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# Classification Schema for Online Communities

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## Abstract

*A synthesis of the literature suggests that the key characteristics for classifying online communities are: (i) their attributes, (ii) supporting software, (iii) their relationship to physical communities, and (iv) the sociological concept of boundedness. A classification schema based on these four characteristics is presented in this paper. Examples of each type of community are discussed. These classification schema have important implications for the design and management of online communities.*

Computer networks, such as the Internet, have begun to connect people around the world. In the past, access to computer-mediated communication was mostly limited to employees in the government, military, or university research communities (King, Grinter, and Pickering, 1997), and to work-related tasks (Greif, 1988). As more diverse groups of people gain access to computer networks, a new type of communication group, known as an online community, has begun to emerge.

What is an online community (also called a virtual community or an electronic community)? Although there is an increasing amount of research being done on online communities, there is no standard definition, and there are several different classification schema. These classifications partially represent the different academic perspectives, of the technologist, sociologist, psychologist, etc. The purpose of this paper is to examine the different classification schema that have been presented for classifying online communities. Although these classification schema are by no means exclusive or exhaustive, they can assist in identifying online communities that are similar. Discovering these similarities may help to improve the development of different kinds of communities. For example, similar communities may benefit from similar technical design and structure. These communities may have similar needs, such as moderation. Within similarly structured online communities, there may be certain research methodologies that are more appropriate than others.

In the literature, four different schema for classifying online communities have been presented. These four schema classify communities by: (i) attributes, (ii) supporting software, (iii) relationship to physical communities, and (iv) boundedness.

## By Attributes

Online communities can be defined by the community attributes that the online community possesses. Some of the attributes of an online community might be:

- A shared goal or interest that provides the reason for being a part of the community
- Intense interactions and strong emotional ties
- Shared activities between community members
- Access to shared resources
- Support between community members
- Social conventions, language, or protocols (All from Whittaker, Isaacs, and O'Day, 1997)

Whittaker, Isaacs, and O'Day state that online communities that possess more of these community attributes may be clearer examples of communities (Whittaker, Isaacs, and O'Day, 1997). This concept can be taken further to suggest that online communities that have similar community attributes might be comparable. At this time, there is no "life cycle model" of online communities, which could aid in showing how these attributes contribute to online community development. Such a model might be helpful for determining the needs of an online community, based on the life cycle stage that the community is at. Preece (1998) has proposed such a model for the development of an online patient support community.

One of the attributes listed by Whittaker is a shared goal or interest. This shared interest can influence the behavior of the community. In a study of 100 online communities, Preece and Ghazati (1998) found that members of patient and emotional support communities were generally more empathic than members of other groups. Religious and sports communities exhibited the most hostility. Knowing about such behavioral differences may enable designers to tailor software supporting online communities to suit the needs of their members better.

Reid's work with the Internet Relay Chat (IRC) is based upon a similar attribute-based view of an online community (Reid, 1996). Reid discusses the social conventions used by users on IRC, such as emoticons (Reid, 1996). Reid says that it is necessary for IRC users to have social conventions, so that the intended meaning of their communication will not be lost.

Another important attribute of an online community is the population size. Gates states that an online community becomes more valuable as more people join the community (Gates, 1995). This conjecture is supported by Ackerman and Starr, who found that people only use a communication system if there is already a sizable number of people using it (Ackerman and Starr, 1996). This is called the “threshold effect.”

### **By Supporting Software**

An online community can be classified by the software (technology) that supports it. Many communities are supported using a listserver, newsgroup, bulletin board, Internet Relay Chat (IRC), or Multi-User Dungeon (MUD). These software technologies support the communication within the community, and can help to create the boundaries of the community. There are also some communities that are supported by a combination of communication tools, such as a newsgroup, listserver, and a web-based bulletin board (Lazar, Tsao, and Preece, 1997).

Some authors support this “software-based” definition of an online community. Jones considers an online community to be a community that is formed by computer-mediated communication software (Jones, 1995). Wilbur also defines an online community in this way. “[An online community] is the experience of sharing with unseen others a space of communication.” (Wilbur, 1997, p.13) However, by implying that members of the community must be “unseen others,” Wilbur limits the computer-mediated communication to only non-visual communication. There is, however, computer-mediated communication that may include still images and/or live video. Communities may be supported by software packages such as TeamRooms or CU-SeeMe, which provide for image transmission (Roseman and Greenberg, 1996; Dorsey, 1995).

### **By Relationship to Physical Communities**

Many online communities are based on traditional, physical communities. Online communities “...offer a means by which individuals can seek a new form of community, rather than shun a currently useful one” (Foster, 1997, p.31). Online communities differ in their relationship to physical communities. Kumiko Aoki created a simple model, classifying online communities based on the relationship to physical communities. Aoki’s model states that there are three types of online communities; those that are based on physical communities, those that are somewhat based on physical communities, and those that are not related to any physical communities (Aoki, 1994). We have expanded this model to more fully describe many of the types of online communities.

#### *Based on Physical Communities*

These online communities are usually geographically-focused. Examples of such communities include the Blacksburg Electronic Village (Cohill, 1997), and community freenets, such as those in Cleveland and Washington, D.C. (Schuler, 1994). The online communities are based on news, events, people, and locations in the physical community.

Government services can be provided via these online communities (Huff and Syrczek, 1997). Citizens can access government information, such as transit maps, license and permit information, waste collection schedules, and zoning information. It is also possible for citizens to contact their local government officials. But information in a geographically-based online community is not limited to government information. There is also educational information, business information, cultural information, religious information, sports information, and social information (Carroll and Rosson, 1996). There are even subcommunities within an online community. In the Blacksburg Electronic Village, senior citizens maintain a listserver for discussion, a calendar of local events, and a list of relevant links (Carroll and Rosson, 1996). In a geographically-based online community, face-to-face meetings can be frequent and on a regular schedule (Carroll and Rosson, 1996).

#### *Somewhat Based on Physical Communities*

These online communities are not wholly based on a specific geographic location. Members of these online communities have periodic face-to-face meetings. Examples of these communities include online scholarly communities (Gaines, Chen, and Shaw, 1997). In scholarly communities, community members may meet face-to-face periodically at conferences, but continuously communicate through computer-mediated communication channels. Other online communities that are somewhat based on physical communities include hobby-based communities, including those for sports teams, collectors, pet owners, religious groups, and other groups that meet periodically at competitions, conferences, swap meets, meetings, and retreats (Lazar, Tsao, and Preece, 1997). These communities may meet face-to-face periodically, but are in continuous communication through computer-mediated communication channels.

#### *Not Related to Any Physical Communities*

These online communities usually have no face-to-face meetings. Included in this classification are communities such as those that are based on role playing (Curtis, 1997) and support communities (Mickelson, 1997). One reason for belonging to these communities may be that people are geographically dispersed. Another reason is anonymity, the lack of face-to-face communication (Turkle, 1997). Users may prefer anonymity, because they want to create a different identity (Turkle, 1995) or share a painful memory, such as in a USENET newsgroup about sexual abuse (Rosenberg, 1997). In communities where anonymity is not an important factor, community members may begin to meet face-to-face. If these meetings begin to take place

on a more regular basis, then the community may change from a community that is not related to any physical community into a community that is somewhat based on a physical community. This is certainly a possibility, as online communities can change rapidly (Schuler, 1994).

### **By Boundedness**

Boundedness is a sociological concept, which relates to how many social relationships remain within the defined population of a group or community (Wellman, 1997). In a tightly bounded community, a majority of the social relationships, and therefore the communication, take place among the members of that community (Wellman, 1997). In a loosely bounded community, community members have more social ties with people who are outside of the defined community (Wellman, 1997).

Boundedness can be used to classify different types of online communities. The design, or the community members' actions, may determine the level of boundedness. Companies or organizations may decide that their online communities should be limited to people who work for that company, who live in a specific geographic area, or who are part of a specific population. By design, a computer network may be an intranet which is not connected to the Internet or to other outside networks. This may be done for security reasons, for productivity reasons, or because of an organization's culture. Social ties within those communities are tightly bounded, meaning that a majority of the communication and social ties occur within the community. At the other end of the spectrum, the Internet is the best example of a loosely bounded network (Wellman, 1997). Communication can take place between anyone in any number of communities around the world.

Not only can network design determine the level of boundedness, but community members may also decide the level of boundedness by their actions. Community members may decide to keep their community tightly bounded by having registration requirements as often occurs in listserver-based communities, to prevent outsiders joining in, as in Usenet communities. Members of communities with restricted access are often more empathetic (Preece, 1998).

### **Summary**

Each of these different classification schema provides a different perspective, with new insights into the purpose, structure, and needs of the online community. These insights are the first step in identifying different methodologies for both developing and researching online communities. Similar communities may, for example, indicate the need for similar methodologies for doing research within those communities. Different research methodologies (e.g. surveys, ethnography, and interviews) may be appropriate for studying different types of online communities. By examining the classification schema for online communities, we hope to help stimulate the process of assessing the appropriateness of different research methodologies, within the environment of an online community.

### *References*

References available upon request from Jonathan Lazar (jlazar1@umbc.edu).