INTRODUCTION

Virtual forms of organizing are becoming ever more common forms of managing knowledge resources, because working in a virtual environment offers possibilities that would not be available in conventional organizations. It is believed that the technology enabling virtual work "tricks" teams and organizations into thinking that work is being done in the same space and with the same set of organizational norms (George, 1996). Rachman and Battachryya (2002) pinpoint transaction costs as the drivers behind the disintegration of organizations into dispersed organizations. They propose that modern technology allows small businesses to gain access to the same amount information that previously required heavy investments in a large organization; operating in a network economy allows small businesses to avoid such investments, while reaping the same benefits.

The MENOS (Successful Expert Teams) project aims at creating self-employment through a networked collaboration model between SMEs and professionals in the field of content and software production in the region of South Karelia in Finland. The MENOS project is an interesting virtual venture in a knowledge-intensive information and communications technologies (ICT) industry. The classification of such a phenomenon, which exhibits features of virtual teams, a virtual community and a virtual organization, is not straightforward. This article offers a critical analysis of the contemporary conceptual confusion as well as some empirical insight obtained from the MENOS case.

VIRTUAL ORGANIZATIONS, VIRTUAL TEAMS, AND VIRTUAL COMMUNITIES

Bremer, Michilini, Siqueira, and Ortega (2001, p. 213) give a general definition of virtuality as being “the ability of an enterprise to offer customers a complete product or service, with the enterprise itself only having a few proprietary competencies and achieving the remaining competencies through collaboration.” This is a broad definition emphasizing the advantages of complementary competencies and is in line with the discussion by Chesbrough and Teece (1996). In the following a critical overview of the conceptual discussion on virtual organizations, virtual communities, and virtual teams is presented.

Virtual Organizations

The definition of virtual organization is rather vague. Concepts such as the “virtual factory” (e.g., Upton & McAfee, 1996), “virtual company” (Porter, 1993), “virtual enterprise” (Hardwick, Spooner, Rando, & Morris, 1996), “virtual corporation” (Davidow & Malone, 1992), and “cluster organizations” (Camillus, 1993) are currently used. However, the “virtual organization” is the most used concept (e.g., Mowshowitz, 1994; Grenier & Metes, 1995). Also, the term “dynamic network” has been used instead of “virtual organization” in network research (Miles & Snow, 1992). Hence, we will concentrate here on the term “virtual organization.” Rachman and Bhattachryya (2002) look at the development of organizations from the traditional hierarchical structure to virtual organizations and the presence of virtual enterprises in different industries. They identify five clear characteristics of virtual organizations:

- a shared vision and goal and/or common protocol of cooperation
- the clustering of activities around core competencies
- work is performed jointly in teams of core competency groups
- information is processed and distributed in real time throughout the entire network
- delegation takes place from the bottom up whenever economies of scale can be achieved, new
conditions arise or a specific competence is required

They complement the discussion by the previous authors with the idea of real-time work and bottom-up delegation. Also, other authors provide a definition of “virtual organization” by providing a list of their typical characteristics (e.g., Boudreau, Loch, Robey, & Straub, 1998). Chutchian-Ferranti (1999) defines a virtual organization as being one in which business partners and teams work together across geographical or organizational boundaries through the use of information technology and gives examples of virtual organizations: (a) a group of skilled people who form a company but who do not work together in the same location. They communicate using electronic communication media; (b) a group of companies, each of which has its own special expertise. These companies come together to form a temporary or permanent enterprise in order to solve a specific problem; (c) a large company that outsources its internal functions through joint ventures with suppliers or partnerships with other companies that have the skills required in the respective areas. Their definition and examples clearly add the cross-organizational dimension and critical role of electronic communication media. Venkatraman and Henderson (1998) state that a virtual organization is not a distinct structure but rather a strategy for revolutionizing what they refer to as three vectors: customer interaction, asset configuration, and knowledge leverage. They emphasize the critical role of IT tools for coordination and the possibility for customer intimacy.

Based on the above, we conclude that the discussion on virtual organizations varies in its degree of abstractness; some writers define virtual organizations as being tangible entities and others as more of a business model, in which the firm focuses on its core competencies and leverages the complementary resources from others. It seems that virtuality and virtual forms of organizing still form a new emerging paradigm in organizational management. In order to increase the understanding of virtual organizing, we will next review some discussion on closely related virtual teams and their definitions.

Virtual Teams

As in the case of virtual organizations, virtual teams are also used to leverage diverse competencies, speed, and competitiveness. The previous discussion on virtuality and its advantages and disadvantages also applies to virtual teams. In line with Davidow and Malone, Benson-Armer and Hsieh (1997) define the virtual team as being “a micro-level form of work organization in which a group of geographically dispersed workers is brought together to accomplish a specific organizational tasks using Information and Communication Technologies (ICTs).” Kristof, Brown, Sims, and Smith (1995) and Mowshowitz (1997) ref. Järvenpää, Knoll, and Leidner (1998b), on the other hand, define a global virtual team as being “temporary, culturally diverse, geographically dispersed, electronically communicating work group.” According to Townsend, DeMarie and Hendrickson (1998), virtual teams are “composed of coworkers geographically and organizationally linked through telecommunications and information technologies attempting to achieve an organizational task.” A rather similar definition is proposed by Lipnack and Stamps (1997), who define virtual teams “as a group of people and subteams who interact through interdependent tasks guided by common purpose and work across space, time, and organizational boundaries with links strengthened by information, communication, and transport technologies.” Virtual teams are seen to communicate completely or mainly using electronic communication tools and media, which can be either synchronous, such as telephone, IRC, videoconferencing, or asynchronous, such as e-mail, bulletin boards and collaborative writing (see also Paulsen & Yoong, 2001). Maznevski and Chudoba (2000) define global virtual teams extensively as follows: (a) identified by their organization(s) and members as a team; (b) are responsible for making and/or implementing decisions important to the organization’s global strategy; (c) use technology-supported communication substantially more than face-to-face communication; and (d) work and live in different countries.

Hence, geographical dispersion and communication through technology are generally considered typical to virtual teams. Also, virtual teams are, in general, assumed to interact electronically and work across time and space. Virtual teams can be considered as being evolutionary forms of network organizations (Miles and Snow, 1986) and even be a whole company. In practice, virtual teams take many different forms; network teams, parallel teams, project or product development teams, work or production teams, service teams, management teams, and action teams (Duarte & Snyder, 1999, p. 6). Hence, we may argue that there is no “generic” model for virtual teams. Furthermore, in order to meet the definition of a real team (e.g., Hackman, 2002), a virtual team must consist of individuals who are interdependent in their tasks, and who share responsibility for the outcomes of the team. The notion of a “virtual team” is used too carelessly to describe any collaboration that takes place through technology. Virtual communities should not be confused with virtual work (e.g., Vogel, Davison, & Shroff, 2001). Without a virtual team being a real “team” the full potential of such