

Framing participation in organizational online communities: research challenges

Pär J. Ågerfalk, Mats Edenius, Stefan Hrastinski

Uppsala University, Sweden

par.agerfalk@dis.uu.se, mats.edenius@nita.uu.se, stefan.hrastinski@dis.uu.se

Abstract. Although many organizations have started to experiment with online communities, there is little theoretically grounded knowledge on how to develop, manage and improve such communities. In addressing this gap, we explore how participation in organizational online communities can be framed with the purpose to identify future research challenges. By conceptualizing the online community phenomenon the paper reflects on what motivates people and organizations to participate in such communities. Special attention is given to organizational online communities and potential research areas. A number of imminent research challenges are suggested.

Introduction

During the last twenty years, we have seen a transition from an industrial economy towards an information and knowledge economy. Human intellect and knowledge together with IT has become the key drivers for gaining competitive advantage. Older organization paradigms with a focus on stability, hierarchy and clear boundaries have been overshadowed by newer paradigms, which argue that “modern” organizations are characterized by horizontal decision-making, flexibility, agility and resilience (Ciborra, 1996; Winter & Taylor, 1996; Riolli & Savicki, 2003; Lengnick-Hall, 2005).

IT has made it possible for employees not only to take part in and make decisions regarding complex processes, but also to be more aware of ideas and contributions of colleagues. Nowadays, employees can use IT to communicate and coordinate their experiences and contributions with colleagues. IT has mediated a variety of “spaces of interaction” (Dhar & Sundararajan, 2007) and we

have reached the age of “social software”. This phenomenon has been described in different terms and researchers have offered different definitions based on specific foci. Concepts like networks of practice, virtual groups and virtual and online communities have flourished the last 10 years.

In this paper, we use the term *online communities* to capture how IT-based “spaces of interaction” can be used for instrumental reasons or in terms of shared interests and social support. It is important to understand online community development because of their potential to enable collaboration and learning among individuals separated by physical distance and organizational boundaries (Koh, Kim, Butler & Bock, 2007). However, despite the contemporary discussion, there is a lack of research on online communities in organizational settings. Even though many organizations experiment with online communities, there is little theoretically grounded knowledge on how to develop, manage and improve such communities (Ren, Kraut & Kiesler, 2007; Wiertz & de Ruyter, 2007), i.e. the organizing process of online communities in a professional context. In fact, in a literature review on online communities between 1993 and 2006, Hercheui (2007) only identified two studies that have examined online communities in an institutional or organizational context.¹ In addressing this gap, this paper explores how participation in organizational online communities can be framed with the purpose to identify future research challenges.

The remainder of the paper is structured as follows: First we discuss what online community means and how and why people participate in online communities. Then we give special attention to online communities in organizational settings and suggest future research challenges. Finally, a brief concluding section is provided.

Online communities

An *online community* can be defined as an “Internet-connected collective of people who interact over time around a shared purpose, interest or need” (Preece, 2000; Ren et al., 2007, p. 378). Some online communities interact purely online while others engage in both offline and online interaction (Andrews, 2002). As an example, many of the more successful open source communities combine ongoing online collaboration with developer meetings, such as the Apache conferences, the Zope/Plone and PyPy development sprints (Goth, 2007; Sigfridsson, Avram, Sheehan, & Sullivan, 2007) and the GNOME annual project conferences (German, 2004), which bring together developers to work on specific tasks and to coordinate and plan future efforts.

¹ It should be noted, though, that there have been some initial efforts. For example, Wenger, McDermott and Snyder (2002) writes about how to cultivate online communities of practice and Wiertz and de Ruyter (2007) have studied factors influencing the quality and quantity of knowledge contributions in online communities.

Online communities can enable colleagues to communicate, learn and take on roles in different ways as compared to traditional meetings, which are restricted by time and place. This development parallels that of the “Web 2.0”, which has transformed web users from being passive consumers of information towards being active producers of content. Thus, as foreseen by Flores (1998) the web has become an arena for learning and innovation. O’Reilly (2005) argues that enabling social networks by taking advantage of emerging social media is key to commercial success on the Web. In order to exploit this potential, organizations need to learn to trust that their customers can innovate in collaboration with their employees.

Online communities and other applications in line with the Web 2.0 concept enable users to engage in collaboration and it is the users themselves that create the content. This does not necessarily mean that online communities are not governed by rules. Graham (1999) maintains that online social networks are characterized by the existence of joint interest and rules. Many authors argue that social norms is what keeps social networks together and support the creation of identity and boundaries, which may drive participation in online communities, an issue that we return to below.

The debate has been intensive and we have also been informed regarding downsides of online communities. For example, some have questioned whether democratic ideals are adhered to in online communities, suggesting many communities are rather like “benevolent dictatorships” (Raymond, 1999). This debate is important and opens for a discussion of what is new with online communities and how organizations can take advantage of such emerging technologies.

Conceptualizing participation in online communities

Online communities would be nothing without its members, but what makes employees participate in online communities? Prior to reflecting on this question, it is necessary to define what *online participation* actually is. A commonly held assumption that some researchers have increasingly come to challenge is that participation is often measured as the number or length of contributions (Hrastinski, 2007b; Vonderwell & Zachariah, 2005). However, much reading or listening is not passive since it may encompass engagement, thought and reflection (Romiszowski & Mason, 2004). The community of practice perspective (Wenger, 1998) has commonly been adopted when studying participation in online communities (Wellman, 2001). If our knowledge of ‘real’ world communities is of any help, it has been shown that the benefits that are derived from communities of practice can be easily disrupted or even destroyed through involvement of management, in attempting to (re-)organise work.

Wenger (1998) defines participation as “a process of taking part and also to the relations with others that reflect this process” (p. 55). He views participation as a complex process that combines doing, talking, thinking, feeling and belonging. Wenger argues that participation is not a separate activity that can be turned on and off. Thus, it should be clarified that we may participate socially even at times when we are not engaged in a conversation with someone. This is in keeping with Weber’s (1978) classical view of social action as behaviour to which meaning is attached and that takes into account the behaviour of others but may not necessarily involve them directly:

“From [my] perspective our engagement with the world is social, even when it does not clearly involve interactions with others. Being in a hotel room by yourself preparing a set of slides for a presentation the next morning may not seem like a particularly social event, yet its meaning is fundamentally social. Not only is the audience there with you as you attempt to make your points understandable to them, but your colleagues are there too, looking over your shoulder, as it were, representing for you your sense of accountability to the professional standards of your community. A child doing homework, a doctor making a decision, a traveler reading a book – all these activities implicitly involve other people who may not be present.” (Wenger, 1998, p. 57)

The quote above illustrates the complexity of studying participation in online communities. It implies that participation is not tantamount to talking or writing. From this perspective, it is not enough to measure how much is being communicated in an online community.

Why do people participate in online communities?

In the literature, at least two key explanations for why people participate in online communities can be discerned. Members of an online community may not only establish a relationship with the community as a whole, but may also build relationships with individuals of the community (Wiertz & de Ruyter, 2007). In social psychological studies of voluntary real-world groups, such as fraternities and clubs, the concepts of *common identity* and *common bond* have been defined: “The distinction between identity and bond refers to people’s different reasons for being in a group, that is, because they like the group as a whole – identity-based attachment, or because they like individuals in the group – bond-based attachment” (Ren et al., 2007, p. 308). In an online community, it is likely that both identity and bond influences participation and attachment to online communities.

In a recent literature review, Ren et al. (2007) also identify antecedents of common identity and common bond in online communities. They conclude that the following are key causes of common identity:

- Social categorization; i.e. members are part of the same social category (e.g. share an interest),
- Interdependence; e.g. members are interdependent because of a joint task or common purpose,
- Intergroup comparisons; e.g. members compare themselves to other groups.

They furthermore conclude that the following are key causes of common bond:

- Social interaction supports people in getting to know each other and build trust,
- Personal information; i.e. people are more likely to form relationships if they learn about each other,
- Personal attraction through similarity; i.e. people are more likely to interact with others of similar preferences, attitudes and values.

Whether or not identity or bond is most significant when it comes to organizational online communities is an open question. In any case, designing for participation in organizational online communities may have to serve multiple purposes, which increases the complexity of the design process. In research on online communities, four themes can be discerned (Hercheui, 2007), which encompass both common identity and common bond:

- (1) Online communities are driven by sharing information and knowledge and can give social and emotional support,
- (2) Online communities can support (or hinder) the development of “social capital”,
- (3) Online communities enable people to participate in new arenas and create social networks (but can also isolate people),
- (4) Online communities are arenas for creating shared identity.

In relation to (1), members of an online community contribute time, energy and other resources that enable a social structure that might be perceived positively by others. Information, influence and social feedback are often quoted as the basis of the social structure that attracts members (e.g. Butler, 2001).

Point (2) emphasizes that online communities can bring people into new environments and help establish new contacts, but may also isolate people. Also, participation in online communities may change the way people prefer to interact socially (e.g. Katz & Rice, 2002).

Just like any social setting, online communities are governed by more or less explicit norms and regulations. That open communities are built upon democratic principles and voluntariness does not mean that the interaction and communication is anarchistic or chaotic. On the contrary, most communities have ways of dealing with people that behave in unaccepted ways (e.g. Graham, 1999) and some impose quite strong leadership, as noted above.

What, then, is it that drives people to seemingly altruistically contribute time and knowledge without any apparent payback, at least not in direct monetary

terms? Lerner & Tirole (2002) suggest that the main driving force is actually rather egocentric. According to their study of open source programmers, the two main incentives to participate are ego-gratification and career concerns. By contributing to a community, people build reputation and gain respect, which thus appears to be the main driving force. As pointed out by Flores (1998) and further explored by Ågerfalk & Sjöström (2007), an online community with associated website can be seen as an arena for cultivating identity – both private and corporate. Committing to a cause that is central to a community and showing that commitment through active participation will make a person or organization look good, thus cultivating their identity. The interplay between satisfying ones ego in an identity cultivating process and the contributions one does in that process appears central to the success of an online community (Ågerfalk & Sjöström, 2007).

It should be noted that drivers for participation in online communities in institutional contexts is not necessarily the same as in interest-based online communities. While organizational online communities probably retain at least some fidelity to their “traditional” counterparts, new expectations certainly appear in a more professional and commercial context (cf. Ågerfalk & Fitzgerald, 2008). In this context, it is also interesting to note the contemporary discourse on the standing of the knowledge worker, who is here seen as quite autonomous within the organization. This view certainly questions the suitability of conventional management perspectives, which distinguish clearly between management and planning, on the one hand, and workers as performers of duties, on the other (Alvesson, 2004; Robertson & Good, 2003). An alternative perspective is that of Florida (2002) who views the knowledge worker as both manager and performer.

Research challenges in organizational settings

In the future, employees will increasingly be used to participating in *organizational online communities*. In line with this development, there is a general trend that employees use Web 2.0 technologies to support collaboration. Employees will have access to technologies and be able to decide how to use them, while organizations will have difficulties in limiting and controlling such uses. Online communities make new ways of collaborating possible and changes how organizations harness knowledge and their capability to innovate. While some managers fear the growth of online communities, “smart” organizations can take advantage of collective capability to spur innovation and capability (Tapscott & Williams, 2006).

In future research, there is a need to contribute towards understanding how participation in organizational online communities can be supported and what participating in online communities mean. This is an emerging research topic with few answers. Because organizational online communities have not been

frequently studied, we believe that the case study approach with rich descriptions of small samples of communities is an important first step in understanding organizational online communities better (Ross, 2007). With such an ambition in mind, a number of questions need to be asked.

How can organizational online communities be managed? How can participation be motivated in organizational online communities? An essential difference between managing organizations and online communities is that online communities depend on members' contributions. A premise of online communities is that participation is driven by a shared purpose, interest or need. People who run online communities generally have less authority and control over community members, as compared with managers of formal work organizations who can rely upon employment contracts and financial incentives (Ren et al., 2007). *How are online communities evolving over time? How can participation be motivated in dynamically evolving online communities? What makes communities and associated social software sustainable?* Ren et al. (2007) maintain that identity-based attachment may evolve into bond-based attachment and vice versa. For example, those who begin participating in an online community because of their interest may make friends in the community. Thus, we need a deeper understand of how to design for participation in dynamically evolving communities, in which reasons for individual participation may change over time. In this context it is interesting to note phenomena such as the extreme rise in popularity of Facebook, which seems to have turned rather cold after the initial hype.

When doing research in this field it must be taken into account that organizations use various technologies for collaboration between colleagues, with customers and across organizational boundaries. An online community may be established by using various technologies, such as e-mail, discussion board, video conferencing and instant messaging, and complemented by face-to-face meetings and phone calls. Recent research suggest that we are moving towards taking advantage of a plethora of complementing media, at least when maintaining strong relational ties with others (Haythornthwaite, 2005). In light of this, together with the tentative discussion above, more specifically we suggest the following five areas for research on organizational online communities:

Research area #1: Communities within organizations. Online communities can enable collaboration between employees within an organization. For example, there has been a mass adoption of instant messaging to support informal e-collaboration in organizations around the world (Hrastinski, 2007a). Consequently, it is likely that online communities will become as natural as e-mail is today in the foreseeable future. However, we have become aware of that e-mail also generates a lot of problem for organizations as well as workers in terms of overload, spam and stress. A suggested research questions is how participating in online communities can become part of workers everyday life.

Research area #2: Communities across organizations. Online communities can enable collaboration between employees of different organizations. For example, in fast-moving industries such as computer hardware, engineers often form a community to keep up with the constant changes in technology, even though not explicitly supported by management (Wenger et al., 2002). Opensourcing (Ågerfalk & Fitzgerald, 2008), i.e. company-led open source projects, is a good example of this. A suggested research question is how online communities should be managed in terms of loyalty and identity in online communities.

Research area #3: Communities of customers. Organizations can use online communities in a number of “purposes, such as building relationships with their customers, getting their feedback, strengthening the brand, and reducing customer service costs by enabling peer-to-peer problem solving” (Wiertz & de Ruyter, 2007, p. 347). A suggested research question is how and if an organization should show its identity and purposes in communities of customers.

Research area #4: Open innovation through open communities. Ross (2007) suggests that identifying and suggesting relevant open online communities to employees can be a simple way of encouraging organizational learning. In fact, in many cases, communities across organizations use open communities as “neutral” meetings spaces, as illustrated by the example of the hardware engineers above. Following O’Reilly’s recommendation to trust users (customers), and even competitors, as co-developers opens up for new exciting ways of bringing in fresh ideas into the company. In a spirit of co-opetition (Brandenburger & Nalebuff, 1996), this could certainly be a way to leverage Goldman & Gabriel’s (2005) catchphrase “innovation happens elsewhere”. A suggested research question is when an open innovation process should be closed and how should it should be organized in terms of business models, etc.

Research area #5: Organizational adoption of open and social software. We see two different ways that open and social software may be adopted in an organization. First, management may promote the use of open tools and participation in online communities. We may refer to this as the *management control* approach. With this approach, finding incentives for people to participate in open communities are at the fore. However, what appears to be happening in many organizations is that employees start participating in online communities, or adopting various open source software products, without management approval. This may lead to organizations moving into this area unknowingly and at some point this may cause severe disruption. We may refer to this as the *evolutionary disruption* approach. Evolutionary disruption is likely even harder to manage than other disruptive technology adoption (Lyytinen & Rose, 2003a, 2003b) as the emergent nature of the phenomenon allows for organizational culture and behaviour to change gradually over time. Clearly, Florida’s (2002) view of the knowledge worker, as mentioned above, is particularly interesting to contrast with traditional management theories in this context.

Conclusion

This paper has addressed the emerging phenomenon of organizational online communities, and particularly how to frame this phenomenon in terms of participation. The purpose of the paper was not to provide answers but rather to serve as food for thought as a foundation for future research. We hope that this starter was digestible and look forward to the main course.

References

- Ågerfalk, P. J., & Fitzgerald, B. (2008). Outsourcing to an unknown workforce: Exploring opensourcing as an offshore sourcing strategy. *MIS Quarterly*, 8(2), 385–409.
- Ågerfalk, P. J., & Sjöström, J. (2007, 22–23 Oct). *Sowing the seeds of self: A socio-pragmatic penetration of the web artefact*. Paper presented at the 2nd International Conference on the Pragmatic Web, Tilburg, The Netherlands. New York: ACM.
- Alvesson, M. (2004). *Knowledge work and knowledge-intensive firms*. Oxford: Oxford University Press.
- Andrews, D. (2002). Audience-specific online community design. *Communications of the ACM*, 45(4), 64–68.
- Brandenburger, A. M., & Nalebuff, B. J. (1996). *Co-Opetition: A Revolution Mindset That Combines Competition and Co-operation*. New York: Doubleday.
- Butler, B. S. (2001). Membership Size, communication Activity and sustainability: A Resource-based Model of Online Social Structures. *Information Systems Research*, 12(4), 346–362.
- Ciborra, C. (1996). The platform organization: recombining strategies, structures, and surprises. *Organization Science*, 7(2), 103–118.
- Dhar, V., & Sundararajan, A. (2007). Information technologies in business: A blueprint for education and research. *Information Systems Research*, 18(2), 125–141.
- Flores, F. (1998). Information technology and the institution of identity: Reflections since understanding computers and cognition. *Information Technology & People*, 11(4), 352–372.
- Florida, R. L. (2002). *The rise of the creative class: And how it's transforming work, leisure, community and everyday life*. New York: Basic Books.
- German, D. M. (2004). The GNOME project: A case study of open source, global software development. *Software Process: Improvement and Practice*, 8(4), 201–215.
- Graham, G. (1999). *The Internet: A philosophical inquiry*. London: Routledge.
- Goldman, R., & Gabriel, R. P. (2005). *Innovation happens elsewhere: Open source as business strategy*, San Francisco: Morgan Kauffman Publishers.
- Goth, G. (2007). Sprinting toward open source development. *IEEE Software*, 24(1), 88–91.
- Haythornthwaite, C. (2005). Social networks and Internet connectivity effects. *Information, Communication & Society*, 8(2), 125–147.
- Hercheui, M. (2007). *An institutional analysis of governance structures: How institutional carriers influence decision-making processes in Brazilian environmental-education Internet-mediated communities*. London School of Economics.
- Hrastinski, S. (2007a). In support for informal synchronous e-collaboration. In N. Kock (Ed.), *Encyclopedia of e-collaboration* (pp. 349–354). Hershey, PA: Idea Group.
- Hrastinski, S. (2007b). *The potential of synchronous communication to enhance participation in online discussions*. Paper presented at the 28th International Conference on Information Systems, Montreal.
- Katz, J. E., & Rice, R. E. (2002). *Social Consequences of Internet Use: Access, Involvement and Interaction*. Cambridge, MA: MIT Press.

- Koh, J., Kim, Y. G., Butler, B., & Bock, G. W. (2007). Encouraging participation in virtual communities. *Communications of the ACM*, 50(2), 69-73.
- Lengnick-Hall, C. A. (2005). Adaptive fit versus robust transformation: How organizations respond to environmental change. *Journal of Management* (31:5), 738-757.
- Lerner, J., & Tirole, J. (2002). Some simple economics of open source. *The Journal of Industrial Economics*, 50(2), 197-234.
- Lyytinen, K., & Rose, M. G. (2003a). Disruptive information system innovation: The case of Internet computing. *Information Systems Journal*, 13(4), 301-330.
- Lyytinen, K., & Rose, M. G. (2003b). The disruptive nature of information technology innovations: The case of Internet computing in systems development organizations. *MIS Quarterly*, 27(4), 557-595.
- O'Reilly, T. (2005). What is web 2.0: Design patterns and business models for the next generation of software. Retrieved Aug 7, 2007, from <http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>
- Preece, J. (2000). *Online communities: Designing usability, supporting sociability*. Chichester, UK: John Wiley & Sons.
- Raymond, E. S. (1999). *The cathedral and the bazaar: Musings on Linux and open source by an accidental revolutionary*. Sebastopol, CA: O'Reilly.
- Ren, Y., Kraut, R., & Kiesler, S. (2007). Applying common identity and bond theory to design of online communities. *Organization Studies*, 28(3), 377-408.
- Rioli, L., & Savicki, V. (2003). Information system organizational resilience. *Omega: The International Journal of Management Science*, (31), 227-233.
- Robertson, J., & Good, J. (2003). Using a collaborative virtual role-play environment to foster characterization in stories. *Journal of Interactive Learning Research*, 14(1), 5-29.
- Romiszowski, A., & Mason, R. (2004). Computer-mediated communication. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 397-431). New Jersey: Lawrence Erlbaum.
- Ross, D. A. R. (2007). Backstage with the knowledge boys and girls: Goffman and distributed agency in an organic online community. *Organization Studies*, 28(3), 307-325.
- Sigfridsson, A., Avram, G., Sheehan, A., & Sullivan, D.K. (2007). Sprint-driven development: Working, learning and the process of enculturation in the PyPy community. In Feller, J. et al. (eds.), *Open Source Development, Adoption and Innovation*, IFIP Working Group 2.13 on Open Source Software, June 11-14, 2007, Limerick, Ireland. Springer, Boston.
- Tapscott, D., & Williams, A. D. (2006). *Wikinomics: How mass collaboration changes everything*. New York: Portfolio.
- Weber, M. (1978). *Economy and society*. Berkeley, CA: University of California Press.
- Wellman, B. (2001). Physical place and cyberplace: The rise of personalized networking. *International Journal of Urban and Regional Research*, 25(2), 227-252.
- Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge: Cambridge University Press.
- Wenger, E., McDermott, R., & Snyder, W. M. (2002). *Cultivating communities of practice*. Boston, MA: Harvard Business School Press.
- Wiertz, C., & de Ruyter, K. (2007). Beyond the call of duty: Why customers contribute to firm-hosted commercial online communities. *Organization Studies*, 28(3), 347-376.
- Winter, S.J., & Taylor, S. L. (1996). The role of IT in the transformation of work: a comparison of postindustrial, industrial and proto-industrial organization. *Information Systems Research*, 7(1), 5-21.
- Vonderwell, S., & Zachariah, S. (2005). Factors that influence participation in online learning. *Journal of Research on Technology in Education*, 38(2), 213-230.