

## Identity in Virtual Communities of Practice

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The “knowledge society” has become a predominant metaphor in the current day and age. Recent development of contemporary information and communication technologies (ICT) has enabled the emergence of new sorts of communities and communicative practices such as Virtual Communities of Practice (CoP). The digitization of identity may be viewed as a bottleneck in the civic engagement with Virtual CoPs, because identity is a critical cornerstone in such environment. This literature review explores a multi-dimensional view of Virtual CoP, acknowledging cumulative traditions in this research area. The review investigates researchers’ questions, approaches, and insights within information systems and other related fields, in order to identify promising new directions for study focusing on the role of identity within VCoP. In other words, this paper explores the importance and role of identity within communities of practice theory, which can be applied in the context of the networked organization. Reviewing how new forms of Virtual CoP enable a new paradigm of collaboration.

### 1. Introduction

The term ‘community of practice’ (CoP) was first used and conceptualized by Wenger and Lave (1991). In his later work Wenger (1999) applies this concept in different context including organizational environment.

The definition of the term ‘community of practice’ was described by Wenger himself as “*groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly.*”

(Wenger, 2002)

It can be further characterized as:

*“Individuals with common expertise participating in an informal relationship to resolve a shared problem or situation that impact upon their shared futures.”*

(Bowles, 2002)

The current field of research is voluminous and some authors use other terms: “community of knowing” (Boland and Tenkasi, 1995), “learning community” (Senge, 1990), or community of purpose (Warren, 1996), but in general they present a similar concept.

Different studies on communities of practice use various theoretical frameworks: the theory of practice that was firstly introduced by Bourdieu (1972) was later amplified and applied to CoP by Lave and Wenger, (1991). The theory of social structure (Murdock, 1949; Giddens, 1984) is applied to CoP by Wenger (1998) and Lin (2001). There are also studies focusing on situated experience (Wenger, 1998) and studies that are based on identity theory (Wenger, 1999; Lesser and Storck, 2001).

Lately the concept of CoP has been viewed as a facilitator of social capital development, which is an important element of individual behaviour in the knowledge economy; it is often associated with the issues of knowledge management (Lesser and Prusak, 1999; 2000). Some authors represented it as a facilitator of innovative processes (Brown and Duguid, 1991; Judge and Cable, 1997), as the mediator for sharing of tacit knowledge in the organizational environment and as an ‘enzyme’ for creation of intellectual capital (Nahapiet and Ghoshal, 1998). In addition to organizational learning, some

researches argue that CoP can enhance performance of the organization in general (Lesser and Storck, 2001) and its competitive advantage (Liedtka, 1999).

### 2. Emergence of Virtual CoP’s

The emergence of new ICT technologies and the Internet provoked the creation of various virtual communities where communication is performed for the most part, or even solely by means of ICT; where new forms of communications are performed and the new functions are developed (Orlikowski, 2000). Therefore, these changes are resulting in an increase of strategic importance of knowledge accumulation and dissemination within the organizational context (Wenger, 1999; Ciborra and Andreu, 2001). This brings possibility for new forms of communication, including indirect, non face-to-face and primarily text-based written communication, which potentially can take place across national and temporal borders. It has resulted in emergence of various types of electronic communities (Teigland, 2000) where individuals can share their organizational knowledge; some of these can be referred to as Virtual Communities of Practice (VCoP) (Wasko and Faraj, 2000; Wenger *et al.*, 2002). Yet some authors (Hildreth *et al.*, 2000) describe communities of practice in a geographically-distributed sense albeit eliminating the notion of virtuality.

For many authors the question “Can CoP be virtual?” has become, in a sense, a peculiar ‘philosophers’ stone’. Wellman and Gulia (1999), in their study on Usenet groups, were among the first to conclude that VCoP could exist. At present there are still scholar polemics and the term ‘Virtual Communities of Practice’ is not widely accepted; some authors refer to it as ‘On-line CoP’ (Cothrel and Williams, 1999), Computer-mediated CoP (Etzioni, 1999), Electronic CoP (Wasko and Faraj, 2000) and Distributed CoP (Wenger *et al.*, 2002). On the other hand, all of them describe a similar concept.

This division and variety of used terms are due to the debate which exists in the field. Much of the debate over *Virtual CoP* existence hinges on the polemics over the precise definition of the term, as various researchers emphasise or deny the existence of certain attributed properties. The dispute is formed around the first usage of the term CoP by Lave and Wenger (1991), where this concept was based upon situated learning in a co-located setting in which face-to-face contact

among participants is a crucial element in constructing a CoP. Therefore, it requires the distribution of tacit knowledge, which by itself requires participants to share the same physical space (Nonaka and Takeuchi, 1995, Teigland, 2000). Hence, the theory has some inherent limitations that may prevent it from being fully applied to modern organizational settings with its emerging and networked nature. However, credibility of the last sentence depends on the type of knowledge to be shared and this also determines to greater extent whether it is possible for CoP to work in a virtual mode (Hildreth *et al.*, 2000) – if the community has to be co-located because they share the same resources or documents then virtualization is possible, but if the nature of learning is situated due to essential face-to-face interactions then virtualization cannot be easily performed due to the disembodiment in virtual environments (Dreyfus, 2001). Nevertheless, with the rapid development of modern technologies the foregoing statement is arguable.

Castells (2000) and Concar *et al.*, (1999) discussed multi-user dungeons, where they referred to participants as a CoP, although their usage of the term CoP is very similar to Wenger's (1991) meaning, as the multi-user dungeon is not only the environment and medium by which participants communicate, but also a motive for the subsistence of the CoP. In his early work Wenger presents CoP as an "...intrinsic condition for the existence of knowledge" (Leve and Wenger, 1991) where the learning process, which takes place in the CoP, is not just a narrow, situated learning, but also a constituent part of practice with three important aspects: legitimation, peripherality and participation. With respect to VCoP, the aspects of peripherality and participation are the key elements, as they refer to the questions of location and identity. As we move towards the VCoP, the role of location is eliminating, while the role of identity is starting to play an even more pronounced role.

Various authors argue that identity is one of the most important elements in virtual communities, as knowing identity of people you interact with is an essential element in evaluating quality of interaction.

### 3. Role of Identity in Virtual CoP

Social identity theory is also very important in order to understand the nature of processes enabling the transaction of the virtual community into the VCoP, as it describes the categorization of in-group and out of group perception, which are founded on differences and similarities of "they" and "we". When the individual "they" becomes the individual "we", people's identities become depersonalized and combined into one identity of a certain group. Wenger (2002) argues that it is hardly possible to differentiate between an individual and a group identity, as individual knowledge that forms and shapes social groups brings the emotional complexion to the group membership (Hogg and Terry, 2000). It is also supported by Tajfel (1970) who conducted experiments using the "minimal group paradigm" and showed that the random assignment of people into the group may gradually initiate a social identification. In contrast to Hogg and Terry (2000), Clifford (1995) suggests that electronic communication doesn't require emotional investment and usually does not lead to close friendships. However empirical evidence (e.g. Miller and Slatter, 2000; McKenna *et al.*, 2002) suggest quite the contrary— people do establish long-lasting relationships,

business partnerships and even marriage online.

Membership in CoPs helps personal identity to evolve and form a work-based identity (Hara, 2000; Mu and Varadharajan, 2000). Therefore, once an identity is developed it usually doesn't stay intact but shifts slightly over a time. Literature on networks suggests that interacting members of VCoP modify personal identities as well as identities of communities and organization(s), sometimes developing a 'multiple citizenship' with various personal identities for the each group identity. This raises questions about identity salience. Multiple citizenship, as argued by Dyer and Nobeoka (2000), can present a serious problem for VCoP's persistence as it provokes the creation of a 'free riders' category—"members who enjoy the benefits of the collective good without contributing to its establishment" (Dyer and Nobeoka, 2000). This phenomenon was also described by Millen *et al.*, (2005), Wasko and Faraj (2005), but they referred to free riders as 'lurkers'. This was also discussed by Wenger (1999) where he focused on identity, describing the importance of trajectories and the problems of multi membership in various communities, and presenting them as main dilemmas for individual members. However, in contrast to above-mentioned authors he does not present it as a problem for CoPs as a whole.

Development of identity or an adequate representation of a real identity is important as it helps to develop trust and, as a result, reduces complexity. Various studies show that in offline CoPs trust can be developed during through regular meetings, while in on-line environments trust can mostly be accumulated by representing own and shared collective identities. Additionally, this helps community members to feel that they know the people they are communicating with, which may help to create desired artefacts and to share knowledge with members more effectively. In a virtual CoP the artifact used for embodiment limits and imposes predefined functionality that shapes the ways in which members of community can participate and exist as code developed by programmers. Some authors even argue that technical objects may themselves predefine users' behaviour (Woolgar, 1991), which is even more noticeable in virtual environments where predefined system architecture shapes users' identity (Taylor, 2003). Wenger (1998) describes a similar concept defining it as the "boundary objects" that are common for individuals and the community in general, but perceived in a different manner. These artefacts may be norms, tools, or procedures that are used by the CoP to execute its tasks.

Social presence and its value (Short *et al.*, 1976) is also related to the issues of identity, as it helps to increase realism of the situation and develop the feeling that one is interacting with a human being. It is true that in virtual communities individuals may hide their own identities. However,, some authors argue that there are some positive outcomes from initial disembodiment and the need for creation/reconstruction of identity online, as it may facilitate as a leveler of race, class differences and even gender discrimination, which can be strong barriers to effective participation in offline society (Verba *et al.*, 1995). Therefore, VCoP members may come from various cultural backgrounds or even live a long way from each other (Etzioni and Etzioni, 1999). This statement is also supported by Tranvik (2000) who describes user participation in virtual communities as less restricted and hence more encouraging more involvement and interaction with complete strangers than in daily life. How-

ever, people in virtual environments, while open to communication with nearly anyone, still need a large number of potential ‘friends’ or potential community members, as the more individualized people are the more difficult it is to achieve identification.

Turner (1988) distinguishes between two social types of status identification. The first one is initially inherited, e.g. race, sex, age, and the second one is achieved status, e.g. education, position, etc. He argues that in a modern society, achieved status is starting to play the most important role. However, the virtual environment is more open to fantasies where participants can exploit situations of disembodiment and transform oneself from an insignificant employee to a knight of one’s profession (Steinkuehler, 2004); where professor can become a rock star (Nardi *et al.*, 2004). In virtual communities people can escape from the predefined and constructed, boundaries of the real world and further develop and extend their identities. Furthermore, it can be argued that people in virtual communities are not fooled by these constructed identities, as long as people declaring their knowledge can disseminate it, while other people can observe their behaviour and judge whether these individuals are really who they claim to be. This is supported by Berman and Bruckman (2001) where they have studied the communication patterns of different categories of people and were able to identify social and geographical origins of the person by studying linguistic patterns. Kollock (1998) presents several reasons for participating in VCoP, egoistic—anticipated reciprocity, sense of efficacy, enhanced reputation, and altruistic—satisfying the needs of others.

This raises the question of competence; as knowing the leaders and ‘knowledge holders’ helps VCoPs to proliferate. However, in VCoPs identifying the leaders and evaluating competence may be not as easy, as some people can role-play with their virtual identity. Quality of interaction is a critical element of both CoP and especially of VCoP due to the lack of behavioral transparency, as there is very little or, sometimes, nothing to validate the relevance and trustworthiness of the disseminated knowledge. That is one of the reasons why in virtual communities people behave differently with strangers compared to people they know and trust (Nabeth, 2005). Thus, virtual identities constructed by participants of VCoP are quite complex; *representation* and *perception* of the identity have immediate consequences on the quality and value of interaction within VCoP.

Hence, virtual identities can inherit several aspects—an explicit identity that can be real or imaginary, a digital identity declared by a user’s profile, as well as an implicit social identity that is developed via a process of on-line communication and is stored in the form of text postings that are explicitly represented in the virtual environment. In contrast to the real world, communication and relationships in VCoPs are stored in log files, blogs, etc., and, to some extent, can be exploited in order to form an on-line reputation, which is one of the crucial parts of social identity (Kumar *et al.*, 2004). Social identity within VCoPs can be described as ‘you are what your community is’ and vice versa.

Privacy is starting to play more important roles in VCoPs due to the explicit nature of the environment. There is an interesting study by Saunders (2002) on the invasion of privacy where he differentiates the following three main privacy is-

ssues: privacy to people not in contact lists, privacy of availability, such as online and offline status, and privacy of shared content, which also relates to distribution of conversations, usually stored in textual form, to third parties. Concerns about virtual identities are often associated with anonymity. When a user enters a virtual community, he/she starts to use a pseudonym, which can be one’s real name or imaginary, but in both cases there is nearly the same level of anonymity with respect to the virtual world, as there is no reputation and power attached to the pseudonym (Berman and Bruckman, 2001) and no previous behavioural information that can be extracted. Beenen *et al.*, (2004) exploited questions of anonymity by using theories of social psychology to investigate motivation strategies of people participating in VCoPs in order to find methods to increase levels of participation or manipulation with their behaviours.

#### 4. Conclusion

The field of VCoP research represents an interesting and fascinating area for practical application of many social theories. These theories are raising many questions in relation to these new virtual environments. Representation of explicit and implicit social identity in the real world is now transformed by the new opportunities afforded by virtual environments. Hence, there are many new categories to be defined and dimensions to be explored, bringing the possibility for development of new services to maximize benefits for end users – community participants. However, with the current state of technology, VCoP cannot be as effective as a conventional CoP due to the lack of interpersonal contact (Wellman and Gulia, 1999).

The theory of communities of practice developed in the early nineties by Wenger (1991) is no longer sufficient as there is a need to evaluate communities of a new kind, which quite differs from the original concept of CoP. Virtual CoPs share many differences and similarities with traditional CoPs, but the theory of CoP, which has not been straightforward even in the past, needs to be re-evaluated and adjusted for the modern organizational context; where working teams are interacting across space and time. Furthermore, there is no reliable theory that explains how knowledge in VCoP is created and how to effectively utilize such knowledge in the networked organization. Participation in CoPs may disrupt psychological and social processes that are underlying the principles of identity enactment, identification, and most importantly—verification of an individual in the workplace, which bring up questions to be answered by future researchers on virtual identities.

At the current stage, communities of practice theory and identity theory, as discussed in literature review, have some considerable limitations and are no longer sufficient to explain all the new changes within networked organizational settings. However, they have some valuable strengths that can be seen as starting points for further VCoP and the identity research.

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