1988). Electronic groups at work. *Organization Science*, 1(1), 41–64. doi:10.1287/orsc.1.1.41
- Haythornwaite, C. (2002). Strong, weak, and latent ties and the impact of new media. *The Information Society*, 18(5), 385–401. doi:10.1080/01972240290108195
- Hogg, M. A., Abrams, D., Otten, S., & Hinkle, S. (2004). The social identity perspective: intergroup relations, self-conception and small groups. *Small Group Research*, 35(3), 246–276. doi:10.1177/1046496404263424
- Koh, J., & Kim, Y.-G. (2003). Sense of virtual community: A conceptual framework and empirical validation. *International Journal of Electronic Commerce*, 8(2), 75–94.
- Kollock, P., & Smith, M. (1996). Managing the virtual commons: Cooperation and conflict in computer communities. In Herring, S. (Ed.), *Computer-Mediated Communication: Linguistic, Social, and Cross-Cultural Perspectives* (pp. 109–128). Amsterdam: John Benjamins.
- Kraut, R. E., & Rice, R. E. (1998). Varieties of social influence: The role of utility and norms in the success of a new communication medium. *Organization Science*, 9(4), 437–453. doi:10.1287/orsc.9.4.437
- McKenna, K. Y. A., & Green, A. S. (2002). Virtual group dynamics. *Group Dynamics*, 6(1), 116–127. doi:10.1037/1089-2699.6.1.116
- McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology*, 14(1), 6–23. doi:10.1002/1520-6629(198601)14:1<6::AID-JCOP2290140103>3.0.CO;2-I
- Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *The Journal of Applied Psychology*, 78(4), 538–551. doi:10.1037/0021-9010.78.4.538
- Meyer, J. P., Becker, T. E., & Van Dick, R. (2006). Social identities and commitments at work: Toward an integrative model. *Journal of Organizational Behavior*, 27(5), 665–683. doi:10.1002/job.383

- Michinov, N., Michinov, E., & Toczec-Capelle, M.-C. (2004). Social identity, group processes, and performance in synchronous computer-mediated communication. *Group Dynamics*, 8(1), 27–39. doi:10.1037/1089-2699.8.1.27
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23(2), 242–266. doi:10.2307/259373
- Obst, P., & White, K. M. (2007). Choosing to belong: The influence of choice on social identification and psychological sense of community. *Journal of Community Psychology*, 35(1), 77–90. doi:10.1002/jcop.20135
- Oh, H., Chung, M.-H., & Labianca, G. (2004). Group social capital and group effectiveness: The role of informal socializing ties. *Academy of Management Journal*, 47(6), 860–875. doi:10.2307/20159627
- Omoto, A. M., & Malsch, A. M. (2005). Psychological sense of community: Conceptual issues and connections to volunteerism-related activism. In Omoto, A. M. (Ed.), *Processes of Community Change and Social Action* (pp. 83–104). Mahwah, NJ: Lawrence Erlbaum.
- Pickering, J. M. K., & John Leslie. (1995). Hardwiring weak ties: Interorganizational computer-mediated communication, occupational communities, and organizational change. *Organization Science*, 6(4), 479–486. doi:10.1287/orsc.6.4.479
- Postmes, T., Spears, R., & Lea, M. (2000). The formation of group norms in computer-mediated communication. *Human Communication Research*, 26(3), 341–371. doi:10.1111/j.1468-2958.2000.tb00761.x
- Postmes, T., Spears, R., Lee, A. T., & Novak, R., J. (2005). Individuality and social influence in groups: Inductive and deductive routes to group identity. *Journal of Personality and Social Psychology*, 89(5), 747–763. doi:10.1037/0022-3514.89.5.747
- Putnam, R. D. (1996). Bowling alone: America's declining social capital. *Journal of Democracy*, 6(1), 65–78. doi:10.1353/jod.1995.0002
- Redman, T., & Snape, E. (2005). Unpacking commitment: Multiple loyalties and employee behaviour. *Journal of Management Studies*, 42(2), 301–328. doi:10.1111/j.1467-6486.2005.00498.x
- Ren, Y., Kraut, R., & Kiesler, S. (2007). Applying common identity and bond theory to design of online communities. *Organization Studies*, 28(3), 377–408. doi:10.1177/0170840607076007
- Rheingold, H. (1993). *The virtual community: Homesteading on the electronic frontier*. Reading, MA: Addison-Wesley.
- Ridings, C. M., & Gefen, D. (2004). Virtual community attraction: Why people hang out online. *Journal of Computer-Mediated Communication*, 10(1).
- Ritekka, M. (2005). Organizational identification: A meta-analysis. *Journal of Vocational Behavior*, 66(2), 358–384. doi:10.1016/j.jvb.2004.05.005
- Rothaermel, F. T., & Sugiyama, S. (2001). Virtual Internet communities and commercial success: Individual and community-level theory grounded in the atypical case of TimeZone.com. *Journal of Management*, 27(3), 297–312. doi:10.1016/S0149-2063(01)00093-9
- Sarason, S. B. (1974). *The psychological sense of community: Prospects for a community psychology*. San Francisco, CA: Jossey-Bass.

Sassenberg, K. (2002). Common bond and common identity groups on the Internet: Attachment and normative behavior in on-topic and off-topic chats. *Group Dynamics*, 6(1), 27–37. doi:10.1037/1089-2699.6.1.27

Spears, R., Lea, M., & Postmes, T. (2007). CMC and social identity . In Joinson, A. N., McKenna, K. Y. A., Postmes, T., & Reips, U.-D. (Eds.), *The Oxford Handbook of Internet Psychology* (pp. 253–279). London: Oxford University Press.

Sproull, L., & Kiesler, S. (1986). Reducing social context cues: Electronic mail in organizational communication. *Management Science*, 32(11), 1492–1512. doi:10.1287/mnsc.32.11.1492

Tanis, M., & Postmes, T. (2005). A social identity approach to trust: Interpersonal perception, group membership and trusting behaviour. *European Journal of Social Psychology*, 35, 413–424. doi:10.1002/ejsp.256

Turner, J. W., Grube, J. A., & Meyers, J. (2001). Developing an optimal match within online communities: An exploration of CMC support communities and traditional support. *The Journal of Communication*, 51(2), 231–251. doi:10.1111/j.1460-2466.2001.tb02879.x

Van Knippenberg, D., & Sleebos, E. (2006). Organizational identification versus organizational commitment: Self-definition, social exchange and job attitudes. *Journal of Organizational Behavior*, 27(5), 571–584. doi:10.1002/job.359

Walther, J. B. (1996). Computer mediated communication: Impersonal, interpersonal and hyperpersonal interaction. *Communication Research*, 22(1), 33–43.

Walther, J. B., Slovacek, C. L., & Tidwell, L. C. (2001). Is a picture worth a thousand words?: Photographic images in long-term and short-term computer-mediated communication. *Communication Research*, 28(1), 105–134. doi:10.1177/009365001028001004

Wasko, M., & Faraj, S. (2005). Why should I share? Examining social capital and knowledge contribution in electronic networks of practice. *Management Information Systems Quarterly*, 29(1), 247–253.

Weis, R., Stamm, K., Smith, C., Nilan, M., Clark, F., & Weis, J. (2003). Communities of care and caring: The case of MSWatch.com(R). *Journal of Health Psychology*, 8(1), 135–148. doi:10.1177/1359105303008001449

Wellman, B., & Guilia, M. (1999). Net Surfers don't ride alone: Virtual communities as communities. In Wellman, B. (Ed.), *Networks in the Global Village: Life in Contemporary Communities* (pp. 331–366). Boulder, CO: Westview.

Wellman, B., Haase, A. Q., Witte, J., & Hampton, K. (2001). Does the internet increase, decrease, or supplement social capital? Social networks, participation and community commitment. *The American Behavioral Scientist*, 45(3), 437–456. doi:10.1177/00027640121957286

## **ADDITIONAL READING**

Abrams, D., & Hogg, M. A. (2001). Collective Identity: Group Membership and Self-Conception . In Hogg, M. A., & Tindale, R. S. (Eds.), *Blackwell Handbook of Social Psychology: Group Processes* (pp. 425–460). Oxford, UK: Blackwell. doi:10.1002/9780470998458.ch18

Ahuja, M. K., & Galvin, J. E. (2003). Socialization in virtual groups. *Journal of Management*, 29(2), 161–185. doi:10.1177/014920630302900203

Akkirman, A., & Harris, D. (2005). Organizational communication satisfaction in the virtual workplace. *Journal of Management Development*, 24(5), 397–409. doi:10.1108/02621710510598427

- Allan, B., & Lewis, D. (2006). The impact of membership of a virtual learning community on individual learning careers and professional identity. *British Journal of Educational Technology*, 37(6), 841–852. doi:10.1111/j.1467-8535.2006.00661.x
- Ardichvili, A. (2008). Learning and knowledge sharing in virtual communities of practice: Motivators, barriers, and enablers. *Advances in Developing Human Resources*, 10(4), 541–554. doi:10.1177/1523422308319536
- Ashforth, B., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review*, 14(1), 20–39. doi:10.2307/258189
- Ashforth, B. E., Harrison, S. H., & Corley, K. G. (2008). Identification in organizations: An examination of four fundamental questions. *Journal of Management*, 34(3), 325–374. doi:10.1177/0149206308316059
- Ashforth, B. E., Kreiner, G. E., & Fugate, M. (2000). All in a day's work: Boundaries and micro role transitions. *Academy of Management Review*, 25(3), 472–491. doi:10.2307/259305
- Blanchard, A. (2007). Developing a sense of virtual community measure. *Cyberpsychology & Behavior*, 10(6), 827–830. doi:10.1089/cpb.2007.9946
- Butler, B., Sproull, L., Kiesler, S., & Kraut, R. (2007). Community Effort in online groups: who does the work and why? In Wiesband, S. (Ed.), *Leadership at a distance: Research in Technologically-Supported Work* (pp. 346–362). Hillsdale, NJ: Lawrence Erlbaum and Associates.
- Chipuer, H. M., & Pretty, G. H. (1999). A review of the sense of community index: Current uses, factor structure, reliability and further development. *Journal of Community Psychology*, 27(6), 643–658. doi:10.1002/(SICI)1520-6629(199911)27:6<643::AID-JCOP2>3.0.CO;2-B
- Clark, S. C. (2002). Employees' sense of community, sense of control, and work/family conflict in Native American organizations. *Journal of Vocational Behavior*, 61(1), 92–108. doi:10.1006/jvbe.2001.1846
- Constance A. Steinkuehler, D. W. (2006). Where everybody knows your (screen) name: Online games as “third places”. *Journal of Computer-Mediated Communication*, 11(4), 885–909. doi:10.1111/j.1083-6101.2006.00300.x
- Culnan, M. J. (2008). Online communities: Infrastructure, relational cohesion and sustainability. In Elliott, M. S., & Kraemer, K. L. (Eds.), *Computerization Movements and Technology Diffusion: From Mainframes to Ubiquitous Computing* (pp. 239–259). Medford, NJ: Information Today.
- Fisher, A. T., Sonn, C. C., & Bishop, B. J. (2002). *Psychological sense of community: Research, applications and implications*. New York: Kluwer Academic/Plenum Publishers.
- Hogg, M., Sherman, D., Dierselhuis, J., Maitner, A., & Moffitt, G. (2007). Uncertainty, entitativity, and group identification. *Journal of Experimental Social Psychology*, 43(1), 135–142. doi:10.1016/j.jesp.2005.12.008
- Hogg, M., & Terry, D. (2000). Social identity and self-categorization processes in organizational contexts. *Academy of Management Review*, 25(1), 121–140. doi:10.2307/259266
- Jones, Q. (1997). Virtual-communities, virtual settlements & cyber-archaeology: A theoretical outline. *Journal of Computer-Mediated Communication*, 3(3).
- Lea, B. R., Yu, W. B., Maguluru, N., & Nichols, M. (2006). Enhancing business networks using social network based virtual communities. *Industrial Management & Data Systems*, 106(1), 121–121. doi:10.1108/02635570610641022

- Mael, F., & Ashforth, B. (1992). Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior*, *13*(2), 103–123. doi:10.1002/job.4030130202
- Obst, P., Smith, S. G., & Zinkiewicz, L. (2002). An exploration of sense of community, Part 3: Dimensions and predictors of psychological sense of community in geographical communities. *Journal of Community Psychology*, *30*(1), 119–133. doi:10.1002/jcop.1054
- Obst, P., Zinkiewicz, L., & Smith, S. G. (2002a). Sense of community in science fiction fandom, Part 1: Understanding sense of community in an international community of interest. *Journal of Community Psychology*, *30*(1), 87–103. doi:10.1002/jcop.1052
- Obst, P., Zinkiewicz, L., & Smith, S. G. (2002b). Sense of community in science fiction fandom, Part 2: Comparing neighborhood and interest group sense of community. *Journal of Community Psychology*, *30*(1), 105–117. doi:10.1002/jcop.1053
- Parker, M. (1997). Dividing organizations and multiplying identities. In Munro, R., & Hetherington, K. (Eds.), *Ideas of difference: Social spaces and the labour of division (Vol. 9, pp. 114–138)*. Oxford, UK: Blackwell.
- Perkins, D. D., & Long, D. A. (2002). This neighborhood sense of community and social capital: A multi-level analysis. In Fisher, A. T., Sonn, C. C., & Bishop, B. J. (Eds.), *Psychological sense of community: Research, applications, and implications* (pp. 291–316). New York: Kluwer Academic/Plenum Publishers.
- Prentice, D. A., Miller, D. T., & 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. doi:10.1177/0146167294205005
- Roberts, L. D., Smith, L. M., & Pollock, C. M. (2002). MOOing till the cows come home: The sense of community in virtual environments. In Fisher, A. T., Sonn, C. C., & Bishop, B. J. (Eds.), *Psychological sense of community: Research, applications, implications* (pp. 223–245). New York: Kluwer Academic/Plenum Publishers.
- Snape, E., & Redman, T. (2003). An evaluation of a three-component model of occupational commitment: Dimensionality and consequences among United Kingdom human resource management specialists. *The Journal of Applied Psychology*, *88*(1), 152–159. doi:10.1037/0021-9010.88.1.152
- Utz, S. (2008). Social identification with virtual communities. *Mediated Interpersonal Communication*, *1*(1), 252.
- Walther, J. (2007). Selective self-presentation in computer-mediated communication: Hyperpersonal dimensions of technology, language, and cognition. *Computers in Human Behavior*, *23*(5), 2538–2557. doi:10.1016/j.chb.2006.05.002
- Wellman, B., Salaff, J., Dimitrova, D., Garton, L., Gulia, M., & Haythornthwaite, C. (1996). Computer networks as social networks: Collaborative work, telework, and virtual community. *Annual Review of Sociology*, *22*(1), 213–238. doi:10.1146/annurev.soc.22.1.213
- Witt, L., Patti, A., & Farmer, W. (2002). Organizational politics and work identity as predictors of organizational commitment. *Journal of Applied Social Psychology*, *32*(3), 486–499. doi:10.1111/j.1559-1816.2002.tb00226.x

## **KEY TERMS AND DEFINITIONS**

**Occupational Commitment:** Commitment to a specific profession or occupation beyond any feelings of commitment to a particular organization.

**Occupational Identity:** Feelings of identity that develop with one's profession or occupation. Super-ordinate identity applied to a particular type of job.

**Personal Identity:** The development of an understanding of others in the virtual community as well as the creation of one's own identity to be presented to the rest of the group.

**Professional Sense of Virtual Community:** Sense of virtual community that develops in professional virtual communities.

**Sense of Virtual Community:** Member's feelings of identity, belonging, and attachment with each other in their online groups.

**Sub-Ordinate Identity:** Feelings of identity that develop with a particular, interacting group. Although theoretically similar to super-ordinate identity, it is tied to a particular group.

**Super-Ordinate Identity:** Feelings of identity that develop with large, non-interacting groups (e.g., ethnicity).

**Virtual Community:** Groups of people who interact primarily through information and communication technologies (ICT).