

# Definition, Antecedents, and Outcomes of Successful Virtual Communities

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## INTRODUCTION

Howard Rheingold's (1993) book *The Virtual Community: Homesteading on the Electronic Frontier* was the first to bring virtual communities to the attention of researchers and practitioners. Although virtual groups have been examined previously, Rheingold's descriptions of participating in the WELL, an Internet-based bulletin board, vividly portrayed the potential of online social groupings. Rheingold told stories of people who had never met face-to-face providing socio-emotional and even financial support to each other through times of crisis and celebration.

Since then, the popularity of virtual communities (also known as online communities) has increased. Interacting with others online became more common as organizations and society began to perceive it as a normal behavior and not one engaged in primarily by the socially inept. Indeed, virtual communities became a typical mode of interaction for both work and social purposes. At work, employees have organizationally sanctioned virtual communities such as the company listserv as well as virtual communities for professionals to interact with each other outside their organizations (e.g., Charity-HR, a listserv for HR professionals in non-profit organizations). Some organizations have even developed virtual communities for their customers. Some of these virtual communities are for users of particular products, like the wristwatch enthusiasts (Rothaermel & Sugiyama, 2001). Others, however, are designed to allow customers to provide input for the company's new products and services (Catterall & Maclaran, 2002).

Virtual communities have also become quite common in social interactions. Many neighborhoods have developed listservs as well as electronic bulletin boards to allow neighbors to interact and share information. Social groups who interact face-to-face (FtF) may also use virtual communities to keep members informed and connected between their meetings. The most com-

mon social virtual community, however, may consist of people who are physically dispersed and never interact FtF. These virtual communities are formed around a shared interest in a particular topic. These topics range from movies, to food and wine, to pets, to political topics, and even to aspects of parenthood as evidenced by the hundreds of interactive sites on Babycenter.com.

## BACKGROUND

But what are virtual communities and what distinguishes them from mere virtual groups? Ironically, the definition of community has always been a bit difficult. Even among traditional, FtF communities, there are over 71 definitions (see Jones, 1997). Among the issues in defining FtF communities is whether communities need to be colocated, like a neighborhood, or whether they can be dispersed like a community of interest (e.g., stamp lovers).

Currently, community researchers agree that both co-located and dispersed groups can be communities. However, members of these groups must have a *sense of community* to be considered a community (McMillan & Chavis, 1986). Sense of community is defined as group members' feelings of belonging, identity, attachment, and influence among each other. By using this criterion, virtual communities can be defined as groups of people who interact primarily through e-collaboration technologies and who have developed feelings of belonging, identity, attachment, and influence (i.e., a sense of virtual community) with each other.

Virtual communities have degrees of virtuality. At one extreme are dispersed virtual communities, which exist entirely online. Members of dispersed virtual communities live in many different locations and do not interact with each other FtF. At the other extreme are colocated virtual communities in which members primarily meet FtF, and the e-collaboration technology

supplements their interactions. Virtual communities for employees co-located within a single organization as well as neighborhoods, and social/volunteer groups fall primarily into this type. In the middle are virtual communities that exist primarily online. Members may be dispersed or colocated; however, these members additionally interact FtF.

Virtual communities also exist over a variety of e-collaboration technologies (see Figure 1). These technologies can be asynchronous, in which communication is delayed like e-mail or bulletin boards, or synchronous, in which communication is instantaneous like instant messaging and chatrooms. Another key feature is whether the e-collaboration technologies allow one-to-one communication like instant messaging, one-to-many communication like blogs, other Web pages and some information distributing listservs or whether they allow many-to-many communications like bulletin boards and most interactive listservs. Other more advanced e-collaboration technologies allow avatars (pictorial representations of the communicators) as well as two-dimensional representations (e.g., rooms and parks) in which people can interact.

In general, virtual communities are valued because they are considered to have positive effects on both the organizations that sponsor them and within the general community in which they are used. In particular, they are believed to increase the amount of social and intellectual capital available in the organization or larger society. Social capital is defined as the networks, norms, and trust of a group (Putnam, 1996) while intellectual capital is defined as the knowledge that is created and shared within a group (see Bieber et al., 2002).

## **CURRENT ISSUES IN VIRTUAL COMMUNITIES**

One of the most pressing current issues in virtual community research is to understand virtual community success. Virtual community success is defined as the ability for the virtual community to sustain itself while meeting its members' needs and maintaining member satisfaction within the community.

Jones (1997) was one of the first researchers to seek to identify the characteristics of a successful virtual community. He takes an anthropological perspective, arguing that one can identify a successful virtual community when one can identify objective components

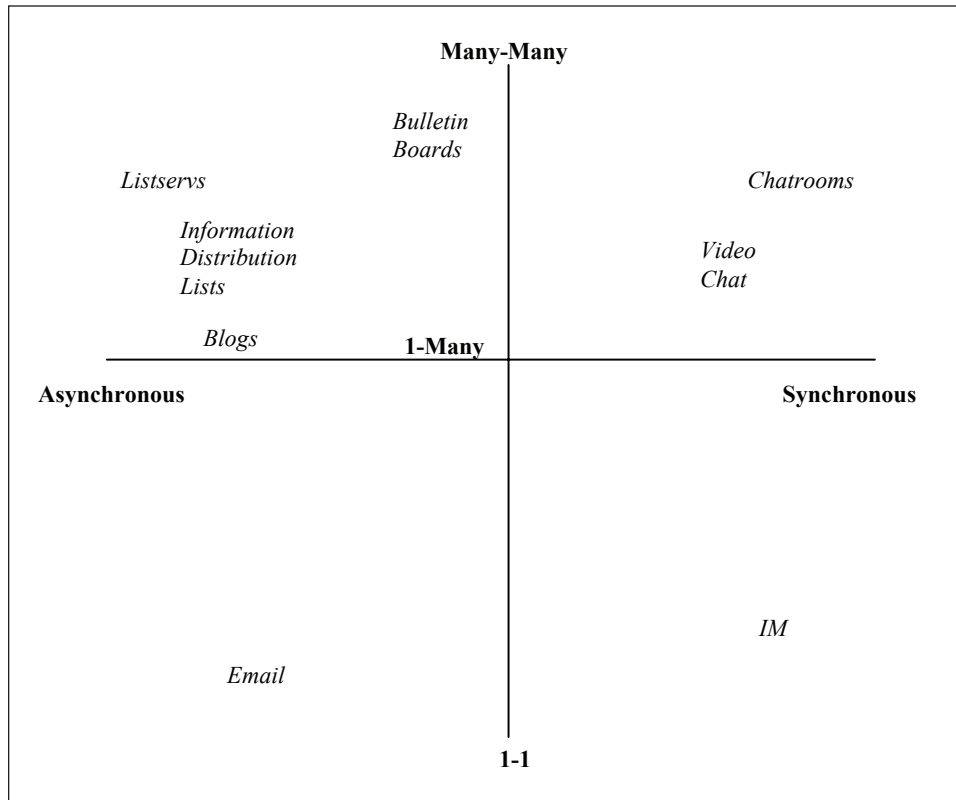
of the community's existence. He calls these objective features a *virtual settlement* and argues that they are composed of: (a) a minimal level of interactivity, (b) by a variety of communicators, (c) with a minimum level of sustained membership, and (d) interacting in a common public space. When these four features exceed a minimal threshold, then Jones argues that the online group can be called a virtual settlement. A virtual settlement is distinct from a virtual community like buildings are distinct from a village. However, he argues that once one has identified a virtual settlement, one is likely to have identified a virtual community.

Within successful virtual communities, researchers have additionally identified three types of members: leaders, participants, and lurkers. Leaders have assumed some sort of prominence in the group. Often, they are informal leaders without any sort of formal authority. Instead, leaders are generally prototypical members who are more likely to provide help and assistance to other members.

Participants are members who contribute to the public communications, but are not considered leaders. Lurkers simply read messages but do not publicly contribute to them. Lurkers are sometimes considered negatively (Kollock & Smith, 1996) because they free-load off the other members' contributions. However, this may only be true if the number of active participants is very small and they have to engage in a disproportionate amount of activity for the community to survive. If the total number of participants is high and the number of active participants is adequate enough to spread out the communication effort, then lurkers are not freeloaders. Blanchard and Markus (2004) found in the study of their virtual community that there were approximately 250 active participants and 16,775 lurkers. If each one of these lurkers posted just once, the sheer volume of messages would overwhelm the cognitive capacities of the virtual community members.

Researchers have additionally focused on the social processes of the virtual community participants. They have noted that successful virtual communities have developed particular social processes that help the community function. These include the exchange of socio-emotional and informational support between members, the development of trust between members, and the development and enforcement of norms of behavior.

Figure 1. Types of e-collaboration technologies by communication timing and number of communication partners



### Exchange of Information and Support

The exchange of information and socio-emotional support is one of the most important aspects virtual communities. Indeed, the primary reason that virtual communities attract so much attention is that the exchange of information and socio-emotional support has been found in such a wide variety of social groups as well as organizational groups and in open source communities.

One of the primary issues in this area revolves around why people are compelled to help others, particularly when they don't know the other members. Constant and his colleagues (1997) found that members who provide online help and support to others in a work virtual community are more likely to have a higher regard for and to be good citizens of the sponsoring work organization. That is, their assistance in the online group could be another form of their organizational citizenship behavior (i.e., pro-social extra-role behavior that helps organizational functioning). Other researchers

have found that members provide information when it enhances their status and demonstrates their expertise (Wasko & Faraj, 2005). Certainly, more helpful members of the group are considered more positively by the group, even if they are extreme in the amount of help they provide.

### Trust

The development and maintenance of trust is also considered very important in virtual communities (e.g., Boyd, 2002). One reason trust is an essential part of a successful virtual community is that deception is so easy online (Joinson & Dietz Uhler, 2002). Because communicators can remain anonymous, they can easily change relatively minor facets of themselves or their personalities such as their fudging their age, attractiveness or income level. With effort, they can change more major facets such as their gender or their persona. Although the minor forms of deception are not considered altogether inappropriate, the major forms of deception are (Utz, 2005).



Many virtual communities have developed ways of addressing this issue. Ironically, one of the more successful modes for developing trust is when virtual community members to meet face-to-face (Joinson, 2001; McKenna & Green, 2002). Even members who do not actually meet face to face, but hear of others who do believe that the group is more trustworthy (Blanchard & Markus, 2004). Other social processes include having members interact using their own name and their “real” e-mail addresses, as well as following the history of member’s posts.

## **Norms**

Finally, the development and enforcement of norms within virtual communities has generated a great deal of interest. Norms of behavior include the appropriate topics of conversations in the group as well as particular styles of communicating within the group. Successful virtual communities must satisfy their members by not only what is discussed but also how it is discussed. For example, health care communities should focus on health care while technological support communities should provide technological support. New members (i.e., newbies) should read the group’s FAQs before asking the “same question” that has been answered again and again. Additionally, some virtual communities do not allow members to post advertisements or conduct financial transactions in the group whereas other groups allow it in particular instances.

The actual patterns of communication may also differ between virtual communities with groups (Postmes, Spears, & Lea, 2000). Some groups may be high users of emoticons such as ;- ) and acronyms that require insider knowledge by group members. Thus, particular groups are able to distinguish themselves from each other by their unique communication styles, even if the different groups share some of the same members.

The reason members do (or do not) adhere to norms has been of special interest. One approach to understanding whether members follow the group’s norms has to do with the salience of the group member’s social or individual identity. Spears and Lea (1992) developed a model which argues that virtual community members either have their social identity salient (i.e., they identify as a member of the group) or their individual identity salient (i.e., they identify as a unique individual within the group). Members are going to be more susceptible to group processes when their group identity is salient.

## **Sanctions**

In addition to understanding why members develop and follow group norms, it is also interesting how members enforce their group’s norms, that is, how members sanction each other. This is particularly relevant because sanctioning is related to trust.

Norms of behavior are particularly difficult to enforce over e-collaboration technologies because people are removed from each other. If someone behaves inappropriately, it is difficult for other members to sanction them. Whereas in FtF groups, one could use nonverbal language (e.g., frowns, turning the body away) to inform others of their inappropriate behavior, this is not possible online. Instead, virtual community members can ignore the offending member, directly tell the member to stop their behavior, or try to have the member kicked out, which is difficult in non-moderated groups. Trolls, participants who enter groups specifically to challenge group norms, offer a particular challenge to both virtual community members to handle them and researchers in order to understand them.

Other sanctioning options depend on the e-collaboration technology. For example, members can be excluded in some technologies (particularly listservs) but not others (e.g., blogs). Content can be filtered by moderators in listservs but not bulletin boards.

The sanctioning options additionally highlight that although the social processes in virtual communities are quite important, the technological features of the different e-collaboration software are clearly important, too. Some researchers have approached this issue from a technological determinism approach. That is, if the technology is configured in a particular way, then a virtual community will likely develop upon it. The key then is to determine the correct configuration of e-collaboration technology that will support community. However, this approach to understanding virtual communities has fallen out of favor because it does not incorporate the social processes necessary to create and maintain a virtual community (e.g., Walther, 1996, 1997).

Others have thus argued that it is the interaction between the social processes and the technology that affect virtual community success. Indeed, Markus (2005) argues that the next stage of e-collaboration research must acknowledge that particular technological features do play an important role in how well the interactions are supported online. Her approach is not

that technology causes behavior online, but that certain technological features can support (or hinder) particular types of interaction, and, by extension, support (or hinder) the success of the virtual community.

Technological features that may affect virtual community success include the ability to save the community's messages, the ability to reply to messages and retain some part of the previous message, the ability to link threads of messages, the ability to communicate both publicly and privately, the ability to limit membership (or not), the ability to track other members' participation including time on the group, number of postings and type of postings, and the ability to detect if others who are currently "in" the community. Future research will need to theoretically and empirically link these technological features to the social processes.

Additionally, the topics discussed here have mainly addressed the success of virtual communities that have already been established. A great deal of research needs to be done in order to determine how virtual communities develop. For example, how easily can virtual communities be designed? Or are they more likely to evolve from an initial group of like-minded people? Certainly, our understanding of what makes an established virtual community successful will provide virtual community developers a goal to which to strive. Nonetheless, developers will have their own unique issues in creating and then maintaining a successful virtual community.

## **FUTURE TRENDS**

There are two future trends in virtual communities. First, the acceptance of e-collaboration technologies continues to increase. As a result, virtual communities are likely to continue develop, become more common, and become more accepted as a productive mode of developing and maintaining work and social relationships. Virtual communities of employees are likely to develop both within and between organizations. Businesses are also likely to pursue their development of virtual communities with customers as a way of promoting their products and developing brand loyalty.

Virtual communities will also continue to develop within society, particularly co-located virtual communities in which people use e-collaboration technologies as an additional mode of communication with their FtF partners. Thus, virtual communities will become

incorporated as another commonplace communication medium for neighbors, schools, and volunteer social and civic organizations.

The second future trend deals with the research on virtual communities. Researchers are just beginning to address how virtual communities influence organizations and society. Initial studies demonstrate that virtual communities generally have positive impacts on FtF social capital (Wellman, Haase, Witte, & Hampton, 2001) although there is little research of their effects on organizations. However, virtual communities of practice may provide a fruitful avenue of research in this area.

In order to better establish this line of research, it will continue to cross disciplinary and methodological boundaries. Because e-collaboration technologies cross the boundaries from work to home to community and to society, research on virtual communities that focuses on one particular discipline is likely to miss important components of virtual communities as well as great bodies of literature. Researchers from social psychology, community, and environmental psychology, organizational psychology and organizational behavior, information science and information technology, business and management, sociology, and communication all have a role to play in understanding virtual communities. This will require not only interdisciplinary thinkers but also training and academies that recognize the importance of cross-disciplinary approaches to understand this phenomenon.

Additionally, methodologies will continue to be diverse. Preece and Maloney-Krichner (2005) note in their special edition on virtual communities for the *Journal of Computer Mediated Communication* that virtual community methodologies range from ethnographies to linguistic analyses to case studies to survey research. Although experimentation is not as popular as it once was (Walther, 1996), clearly even laboratory experiments have a role in understanding virtual communities.

## **CONCLUSION**

Virtual communities have become established in organizations and society as a way for groups of people to interact, help, and connect with each other. Although some researchers still argue whether or not virtual communities exist, others argue that this question is only

relevant to those people who have not experienced it (Haythornwaite, Wellman, & Garton, 1998). As e-collaboration technologies become more integrated into people's everyday working and social lives, virtual communities will become common as a way for the average person to connect with others.

The next phase of virtual community research will be to better examine the antecedents and outcomes of successful virtual communities. The research has moved beyond merely descriptive accounts of virtual communities and is establishing theoretical insights into successful virtual communities. However, a challenge for researchers will be to identify the technical features of successful virtual communities without making claims about technological determinism. This will likely require a depth and breadth of knowledge of social processes and technology that is likely to cross traditional academic disciplines.

Finally, because of how quickly e-collaboration technologies develop and change, we can anticipate only that new forms of virtual communities are likely to develop and become popular. For example, blogs are a relatively new form of e-collaboration technology and already, they have become quite popular and have developed, in some cases, into virtual communities. The speed with which these technologies develop will challenge researchers to keep up with them and to identify the new technical features that contribute to or inhibit virtual groupings. Nonetheless, researchers must keep from becoming obsolete. Virtual communities now and in the future can provide important ways to contribute to the functioning and well-being of organizations and society.

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## KEY TERMS

**Common Bond Communities:** Virtual communities that form because of the members' relationships with each other.

**Common Identity Communities:** Virtual communities that form because of the members' interest in a particular topic.

**Co-Located Virtual Communities:** Virtual communities which are associated with a physical location. Members interact both online and face-to-face.

**Dispersed Virtual Communities:** Virtual communities which are not associated with a physical location. Members are dispersed around the globe and may not ever meet each other face-to-face.

**Emoticons:** Combinations of text that are believed to portray communicator emotions, for example, :- ) and :-(.

**Sense of Virtual Community:** Members' feelings of belonging, attachment, identity and influence with each other in a group supported by e-collaboration technology.

**Trolls:** Members who enter virtual communities with the primary objective of stirring up trouble among the established members

**Virtual Communities:** Also known as online communities, these are groups of people who interact primarily through e-collaboration technologies and who have developed a sense of community with each other.

**Virtual Settlements:** An e-collaboration technology supported group identified by a minimum number of interactive, public interactions by a variety of sustained contributors.

**Virtual Community Success:** When virtual communities are self-sustaining and meet the needs of their members and maintain member satisfaction