

# Virtual Community Sustainability

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## INTRODUCTION

The last decade has witnessed the remarkable transformation of social networks in which people communicate and associate with one another via the Internet. While the popular perception of the Internet is more of a communication medium, the ramification of the Internet is far beyond that. Its significance lies in its capability of keeping people connected. Since its inception, the connectivity enabled by the Internet allows scientists geographically separated to establish a virtual community (VC) in which they distribute research findings, discuss research issues and share research interests. The deregulation of the Internet in early 1990s kindled the booming of VCs with a variety of interests. Research in VCs has been extensive; nevertheless, no one single definition of VCs has been commonly agreed upon and accepted by researchers (Lee, Vogel & Limayem, 2003; Jones, 1997; Liu, 1999). For example, Hagel and Armstrong (1997) adopted the technological deterministic perspective and defined VC as a computer-mediated space that aggregated member-generated content and correspondences, while Rheingold (1994) placed emphasis on the on-going discourse and social-psychological elements. As the debate of definition continues, instead of proposing another one, several researchers adopted an approach to characterizing VCs as follows (Wang, Yu, & Fesenmaier, 2002):

1. Members share common goals, needs and interests
2. Members engage in repeated interaction and participation
3. Members have access to resources, including information, support and services
4. Members share social conventions, language and protocols.

We follow this approach in the article.

Research in VC has been conducted in various areas, such as marketing (Maclaran & Catterall, 2002) and tourism (Wang, Yu, & Fesenmaier, 2002) from different perspectives, such as sociocultural (Zucchermaglio & Talamo, 2003) and philosophical (Mowbray, 2001). It is generally agreed that the critical mass of participation is requisite for success of a VC (Hagel & Armstrong, 1997; Roberts & Fox, 1998). We contend that the critical mass of a VC depicts the status quo of the community, and might not be

sufficient for its sustainability. Instead, we propose the concept of sustainability of VCs and discuss factors that may affect it.

## THE SUSTAINABILITY OF VCs

The sustainability of a VC refers to the extent to which the VC continues to attract and retain its target members that identify with the mission of the community by taking part the activities sponsored by the VC. One important element of the concept is that each VC is established to achieve explicit/implicit missions/purposes. A VC can only be considered prosperous when its purpose is served in terms of whom its members are and what its members do. Furthermore, depending on the purpose of a VC, the activities that members perform might be more than information exchange. The concept of sustainability suggests that members need to participate in events sponsored by the community so the mission of the community can be carried out. In a large moderated bulletin board, active and voluntary members might play the role of “police” and “tutor” to guide new members to learn the conventions and protocols. An example is the professional Java language forum in Taiwan ([www.javaworld.com.tw/jute/index.html](http://www.javaworld.com.tw/jute/index.html)), in which various roles are well defined and played by core members, and each registered member’s performance (involvement/participation) is counted. Additionally, the concept of sustainability implies that the sponsor of the VC can adopt various measures to encourage and attract target members or to discourage mischievous behavior that could potentially jeopardize the establishment.

## ENHANCING THE SUSTAINABILITY OF A VC

We maintain that a VC is not a closed system. It is an open subsystem embedded in a super-system. As an open system, a VC constantly receives inputs (such as new members and the addition of topics of interest) and produces outputs that make a contribution to its super-system and satisfy its members’ needs. The open system’s viewpoint suggests several elements that affect the sustainability of the VC. We borrowed McGrath’s theory

of group project activities to organize those elements. McGrath (1990) indicates that the activities performed by a group of people generally serve three functions: production, member-support and well-being. Production function means that members perform a variety of tasks to generate results contributing to the embedding system. In the context of VCs, this function is realized by the accomplishment of the *chartered mission* of the VC. This function is evident as companies attempt to improve business performance by establishing VCs for various purposes. For example, a company may establish a VC as a knowledge management network to retain and share tacit knowledge that its employees acquired over time (Bieber, Engelbart, Furuta, Hiltz, Noll, Preece, Stohr, Turoff, & Van De Walle, 2002) or as a marketing tool to gain insights about its customers (Maclaran & Catterall, 2002).

Member support function means that while the group is formed to deliver what its embedding system expects, the group also makes contributions to its components (i.e., members) by meeting their desires and needs to *their satisfaction*. The function is clearly at the heart of the notion of VCs and, on most occasions, is the very reason for the VC's existence. Third, the members of the group also make an effort to ensure the group work can move forward and subsequently increase the well being of the group as a whole. To ensure the ongoing group process, group members will need protocols and/or division of labor to define their roles and behaviors. In the context of VCs, the effort is mainly reflected in following the conventions, protocols, languages or even responsibilities to interact with each other and perform activities. We consider the rules, protocols and conventions of proper languages as part of *governance mechanisms*. An important implication of McGrath's theory is that while members' satisfaction might be the major concern of most virtual communities, the importance of balancing the three functions should not be understated. From the

perspective of sustaining the VC, failure to serve any function might jeopardize the community.

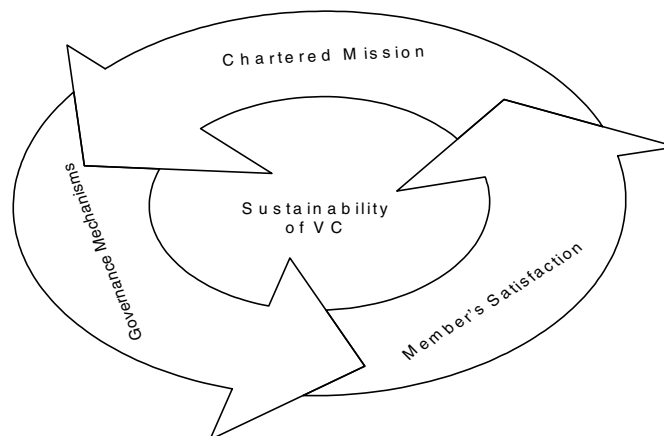
Based on the above discussion, we propose the dynamic process model for enhancing the sustainability of the VC, as shown in Figure 1.

### Achieving Chartered Mission: A Production Function of VCs

From the viewpoint of the VC sponsor, there are one or more missions to justify the VC's existence. The mission could be as noble as seeking social justice (e.g., "boycott Nike" Web sites for ending sweatshop and child labor) or as self-interested as a company attempts to obtain marketing intelligence by creating a valued customer community. In the case of anti-brand communities (Maclaran & Catterall, 2002), even though the VC might not be sponsored by an identifiable organization, its mission could simply be improving common good, which is beyond the community itself. Thus, we can consider VCs with similar natures as subsystems under their "intangible" supersystems represented by the common good they attempt to achieve. It is apparent that the chartered mission varies from one VC to another. Nevertheless, communities with similar natures might share common missions.

Pervious studies provide several classifications of VCs (Maclaran & Catterall, 2002; Jones & Rafaeli, 2000; Hagel & Armstrong, 1997). Among those classifications, Hagel and Armstrong's (1997) is most suitable for this discussion because it is based on the basic needs of humans and was extended by Jones and Rafaeli (2000) for different uses. Hagel and Armstrong (1997) assert that while information exchange or aggregation is an apparent function of a VC, members are drawn to the VC mainly because it enables them to connect to others with similar needs. They proposed four types of VCs on the basis of human needs: Interest, relationship, fantasy and transac-

Figure 1. Dynamic process of enhancing sustainability of VC



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