

Multiple Inclusion and Community Networks

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ERIM REPORT SERIES <i>RESEARCH IN MANAGEMENT</i>	
ERIM Report Series reference number	ERS-2004-094-ORG
Publication	September 2004
Number of pages	20
Email address corresponding author	ibogenrieder@fbk.eur.nl
Address	Erasmus Research Institute of Management (ERIM) Rotterdam School of Management / Rotterdam School of Economics Erasmus Universiteit Rotterdam P.O.Box 1738 3000 DR Rotterdam, The Netherlands Phone: +31 10 408 1182 Fax: +31 10 408 9640 Email: info@erim.eur.nl Internet: www.erim.eur.nl

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REPORT SERIES
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BIBLIOGRAPHIC DATA AND CLASSIFICATIONS	
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Library of Congress Classification (LCC) LCC Webpage	Mission: HF 5001-6182
	Programme: HF 5546-5548.6, HF 5549-5549.5
	Paper: 711 Groups and organizations
Journal of Economic Literature (JEL) JEL Webpage	Mission: M
	Programme : M 10, L 2, M 12
	Paper: M 19 Business Administration, Other
Gemeenschappelijke Onderwerpsontsluiting (GOO)	
Classification GOO	Mission: 85.00
	Programme: 85.05, 85.08, 85.62
	Paper: 77.63 Sociale interactie, relaties
Keywords GOO	Mission: Bedrijfskunde / Bedrijfseconomie
	Programme: Organisatieleer, prestatiebeoordeling, personeelsbeleid
	Paper: sociale netwerken, participatie, individu en gemeenschap
Free keywords	Community of practice, network individualism, partial inclusion, multiple inclusion, network bridges, social ties

Multiple Inclusion and Community Networks

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Abstract

Community membership has changed over the last decades. Most people participate in different communities simultaneously in order to satisfy different individual interests. This network individualism might threaten the sustainability of modern communities, like communities of practice (CoPs). In this paper we discuss the consequences of this notion for membership in a community. The unit of analysis in this paper is not a ‘stand-alone’ community of practice but the multiple included individual as a node of various networks. This multiple inclusion is deemed to be important for the knowledge sharing between different CoPs. Taking this idea into account our analyses reveals the need to redefine the concept of ‘legitimacy’ in a community. Our underlying assumption is that broadening legitimacies facilitates multiple inclusion of an individual and, in this way, supports the sustainability of a community of practice.

Keywords: community of practice, network individualism, partial inclusion, multiple inclusion, network bridges, social ties

1 Introduction

One of the most intriguing issues in recent research on communities is the motivation of community-members to contribute to the production of community goods. The issue has become highly relevant as many business and non-business organizations are experimenting with different kinds of community-organizations for different purposes. Communities are conceived as knowledge resource networks for organizational learning and innovation that may overcome the constraints of hierarchically structured organizations. According to Wenger et al. (2002: 21) communities should not just be seen as auxiliary structures, but as foundational structures on which to build future organizations.

The increasing popularity of communities in management practices has attracted many organizational theorists trying to gain empirical and theoretical insights into the dynamics of communities. Especially the rise of the Internet has promulgated many new interesting research questions. However, there is no full organizational theory of community organization yet. There is a growing research focusing on factors that explain the ability of people and the willingness of people to contribute to the knowledge sharing in CoPs (Hansen, 1999). Although this research provides us with valuable insights into the dynamics of modern community organizations, there are still important issues that need to be addressed to get a better understanding of the working of CoPs.

In spite of the enthusiasm about community organizations in many organizations, many initiatives to set up CoPs fail within a short term. An early break down of a CoP means that a lot of learning and knowledge that is created may get lost and people get demotivated to start new initiatives. Based on their research and experience with organizational communities Wenger et al. (2002) propose a stages model for sustainable community development. The authors argue that communities evolve over time and that each stage is faced with different problems that need to be solved.

The second issue that is deemed to be important for sustainable community development is boundary management. As Wenger (1998: 103) argues, CoPs cannot be considered in isolation from the rest of the world, or understood independently of other practices. The learning and knowledge creation that took place within a CoP only makes sense to the organization if it can be shared with or applied in adjacent CoPs. This issue has been addressed for the first time by Brown and Duguid (1991: 55) when they advocated a conceptual reorganization that must stretch from the level of individual CoPs and the technology and practices used there to the level of the overarching organizational architecture, the *community-of-communities*. Similarly, Wenger (2000) views CoPs as basic building blocks of an organization-wide social learning system. This larger system should be conceived as a constellation of interrelated communities of practice. One important question then is how these interrelations between different CoPs look like. How can the knowledge that is created within one community be shared with and applied into another community? Different concepts and theories have been launched (brokering, boundary management, bridging, multiple memberships) to deal with the interconnections between different communities. In this paper we will argue that these different types of bridges fail to explore the consequences of bridging for the individual and for the CoPs in which he is participating. So our starting point is not the CoP or the bridge between CoPs but the individual who is bridging. Engeström et al. (1995) introduce the concept of polycontextuality which does

not only mean that the individual is engaged in multiple simultaneous tasks and task-specific participation frameworks but also increasingly involved in multiple communities of practice. We take this issue one step further by introducing Allport's concept of "group membership manifold" which we will call multiple inclusion (van Dongen e.a., 1996). Our main argument is that multiple inclusion is a knowledge potential from which different communities can reap the benefits if the contributions are legitimised by the CoPs in which the person participates.

In this paper we first briefly review alternative concepts and theories about the knowledge sharing relations between individuals and between communities from social network analysis and CoP perspectives. Before we introduce our notion of multiple inclusion, we discuss Wellman's recent theory on network individualism which posits that people operate in multiple, partial communities. Multiple inclusion suggests that these partial involvements in different communities are connected and influence each other. Our case story demonstrates that multiple inclusion does not lead automatically to knowledge sharing between communities and to sustainable development. We apply Krackhardt's theory on triadic ties and impact of norm sets in groups on individual behaviour to explain the diverging evolutions of the communities in our case story. We will conclude this paper with some suggestions for further research and general conclusions.

2 Bridging Communities

Following Wellman, we view CoPs as a particular kind of a network of people. They differ from working groups in organizations which are conceived to be canonical, bounded entities that are sanctioned by the organization to perform particular tasks (Brown and Duguid, 1991:49-50). They differ from other types of communities by their boundedness to a common practice.

One important assumption here is that the sharing of knowledge between communities is not unproblematic. Communities are complex collective entities, having their own, idiosyncratic reward systems, legitimation regimes, images of knowledge, relations to a practice, and conflict resolution rules. It implies that something or someone should make the interconnection which facilitates the sharing of knowledge between different CoPs. We won't discuss here all kinds of factors that may thwart the transfer of ('sticky') knowledge within communities (Szulanski, 2003) but will focus on nature of the bridges between communities. In the literature different perspectives about these interconnection has been discussed which will be briefly discussed in this section.

2.1 The weak tie bridge

Social network analyses provide extensive elaborations on the idea of bridging and brokering. Basically, two types of connections are distinguished that can bridge two different nodes in a network: strong ties and weak ties. The strength of a tie is a combination of the frequency of contacts, emotional intensity, intimacy and reciprocity (Granovetter, 1973: 1361). Granovetter's well-known strength of weak tie theory posits that weak ties are paradoxically more important to build bridges between communities than strong ties. Strong ties, out of which communities are built of, create homophilous knowledge among the members. The homophilous knowledge results from the close and frequent interactions the members of a social network entertain. Consequently, a social network tends to close and establish its own norms and social boundaries which may prevent these networks to connect to other networks (Coleman, 1988: 26). Granovetter argues that densely-knit social clusters acquire new or different information mainly via weak ties with other social clusters (see also Friedkin, 1982). The tie that bridges between clusters is a weaker tie because each individual participates in two different social clusters, which prevents him to become a full member of one of the two social clusters. As Lin (2001: 67) concludes, Granovetter's theory also implies that the bridging individual tends to be in the periphery of both social clusters.

In a recent study on 120 new-product development projects in 41 divisions in a large electronics company Hansen (1999) has combined the strength of weak tie theory to the notion of complex knowledge. The findings of this study showed that weak interunit ties facilitated the transfer of useful, 'not-too-complex knowledge', but impede the sharing of complex knowledge.

2.2 The entrepreneurial bridge

Referring to Granovetter's weak tie theory, Burt argues that the strength of the tie is hardly relevant to the flow of information. What really counts is whether the tie bridges or not (Burt, 1992: 26-30, see also Krackhardt, 1999: 184). Burt's network theory on structural holes has not been applied on CoP-settings but it provides some interesting insights into the relevance and potential value of brokering and bridging.¹ Structural holes are defined as gaps between nonredundant contacts between two networks. The rise of structural holes in networks is explained by the fact that people focus on activities inside their own group, which creates holes in the information flow between groups (Burt, 2003: 5). It does not mean that people in both groups

¹ In fact, Burt presents his theory on structural holes against the background of a competitive environment.

are unaware of each other but simply don't have time to attend to the activities of the other group (Burt, 2001: 35).

Structural holes present opportunities for brokers (*tertius gaudens*) to build bridges that span the holes. Resources can flow disproportionately to these brokers who bridge the gaps between otherwise disconnected networks. However, structural hole positions need to be instantiated before the potential can be realised (Lin, 2001: 53). This provides entrepreneurs with an excellent opportunity to take up this brokerage role and to connect the flows of information in two disconnected networks. So entrepreneurs take advantage of what different actors know, without telling the other parties they are doing so (Krackhardt, 1999:207).

The relevance of structural hole theory to the idea of bridging communities is its emphasis on the potential value of the in-between-position and the need to take action to exploit this position. The weakness of the theory is that does not indicate how the community-of-communities can benefit from this structural hole position because of its emphasis on the individual's interest.

2.3 The multimembership bridge

In the course of the years Wenger has developed a full-fledged theory about CoPs. A recurring theme in his work is boundary crossing. Boundaries are important for CoPs for two important reasons (Wenger, 2000: 233). First, they connect CoPs so that knowledge sharing can take place. Second, boundaries expose the CoPs to knowledge and experience external to the CoP. Boundary crossing is a complex, interactive process which calls for collective concept formation (Engeström et al., 1995: 320). Interaction across boundaries can be realized by two types of connections: boundary objects and brokering. Boundary objects become manifest in different forms (Wenger, 2000: 236). The first are artifacts like documents, concepts, and other forms of reification around which CoPs can organize their interconnections. The second are discourses in terms of a common language that allows people to communicate and negotiate meanings across boundaries. The third are shared processes that allow people to coordinate their actions across boundaries.

Brokering refers to the connections provided by people who introduce elements of one practice into another. Brokering is conceived as the transfer of the non-reified knowledge by human agents which allows for the negotiating of meaning across CoPs. As Wenger (1998: 109) argues, brokering is a complex job as it involves translation, coordination, and alignment of perspectives. It also requires enough legitimacy and trust to influence the practice of the CoP and to address conflicting interests. Brokering can only be done by people who participate in different CoPs, which he calls multimembership. This multimembership is inherently characterized by some

degree of ambivalence with respect to full participation in more than one CoPs. Wenger therefore concludes: “Brokering therefore requires an ability to manage carefully the coexistence of membership and non-membership, yielding enough distance to bring a different perspective, but also enough legitimacy to be listened to.” (Wenger, 1998: 110).

Based on his experience with CoPs Wenger found that although most people do some brokering in organizations, some individuals are more oriented and skilled to accomplish this brokering role and prefer to stay at the periphery of the CoP instead of moving to the core. For example, at Xerox some people are especially charged and dedicated to maintain the connections between the R&D lab and other departments of company.

In this section we discussed different types of bridges. These different perspectives underline the notion that something has to be created (artifact, communication, interface, gatekeepers, relationship) that connects individuals or collective entities. Although these bridging concepts are presented as complex and multidimensional, most of them ignore the socio-cognitive complexity of the two ends of the bridges: the individual.

3 Network individualism, individual interests, and public goods

Research on community organization is almost as old as the sociology discipline itself. In the old sociology (Tönnies, 1912, Parsons, 1951) communities are conceived as densely-knit and tightly-bounded groups of people, who share a sense of belonging, common interests and common resources. Global processes of informatization, computerization, bureaucratization, and urbanization gave rise to a debate about the change in the nature of the community structure. This debate is called the *Community Question* (Wellman, 1979). In contrast to what is often suggested, communal relationships did not disappear but the type of relationships between members of communities has changed. This most important transformation of the traditional concept of sociability to modern, partly web-based forms of social relationships has been succinctly characterized by Wellman as a move away from Little Boxes (homogeneous, broadly-embracing groups) to networked individualism (Wellman, 2002, 2003). Individuals build up personal networks to which they contribute proportionally and out of which they mobilize resources variably. “Most people operate in multiple, partial communities as they deal with shifting, amorphous networks of kin, neighbours, friends, workmates and organizational ties.” (Wellman 2002: 11). Network individualism is not created by the Internet, but the development of it provides opportunities for the diffusion of it as a dominant form of sociability (Castells 2003: 130-131).

Networked individualism suggests that the individual is a node between different networks. The individual is switching between these networks according to his own personal needs and interests and he participates within each network according to specialized roles. Consistency in the roles is not necessary; an individual can have different roles in various networks.

Some networks might transform into communities that are bound together by shared interests, rather than by kinship or locality as was the case in the past. The individual as the central node in specialized networks has a choice whether and how (according to which specialized role) to get involved in a particular network. Furthermore, people contribute and participate concurrently in several communities. This node is located at the intersection between various networks and bridging takes place upon individual choice.

Wellman's network individualism emphasizes the way how individuals take participation in networks in terms of costs and benefits. They leave or switch to other networks at the moment the network is not satisfying the individual's specialized needs any longer. In this way network individualism may lead to a 'crisis of survival' of the communities that are left by self-interest seeking individuals. A community must be highly attractive to its members in order to become and stay sustainable. The attractiveness must be created within the community, i.e. by the other members who are engaged in interactive and innovative problem-solving of participant's problems in practice. There are no other sources in CoPs (like natural sources), which means that on the one hand CoPs provide unlimited resources to the community members but on the other hand are unconditionally bounded to the contributions of the members of the community. Free-riding is a serious threat to the community. Although network individualism may not be confused with free-riding, it is threatening the sustainability of the CoP as it allows for opportunistic behaviour.

In discussing open source software communities von Hippel and von Krogh (2003) provide an interesting explanation how these networks are able to sustain in spite of network individualism.

Open source communities are very attractive to software developers who want to contribute to the community but are also visited by many free-riders who do not contribute. The question then is why people voluntarily contribute to open source software, whereas their private benefits are possibly low due to free riding and spill-over of knowledge. Specifically related to the problem of free-riding, they think: "Indeed, under some conditions free revealing may actually result in a net gain in private profit for the innovator [or active participant, I.B. and PvB]. For example, free revealing can increase innovation diffusion and so increase an innovator's innovation-related profits through network effects." (von Hippel and von Krogh, 2003: 216). In a more generic

sense, the reason for contributing, as these authors explain, is the ‘double’ (or multiple) advantage that such a network offers for an active participant. “It also means that I as a developer can contribute my code as a public good and at the same time use it for my private and perhaps somewhat different purposes.”(von Hippel and von Krogh, 2003: 216). Therefore, it is understandable how a common good is developed although not everybody contributes. A concurrence between collective good productions and gaining private benefits is taking place: “Instead, it proposes that contributors to a public good can *inherently* obtain private benefits that are tied to the development of that good.” (von Hippel and von Krogh, 2003: 216).

Von Hippel and von Krogh’s ‘private-collective incentive model’ provides a part of the solution to the problem of how communities can sustain in spite of network individualism but leave the notion of private benefits unexplored. Some private benefits, like reputation, are directly relevant for the individual in the community. Other private benefits, like learning to develop new software patches, are only relevant if they can be deployed into other communities. Private benefits are gained because a participant is also member of another network or group where benefits from the original non-beneficial group can be used. To a certain extend, even free-riders contribute to the sustainability of the open source community as they may apply the software into different contexts. Without explicitly referring to it, the authors apply the notion of networked individualism. However they do not consider the individual as fragmented person that has to realize his benefits solely inside every community separately. They insist that an individual can derive private benefits that lie outside the particular community, e.g. knowledge gained in one community can be useful in another community membership. They adopt the notion of networked individualism but at the same time, they assume a connection between community memberships. As long as private benefits can be realized within the overall network, participation in a particular community can be safeguarded without realizing benefits within this group.

Although Wellman and von Hippel and von Krogh have based their ideas on the transformation of social relationships due to the rise of the new media, we believe that their insights apply to relationships in social networks in general. The new technology amplifies the reach of the connections and enhances the possibilities for switching between communities but does not show how the individual is participating in different social networks, and by doing this, is contributing to the sustainability of different communities.

4 Partial and Multiple Inclusion

To stress the notion that the individual is connected to different social networks, we elaborate on Allport's (1962) insights about the relationships between the individual and the collective order. Different from the analyses of Wellman (2002) but similar to von Hippel and von Krogh (2003), Allport suggests that multiple membership is not just about diverse and separated memberships - a view in which the individual is fragmented and entertaining separated memberships - Allport (1962) introduces the notion of partial inclusion. This concept is also discussed by Weick (1979), who explains the relevance of the notion of partial inclusion as "a person does not invest all behavior in a single group; commitments and interlockings are dispersed among several groups." (Weick 1972: 97). Partial inclusion bears some similarities with Wellman's idea of membership in specialized roles. However, instead of accepting the separatedness between the specialized roles, Allport (1962) emphasizes the interconnection between individual's different partial inclusions. He views the individual as a sort of "matrix in which these patterns of collectively organized segments meet and affect one and another" (Allport, 1962: 25). In more concrete terms: "What the individual does in one group, or merely his relation to that group, may have an important bearing upon what he does in another group; and the total 'group membership manifold' of one individual who is a member of a particular group may be widely different from the manifolds of the other members." (Allport, 1962: 25). Allport suggests that group membership in one group has consequences on membership in another group. The manifold of group membership is interconnected in the individual person. "Instead of saying that a group incorporates (or is composed of) many individuals, we would do almost better to say that an individual incorporates many groups. One group has salience for him (that is, he is present in it or acting in terms of it) at one time, and another has salience at another time. When not salient for the individual, a group to which he belongs could be said to be represented in his own organism as sets, latent meaning, or stored memories." (Allport, 1962: 25).

The implication of an individual as a node between diverse groups, then, is not only partial inclusion but also multiple partial inclusions a notion which is also described by van Dongen et al. (1996). These authors insist that multiple inclusion consists of the simultaneity of partial inclusions. Multiple inclusion serves as an interpretative background for particular behaviour and participation in a community. Or as Allport (1962) puts it: "The 'intensity' of our behaviour in a given structure [i.e. a group...] is in part dependent upon these reinforcing or inhibiting effects received from positively or negatively related structures [i.e. groups ...]" (Allport, 1962: 27).

There are important differences between multiple inclusion, network individualism and multimembership. Network individualism assumes an individual who is split up into different specialized roles and who participates in different communities in order to satisfy these different

individual interests. Multimembership assumes an individual who is participating in different communities and is seeking for a balance between participation and legitimation in different communities. Multiple inclusion does not refer to actual behaviour but to the relatedness of the individual to different social worlds. This relatedness can be beneficial to both the individual and the communities but can be effectuated in detrimental ways as well. The main observation here is that individual behaviour within a group is not an isolated phenomenon but is related to other group memberships. Whereas bridging suggests that a connection has to be created, multiple inclusion implies a state of being.

There are some other important implications for our discussion about bridging communities and sustainability of the community. The first is a paradoxical one. A CoP becomes more sustainable when the individual is engaged and participates in other communities. Multiple inclusion can be viewed as the foundation for bridging between different communities.

The second is that most theories on bridging suggest that only not too complex knowledge can be shared between communities. Practice-bound, non-canonical knowledge has to be abstracted and decontextualized from a particular context and its meaning needs to be renegotiated into the context of application (Lave and Wenger, 1991:34). This negotiating process depends on the nature of the relationships within the community.

Third, multiple inclusion theory suggests that the individual who is engaged in different communities is bridging through participation. Following Lave and Wenger's theory on legitimate peripheral participation (LPP), the contribution of the individual in the community depends on the way and the extent to which these contributions are legitimized by the communities.

In order to explore the implications of multiple inclusion for community development we discuss these implications more in detail in the next sections.

5 Dealing with multiple inclusions in a double-knit organization- a case story

As McDermott (1999) points out, multimembership not only concerns the participation between CoPs but also between CoPs and project teams. In the latter case simultaneous participation takes place between CoP and project teams. The knowledge creation and learning that takes place in project teams is discussed, synthesized and shared within the home community and transferred back to new project teams. McDermott calls these dual organizational forms 'double-knit organizations'. Our case story about a Dutch consultancy firm (DCF) deals with this type of double-knit organization in which professionals work in project teams and set up CoPs (in DCF they were called learning groups) to support their professional work. We briefly discuss the

development of two learning groups: the Professional Development Group – PDG and Project improvement group – PIG.

In DCF clients' assignments were realized in project teams consisting of various consultants. Most of the project teams work on long-term assignments and have developed towards CoP-like organizations. Membership in the project teams varied according to the client's assignment. Success and failure in projects were set as the main criteria for determining career paths of the individual consultants. High demands on quality from the customer's side and time pressure has created an accountability culture which rewarded success and left hardly any space for discussing problems or failures in the project teams in an open atmosphere.

The management team of DCF acknowledged this problem and therefore decided to facilitate the establishment of learning groups within the firm. These learning groups were thought of as a professional home base, next to the 'hands-on' project teams. Members of these learning groups came from different project teams. It was hoped that these learning groups formed a sound base for the professional development of the consultants of DFC and that it could provide a social space for settling relationships from which the consultants could benefit on future projects.

The interesting aspect in this case is that the two learning groups developed differently, although, the original assignment by management was the same: learning in order to improve the work in the project teams. PDG decided to take the own professional development of the consultants as starting point. The other group, PIG, decided to take the participants' current client-projects as the object for learning and sharing knowledge.

The PDG functioned well. Members showed up regularly on the monthly meetings. There was coherence in the group. Members used the group as working space and did not just narrate their current experiences in a project. Instead, the group discussed generic themes of professional development, like conflict resolution with a client, giving unsolicited advice etc. The interaction was high and intensive and critical feed-back was given by the participants on their contributions. Members did not feel urged to report their own current projects. Instead they often used hypothetical situations which described the problems in a general way. Members could hide in vague references such as '... what once happened to me ...' etc. They liked to participate in this group and felt comfortable. Although it was admitted that the acquired knowledge was not directly applicable to and in their daily projects most members were convinced that participation in this group was of great value for their professional functioning in current and future projects.

The working of the PIG was different. The group decided to take the members' current projects as the subject matter to learn from. The idea was that every member should present (parts of)

his/her current project and that the group should help to improve this project by giving advice, hints and tricks. However, the typical course of these monthly sessions was that every member told his/her story, that some questions were raised but that no one was exchanging painstaking and sensitive information about the projects. Absenteeism was high. Members reported that they did not learn something which they could use in their current project. The reasons mentioned were: a) there was no coherence in the group, there was not continuous participation; b) the discussed projects were too diverse; c) only superficial information was exchanged which was not very useful to other participants; d) members found it hard to discuss their problems and failures openly. This information could threaten their position and might have consequences for getting involved in future projects and even for their careers.

This case on the two learning groups illuminates some interesting points with reference to the notions of multimembership, brokering, boundary objects and multiple inclusion. All members in the two learning groups were also involved in project teams, where the actual work took place. In contrast to what Wenger (2000) suggests no specific roles for brokerage were defined. Participants bridged the learning groups and project teams through multiple inclusion and multimembership.

Moreover, multimembership in our case story did not only refer to the multiple participation in the learning groups and project teams but also to the organizational culture of accountability that was embedded in these learning groups and teams. This organizational culture influenced the decision on the content of the new 'practice' in the learning groups in different ways. In PDG, which was a well-functioning learning group participants avoided to discuss concrete problems and failures in the projects they were working on. The result was that the group only learned about general problems and solutions. In PIG the participants decided to form a 'practice' around their own projects. In this case the boundary objects, the narrative of their problems, failures, and learning experiences, were threatening the reputations and career prospects of the consultants. Members in the PIG were afraid that if they reveal knowledge about their current projects it might be used for a different purpose than learning from each other. In this case releasing knowledge in the PIG could imply that (future) cooperation in projects could be compromised. As a consequence, people began to attend the monthly meetings infrequently and to discuss the project experiences shallowly. What is important here is that boundary objects are not just neutral artefacts or devices that can be shared and negotiated across boundaries. Boundary objects are inscribed with ideological intentions which influence the nature of the practice and the functioning of the CoP within the wider context of the dominant organizational culture.

At this point, the explanatory value of multiple partial inclusions becomes clear. The individual behaviour in PDG and PIG interferes with the individual's multiple inclusion in the project teams and organizational culture. When members started participation in the PIG they also kept in mind the consequences this might have for their future work in the project teams and the career prospects. The partial inclusions (project team, PIG, and organizational culture) together determine the type of behaviour that became manifest in the PIG, namely superficial narration and infrequent attendance. Here it gets true what Allport stated: "Instead of saying that a group incorporates (or is composed of) many individuals, we would do almost better to say that an individual incorporates many groups." (Allport, 1962: 25).

The main difference between PIG and PDG lies in the decision about the practice and the boundary object. In both cases this decision was influenced by the fact that the participants were also partial included in the wider organizational culture of accountability which rewarded success in projects and did not allow learning from failures. The relative success of PDG can be explained by the decision to single out a practice at a safe distance from the practice in the project teams.

Our case story illustrates how individual behaviour interferes with participation in different organizational settings. Many initiatives to set up CoPs fail because they are built on the rather naïve assumption that a new CoP creates a disjunct zone of collective behaviour that is disconnected from the social world in which it is embedded. Multiple inclusion implies that the individual has to deal with different, sometimes conflicting and sometimes congruent legitimation regimes which have serious implications for knowledge sharing between CoP. In the next section we will discuss this in more detail.

6. Conflicting and Congruent legitimation regimes

Multiple inclusion refers to the interferential dynamics between partial inclusions. It describes the type of participation within a group but originates from the type of interrelatedness between groups. Alternative relationships influence the salient membership in a particular community. In our case story we have identified various types of interrelatedness between groups and their differences upon the choice of a practice. As we saw in the case story multiple inclusion does not automatically lead to beneficial cross-boundary sharing. It largely depends if and how the different contributions are legitimized by the groups in which the individual participates.

Krackhardt (1999) points to contradictory norm sets the individual is confronted with when he is participating in different groups which may thwart knowledge sharing knowledge. Krackhardt's

study is important to our notion of multiple inclusion as he extends the focus of social network analysis on dyadic relationships (bridges, ties), especially in Burt's structural hole theory, to triadic relationships (Simmelian ties). Simmelian ties are relationships that are embedded in cliques and may constrain the individual's behavior. He further makes a distinction between private and public behavior. Krackhardt argues that under circumstances of private behavior the various groups do not know that a member is also included in other groups. In this situation the individual can reap the benefits from the bridge position. However in the case of public behavior the individual behavior becomes observable to two or more in which the individual is participating. As a consequence the individual, being part of different groups, is less free, less independent, and more constrained (Krackhardt, 1999: 185). Krackhardt puts it as follows: "If the behaviors being constrained by the norms of the group are *private behaviors*, known only to ego and the local group members, then ego is free to engage in different behaviors in different groups, changing her colors as she moves from group to group. In such cases, Burt's argument prevails: being tied to separate groups is not constraining, because the other group who might be offended by the aberrant behavior does not observe it." (Krackhardt, 1999:207).

Krackhardt's observations have some important bearings for cross-boundary knowledge sharing. The first is that if behaviour is public the bridge is most constrained as the group does not permit the individual to take all the benefits to his private interests. Secondly, the norm sets of both groups exclude each other. Here Krackhardt assumes that every behavior that is not permissible in a group is forbidden in this group. Krackhardt (1999) argues that the bridge or structural hole is most constrained in this situation as he has to comply with two differing norm sets of two groups - under the condition when the bridge's behavior can be observed by both groups: "That is, to the extent that norm-bound behaviors are visible to members of both groups, a person who is a member of two cliques has fewer permissible behaviors than a person who is a member of just one of them. By extension, the more cliques one is a member of, the more constrained are one's options." (Krackhardt, 1999:198). The limitations in behavior come from the intersection of the two norm-sets of the two groups and the observability (publicity) of these behaviors.

Krackhardt has built his argument about exclusive norm sets on deductive reasoning: "For didactic purposes, I will designate the norms of a clique as a set S1 and define the set as all those behaviors that are *permissible* in group (or clique) #1. By definition, then, all behaviors outside this set are prohibited by the group. A potentially different set of norms, S2, would be permissible in clique #2." (Krackhardt 1999: 189). The conclusion on the base of this definition is that as soon as norm sets are different they are exclusive.

When we relate Krackhardt's observations to the notion of multiple inclusion the following conclusions can be drawn: under the condition of public behavior and under the condition of excluding norm sets multiple inclusion in several groups does not produce benefits neither for the individual nor for the group. On the contrary, committed participation in various groups is constrained or does not develop at all.

The failure of PIG to develop a sustainable learning community can be explained from this perspective. The norm sets of the organizational culture of accountability, the project teams and the PIG were conflicting. The norm sets of the organizational culture and project teams did not allow participants to be open about project failures, whereas the norm set of the PIG emphasized public in order to learn from each other. Participants sought for congruence between the norm sets of the organizational culture and the project teams and did not find a mode to reconcile them with the norm set of the PIG.

Krackhardt's theory on different norm sets and consequences for individual behavior applies to the PDG case as well but in a different way. In PDG the participants selected a practice and boundary objects that were not conflicting with the practice and associated norm sets of the organizational culture and project teams. The general and abstract knowledge that was exchanged within PDG was complementary and compatible but also rather harmless to the practice and participation in the project teams. Hence members are not hindered by their multiple inclusions. Even more, members felt that there was a positive trade-off between the participation in the two groups.

The PDG case illustrates that differences in norm sets do not automatically mean that they are conflicting and mutually exclusive. In contrast, the case shows how multiple inclusion and multimembership can be advantageous to different communities if contributions are mutually legitimized. Lave and Wenger's theory on 'legitimate peripheral participation' (LPP) can be used to explore the notion of mutual legitimation (Lave and Wenger, 1991). In LPP the social position of a participant (peripherality) is connected with the cognitive participation of a participant. The attribute 'peripheral' indicates that a participant within a CoP occupies a particular position within the social structure of a CoP. This position changes relative to the legitimacy of a contribution. Legitimacy of a contribution is granted by the other participants. Thus, we could say 'legitimacy lies in the eyes of the beholder'. For multiple inclusions being effectively used, we propose that legitimacy must be extended to different groups. Participation should not only be legitimized within one group but by the several groups where an individual is partially included.

We propose to call this mutual legitimacy of participation. The relevance of mutual legitimacy of participation is manifested in the definition of LPP: “The form that the legitimacy of participation takes is a defining characteristic of ways of belonging, and is therefore not only a crucial condition for learning, but a constitutive element of its content.” (Lave and Wenger, 1991: 35) We hypothesize that mutual legitimacy of participation is a precondition for the individual to belong to and participate in several communities.

7. Discussion and suggestions for further research

Social network studies and CoP-theory stress the importance of studying the relationships between groups or CoPs for knowledge sharing. Different theories and concepts have been launched to get a better understanding of these inter-CoP relationships. In this paper we have introduced the concept of multiple inclusion and in association with it, mutual legitimacy of participation. In the case study we found that differences in the development of PDG and PIG were related to the different practices that have been selected. We observed contradictory results concerning the role of practice. In the PIG-case, the learning group and project teams relied on exactly the same practice – namely the members’ current projects. However a coherent PIG did not develop and mutual legitimacy could not be gained. Although the practices of the learning group and the project teams diverged considerably in the PDG-case a relatively successful community was developed. We have suggested some explanations for these divergent developments of the learning groups but there is still a number of issues that need to be explored. The first is the way the organizational culture has influenced the legitimation regimes in the learning groups and project teams. In our case description we adduced that the individual consultants were partially included in the dominant organizational culture of accountability in the project teams. This partial inclusion interfered with the partial inclusions in the learning groups. This raises the important question how we should conceptualize the community-of-community, a term coined by Brown and Duguid (1991). To get a full understanding of working of this community-of-community it does not suffice to focus only on these in-between relationships. The latter are embedded in a larger cultural context which influences the nature of these relationships. Another issue, which is quite related to the former one, is that norm sets may differ in the strength of their influence on individual behaviour. In our case story the norm set of the accountability culture was dominating the norm sets in the project teams and did not allow the PDG and PIG to fully develop their own norm sets. Both learning groups sought for a mode to avoid a conflict with the dominating norm set of the organizational culture. More detailed case study research is

needed to explore the impact of conflicting norm sets on multiple inclusion and multiple participation.

In contrast to what Krackhardt suggests, differences in norm sets do not automatically imply that they will conflict. What needs to be investigated is under what conditions mutual legitimacy of participation is possible. In our opinion the choice of the new practice in relation to current practices is of crucial importance. Our case story suggests that communities with similar practices conflict while communities with distinct practices but complementary to each other have a reasonable chance to sustain. However, as LPP posits, these practices should always be studied in close relation with participation and legitimation.

March et al. (1991) already recognized that one and the same practice can be interpreted in different ways: “Similarly, every time a pilot avoids a collision, the event provides evidence both for the threat and for its irrelevance. It is not clear whether the learning should emphasize how close the organization came to disaster, thus the reality of danger in the guise of safety, or the fact that disaster was avoided, thus the reality of safety in the guise of danger.” (March et al., 1991: 10). The different interpretations of practice may also help to explain why groups with contradictory norm-sets do not support learning from each other although work on similar practices (as is the case between PIG and project team). Both groups stress different interpretations of this practice (PIG starts from the failures and weaknesses in a current project, the project team starts with the successes and strength in a current project). Both groups used different and contradictory legitimation regimes for determining what is thought to be essential for their practice. In the case of multiple inclusion both interpretations of the same practice cannot be simultaneously legitimized.

Our case study does not provide adequate evidence to show how the practices in the two (or more) communities should be related to each other in order to support mutual legitimacy. As Hanks states: “If both learning and the subject learned are embedded in participation frameworks, then the portability of learned skills must rely on the commensurability of certain forms of participation.” (Hanks in Lave and Wenger, 1991: 20). In the words of Hanks we know that commensurability of participation needs mutual legitimacy of practice. However, we do not know what the characteristics of practice should be in order to gain mutual legitimacy. Further research is needed here.

8. Conclusion

We started our discussion on multiple inclusion in community networks by identifying different concepts and theories that discuss the ways how knowledge can be shared between different

communities. Most theories have conceptualized a separate role, artifact, or a potential position between the communities. In this paper we have alternatively, inspired by Wellman's theory on networked individualism, focussed on the individual who is involved in multiple networks. However in contrast to what networked individualism suggests we believe that these different involvements of the individual are somehow related to each other. Multiple inclusion indicates that the various involvements of an individual do not exist in isolation from each other. They influence each other. Multiple inclusion is not an artifact that has to be created or a position to which somebody can be appointed to. It is an interferential dynamic which can be called upon and is moulded through participation and legitimation. From this viewpoint we have discussed the consequences of multiple inclusions on the sustainability of a CoP. Different norm sets between communities might thwart knowledge sharing between those networks. To benefit from multiple inclusions mutual legitimacy of participations is required. For organizations that want to set up CoPs it is needed to take care of congruence with norm sets between different communities and between the communities and the organizational culture. A CoP is not a neutral zone within the organization in which new and different norm sets can be settled from scratch. Setting up a new, sustainable CoP has consequences for other CoPs but also for the organization at large. We argued that boundary crossing is proficient as long as the individual is legitimized for his multiple group membership. Our elaboration on multiple inclusion and the consequences for the sustainability of CoP showed some of the intriguing complexities that modern organizations are dealing with today.

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