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Virtual Community Studies: A Literature Review, Synthesis and Research Agenda

Honglei Li
The Chinese University of Hong Kong

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The Chinese University of Hong Kong
Honglei@baf.msmail.cuhk.edu.hk

ABSTRACT

This paper presented a literature review, a classification schema, and a research agenda for the virtual community studies. Thirty-six academic papers on virtual communities, published from 1996 to 2004, were reviewed. A classification of these studies, based on research similarities and patterns, resulted in five areas being identified--social perspective, business perspective, development issues, application issues, and methodology issues. A proposed research agenda was offered according to these classifications.

Keywords

Virtual communities, literature review, research agenda

INTRODUCTION

Virtual community study is an emerging research area that is gaining a lot of attention from varied disciplines. In the last decade, the number of virtual community studies has increased significantly not only in IS journals, but also in other business journals. Therefore, it is essential to have a review on what has been done and what has been accomplished because:

1. The current research is too divergent--it varies from medicines to psychology. It is desirable to sort out, from previous research efforts, a direction that could guide future virtual community research.
2. A synthesis, classification and critical analysis of past divergent studies will give a systematic and integrative view of past research.

Prior to such a literature review, it is essential to differentiate the differences between virtual communities and virtual groups or virtual teams. Virtual Communities are different from virtual teams in three respects. First, most virtual teams are formed to solve specific problems or tasks. Virtual communities, in contrast, focus on relationship development in real life, where people do not have definite reasons to remain in them. Second, virtual communities are spontaneously shaped by people with similar interests, while virtual teams and virtual groups are organized by specific organizations. Third, virtual communities can exist for a very long time, as long as people with similar interests do not disperse, while virtual groups or virtual teams usually dissolve after the task is finished or the problem is solved. Therefore the virtual communities we talk about in this study are significantly different from virtual teams or virtual groups. Thus the papers concerned in this study do not include virtual team or virtual group papers.

LITERATURE SEARCHING

Three methods were used to search for prior studies in virtual communities. First, major academic journal databases, which include ABI/INFORM Global, ScienceDirect, and EBSCOhost, were searched using keywords and phrases like virtual community and virtual communities.

Second, five additional prominent IS journals were searched manually to ensure that no major virtual community papers were missed. This was done because these five journals are either only partially included or excluded in the above academic databases. These five journals were MIS Quarterly, ISR, Journal of MIS, Information and Management, and Decision Support Systems. Since virtual community is a new technology that emerged after 1990, only papers published from 1990 to the present were screened.

Third, all references cited in the virtual community papers were evaluated. This process also resulted in many conference proceedings covering virtual communities. Although these references were not included in our final virtual community study list, they provided additional information for the understanding of virtual community technologies and development. It is worth mentioning that we do include a book by Hagel and Armstrong (1997) as it was cited by most of the virtual community papers identified.

CLASSIFICATION SCHEMA

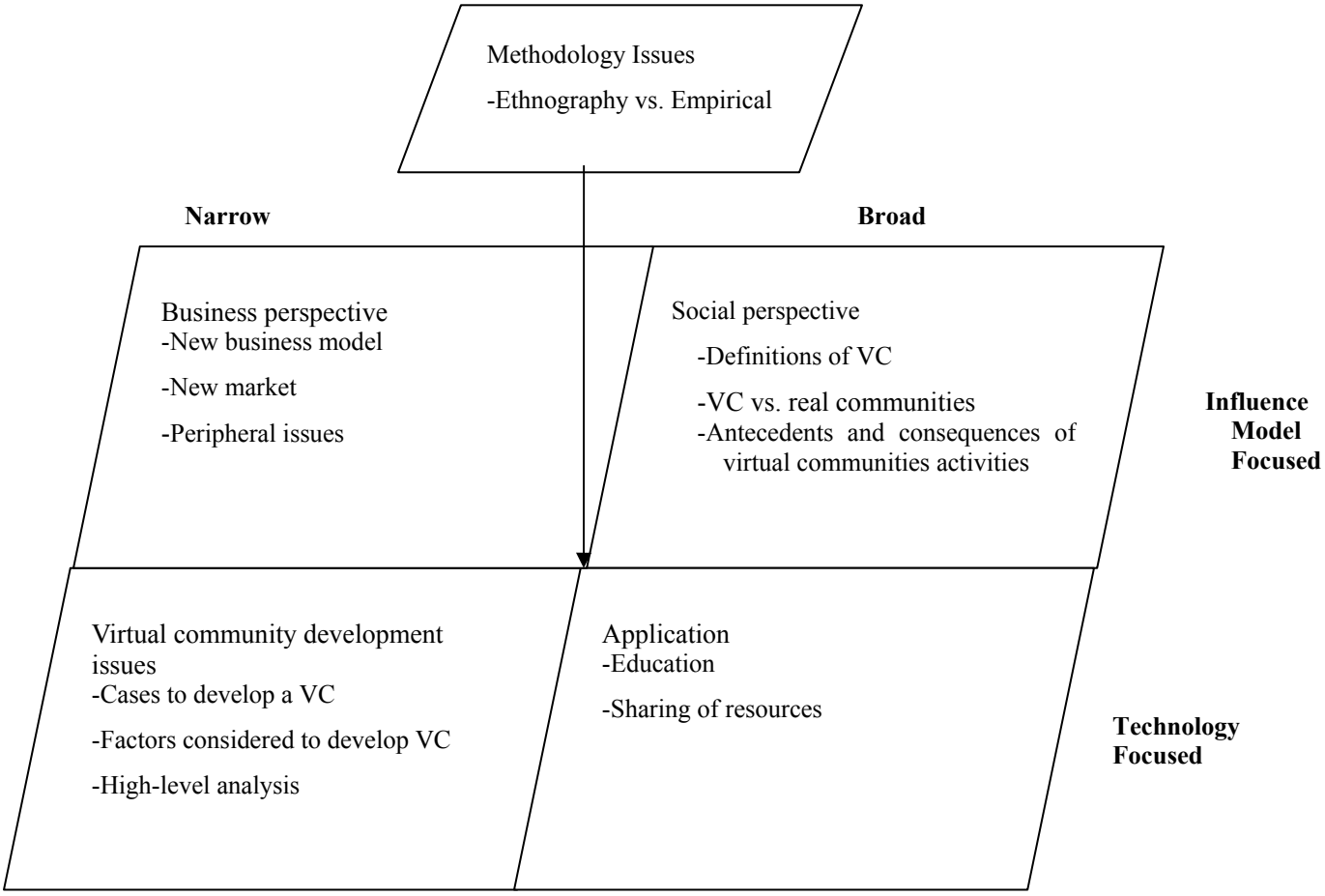


Figure 1. Virtual Community Studies Classification Schema

35 papers plus one book relevant to our study were selected and reviewed in total. After a detail classification by similar topics and research patterns of papers 5 areas, social perspective, business perspective, virtual community development issues, application issues and methodology issues, were identified out in virtual community studies. Figure 1 gives an illustration for this classification schema. Five areas of virtual community studies range from broad sphere like social perspective, application issues to specific area like virtual community development issues and business perspective, from technology focused issues like development issues and application issues to technology influence issues like social and business perspectives. The methodology to study virtual communities provides an external point of view for it is concerned in all of the other four categories. We will give the detailed analysis for each area in what follows.

Social Perspective

When virtual communities were researched in the early stages, there had been a debate on whether they had the functions of real communities (Wellman et al., 1996; Agres et al., 1998; Coon, 1998; Etzioni & Etzioni, 1999; Fox & Roberts, 1999; Anderson, 2000; Mowbray, 2001; Shah et al., 2002; Bakardjieva, 2003), their formal definition (Etzioni & Etzioni, 1999; Ridings et al., 2002; Bagozzi and Dholakia, 2002; Rothaermel and Sugiyima, 2001), and the psychological and social

motivations or antecedents of virtual community activities (Coon, 1998; Ridings et al., 2002; Bagozzi and Dholakia, 2002; Bakardjieva, 2003).

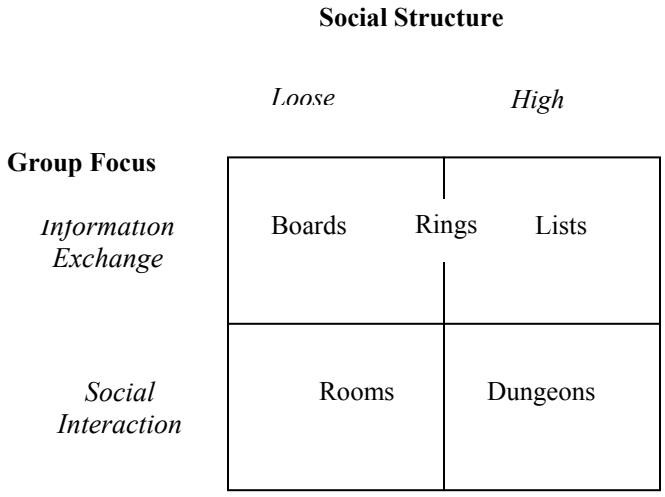
Definitions of Virtual Communities

Though virtual community could be defined differently, most researchers defined virtual community into two major categories: one that focuses on the metaphysical properties of virtual communities (Coon, 1998; Etzioni and Etzioni, 1999; Rothaermel and Sugiyima, 2001) and one that focuses on the types of practical virtual communities (Hagel and Armstrong, 1997; Bagozzi and Dholakia, 2002; Ridings et al., 2002). These two categories of definitions could also be viewed as representative of the academic field and the practitioners.

Despite different opinions of the definitions of the first (academic) definition of virtual communities, most researchers agree that virtual communities can be traced back to the sociological definition of "community", which is also controversial in its definition (Coon, 1998; Etzioni and Etzioni, 1999; Rothaermel and Sugiyima, 2001). According to Tönnies (1912; 1967), who was one of the first to discuss the concept of community his definition (Coon, 1998; Rothaermel and Sugiyima, 2001), community, or Gemeinschaft, is different from society, or Gesellschaft, in that community (Gemeinschaft) is as intimate, private, and exclusive living together, whereas society (Gesellschaft) is the public life – that is, the world itself. Tönnies implicitly gave the concept of community a spatial form by contending that the prototypical community could be found in the rural agrarian village. According to his definition, there are 3 types of communities: (1) community by kinship, (2) community of locality, and (3) community of mind. The third type of community is pertinent to this study because it resembles the communities that are shaped on the Internet. Other researchers have offered similar definitions of virtual communities. Rothaermel and Sugiyima (2001) argued, "a virtual community is similar to a community of mind described by Tönnies (1967), except that it forms through an electronic communication medium and is not bound by space and time"(2001, p. 299). Bagozzi and Dholakia defined a virtual community as "mediated social spaces in the digital environment that allow groups to form and be sustained primarily through ongoing communication processes" (2002, p. 3). Etzioni and Etzioni (1999) defined a virtual community as one that has two essential elements, bonding and culture.

According to Hagel and Armstrong (1997), early virtual communities were started by enthusiasts who had certain interests, and were the results of spontaneous social events. Participation in virtual communities is often spontaneous and volitional. A virtual community is usually open to any interested member. If one wants to join a certain community, they can register without cost. Dropping out of virtual communities is also at the personal will of the participants. If participants lose interests or have no intention to participate any further in a virtual community, they can choose not to log into or to quit the community. The participants in virtual communities could also choose the degree to which they participate in a virtual community. They can choose to be lurkers (whose appearance online is totally unobserved by other members), choose not to speak, or choose to speak as actively as possible. Usually, a virtual community is managed by a BBS manager, a forum board manager, or a Listserv manager, who is responsible for managing member identification and messages. Board managers are sometimes also responsible for organizing board activities and initiating discussion of interesting topics on the board. After a period of time, the messages that are posted by different members of the virtual community shape a message base. For those virtual communities that focus on special expertise, a knowledge base is shaped.

Hagel and Armstrong (1997) further pointed out that virtual communities could satisfy four types of consumer needs: (1) interests, (2) relationship building, (3) transactions, and (4) fantasies. Following their definition, Ridings et al. (2002) classified another four types of virtual communities: Listserv, Chat room, MUD (multiple user domains or dungeons), bulletin boards or newsgroups based on the type of technology implemented. Based on time delays, these virtual communities can be further classified as asynchronous (Listserv, bulletin boards, newsgroups) or synchronous (MUD, chat rooms, and programs such as MSN Messenger, Yahoo Messenger, and ICQ). The classification is not absolute because online forums have both synchronous and asynchronous functions. A more interesting and useful classification is that of Kozinets (2000), who divides virtual communities into two dimensions: primary group focus and social structure. The higher end of group focus is social interaction, and the lower end of group focus is information exchange. The two ends of social structure are loose and high. Figure 2 illustrates Kozinets' schema.



Source: Kozinets (2000)

Figure 2. Type of Virtual Communities

Virtual Communities vs. Real Communities

Virtual and real communities differ in functions and values. Most researchers (Wellman et al., 1996; Coon, 1998; Fox and Roberts, 1999; Shah et al., 2002; Bakardjieva, 2003) are of the opinion that virtual communities offer better functions and the values than real communities. Both Wellman et al. (1996) and Etizioni and Etizioni (1999) argued that virtual communities provide, sometimes better, functions of real communities, particularly in social relationship building. By investigating members in a chat room, Coon (1998) was among the first to suggest that the virtual communities resemble real communities and that people can form communal relationship through computer-mediated communication (CMC) on the Internet. Fox and Roberts (1999) also supported that the existence of virtual community in a medical practitioners electronic forum and further suggested that virtual communities should be the extension of real communities instead of completely replacing them. Bakardjieva (2003) pointed out that virtual communities could satisfy people's various everyday-life needs. Furthermore, Shah et al. (2002) claimed that virtual communities could foster people's involvement in public life through empirical validation.

Anderson (2000) and Mowbray (2001), on the other hand, had different views on virtual community's functions. For example, Mowbray (2001) stated that there were several limitations of freedom of speech even in well-run virtual communities. Anderson (2000) even argued further that virtual communities decrease people's real social interactions and are detrimental to people's relationship building in real life.

Antecedents and Consequences of Virtual Community Activities

While the nature of virtual communities is still controversial, several researchers went further to explore not only the motivations but also the consequences of virtual community activities from either psychological or sociological perspective (Coon, 1998; Ridings et al., 2002; Bagozzi and Dholakia, 2002; Butler et al., 2002; Bakardjieva, 2003; Ginsburg and Weisband, 2004). The motivations of virtual community activities are of great interests to several researchers. While Bakardjieva (2003) brought up the issues that people may have various motivations, especially everyday-life needs, to participate in virtual communities, several other researchers (Coon, 1998; Ridings et al., 2002; Bagozzi and Dholakia, 2002) have already empirically tested this proposition. Coon (1998) was among the first to empirically test the sociological properties of communities on the Internet, and concluded that online friendships were the most important factors for people who participated in virtual community activities. Drawing on survey findings from about 40 online boards, Ridings et al. (2002) concluded that trust is a very important antecedent factor in the prediction of people's desire to obtain and exchange information. Bagozzi & Dholakia (2002) found that regular virtual community participants' intention to participate virtual community is determined jointly by individual determinants and social identities.

What is of more interest than participant motivations are the consequences of virtual community activities despite the fact that only a few researchers (Butler et al., 2002; Ginsburg and Weisband, 2004) have discussed it. This is not only interesting but also very essential to the study of virtual communities because virtual community activities are spontaneous for most members; Bulter et al. (2002) have named this 'volunteerism'. Both Bulter et al. (2002) and Ginsburg and Weisband's (2004) studies empirically established that real life volunteers in virtual communities help keep the virtual communities going. The Butler et al.'s (2004) paper specifically talks about volunteers maintaining virtual community infrastructure. And Ginsburg and Weisband's (2004) paper further strengthened the consequences of virtual community behavior by illustrating that volunteers in an international chess club could reinforce a business model.

Business Perspective

Other than the social functions of virtual community, another big issue of virtual community is its commercial potential. In fact the discussion of the commercial potential of virtual community began as early as the discussion of the functions of virtual communities (Hagel and Armstrong, 1997; Hagel, 1999; Kozinets, 1999; Evans et al., 2001; Rothaermel and Sugiyama, 2001; Maclaran and Catterall, 2002; Kardaras et al., 2003). Hagel and Armstrong (1997) are the pioneers who provided a complete analysis for the potential of virtual community business models with dedicated economic analysis in their book. Following their models, several researchers (Kozinets, 1999; Evans et al., 2001; Maclaran and Catterall, 2002; Kardaras et al., 2003) explored the potential models of virtual communities and most of them described the marketing values of virtual communities. Rothaermel and Sugiyama (2001) argued that a business-oriented virtual community depends mainly on transactions to survive and proposed several hypotheses on the positive relationships between the number of transactions in a virtual community and several factors such as off-site communication, member experience, site management, site content, collectively held knowledge, etc. Replacing individuals with companies, Post (2000) analyzed the potential of building global business virtual communities and offered a broader vision of a virtual community business model. Ginsburg and Weisband (2004) provided a very interesting case study of an International Chess Club that has generated revenues through its operation. Their successful virtual community business model consists of inimitable information assets and persistent handles fomenting trust and an economic infrastructure.

Virtual Community Development Issues

The third research trend focused on the basic development issues with virtual communities. Identified topics include the process of building virtual communities and the evolutions of virtual communities of specific cases (Fulker et al., 1997; Pliskin and Romm, 1997; Dennis et al., 1998; Carve, 1999; Zucchermaglio and Talamo, 2003). On a macro-level analysis, Bakardjieva and Feenberg (2002) provided detailed analysis of virtual community technology and democratic rationalization. Gomez (1998) showed that the constitution of virtual communities through CMC is a complex process that does not necessarily result in strengthening democratization and development while Romm et al. (1997) explicated the process to expand virtual communities into the whole societies by a three-phrase model.

Virtual Community Application Issues

Not many researchers have investigated the applications of virtual communities. Of those who did, many of them had focused on the investigation of resource sharing (Boczkowski, 1999; Wachter et al., 2000; Kodama, 2001; Bieber et al., 2002; Kitchin, 2002), including sharing of education resources (Wachter et al., 2000). Kodama (2001) further describes the development of virtual communities in medical and education fields with multimedia IT. Bieber et al. (2002) illustrated a vision and architecture for a community knowledge evolution system. Boczkowskis (1999) further analyzed the sharing of resources into the national level.

Methodology

Though empirical research is popular in the IS field, qualitative research methods for studying virtual communities is widely used (Agres et al., 1998; Fox and Roberts, 1999; Catterall and Maclaran, 2001; Vrooman, 2001; Kozinets, 2002; Maclaran and Catterall, 2002; Bakardjieva, 2003). A new term, 'Netnography', refers to ethnography adaptive to online communities was created by virtual community researchers. Several virtual community studies have already used netnography methods to study virtual communities (Fox and Roberts, 1999; Bakardjieva, 2003; Vrooman, 2001).

Empirical studies were also found in virtual community investigation (Coon, 1998; Bagozzi and Dholakia, 2002; Ridings et al., 2002; Butler et al., 2002; Ginsburg and Weisband, 2004), but were still limited. Basically the empirical study methodology in virtual community is not much different from traditional methodology except in data collection. While several empirical virtual community studies collect data through traditional methods like the pencil-and-paper method

(Bagozzi and Dholakia, 2002) and e-mail surveys (Coon, 1998; Butler et al., 2002), several studies use new methods to collect data in real communities (Ridings et al., 2002; Ginsburg and Weisband, 2004). Compared to Ridings et al. (2002), who collected data by posting soliciting messages in online forums, Ginsburg and Weisband (2004) devised a robot in an online international chess club to promote their survey. There is no literature exploring the distinction between collecting data inside the community and collecting data outside virtual community milieu.

DISCUSSIONS, CONCLUSIONS AND IMPLICATIONS

This study gave an integrative literature review on studies on virtual communities from 1996 to the present. Five areas of studies were identified and classified according to the topics and patterns of research papers on virtual communities. Based on the five identified areas a research agenda and implications for the future researchers encompassing these five areas are provided in what follows.

For the social perspective of virtual communities, though a group of researchers dedicated themselves to clarifying the definitions of virtual communities and comparing virtual communities vs. real communities, a conclusive definition of virtual communities has not been shaped. Though a majority of researchers favored the functions of virtual communities to real communities, it's still qualitative and couldn't be accepted as conclusive statements. The motivations along with the consequences of virtual communities were studied both empirically (Coon, 1998; Ridings et al., 2002) and qualitatively but the research is very limited. Future researchers should focus on developing a relative unified concept of virtual communities, validating functions of virtual communities through empirical studies, and explore more for both antecedents and consequences of virtual community participation, especially theories grounded in this area.

For the business perspective, business models were suggested but empirical supportiveness was not given. At the same time the business potentials were only mainly limited to marketing. Though several hypotheses were provided, Rothaermel and Sugiyima's (2001) theory may be incomplete and biased because their hypotheses were not tested and only focused on communities that were built to satisfy specific interests. Future studies should empirically validate the suggested business models as well as exploring business potentials other than marketing. New business models that could generate values are also expected.

For the virtual community development issues, though several studies including both case studies and macro-analysis are provided, the information is still very limited. More studies, including but not limited to both case studies and empirical studies, should be developed. The analysis at the micro-level is also called on.

For the application issues the studies are still very limited too. A broader area of applications for virtual communities should be identified and studied.

For the methodology used to study virtual communities the qualitative method is used more often than the empirical one possibly because current studies on virtual communities are not mature and not many theories are accumulated. For empirical studies on virtual communities, collecting data inside a virtual community is a new method and its effectiveness should be measured in contrast to collecting data outside virtual communities. Future interested researchers should pay attention to both the qualitative studies and empirical studies and explore the distinction between collecting data inside virtual communities and outside virtual communities.

All in all, virtual community studies are in their infancy and most studies on virtual communities are exploratory and qualitative. Generally, the lack of completeness in virtual community studies encompassed three perspectives, lacking grounded theories, lacking empirical studies and lacking studies in real setting, which is essentially important because it is hard to create virtual communities similar to real online virtual community settings. Further interested researchers may contribute to virtual community literature with more theoretical and empirical as well as qualitative papers.

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