Myths and Observations of communities

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Abstract:

The paper starts from an observed discrepancy between a multitude of conceptual works on communities, published over the last 15 years, and a general lack as well as conceptual diversity of empirical studies, to test those concepts. The author assumes that the following reasons account for this observation: First: Communities serve different purposes, use different modes of interaction and follow different rules with regard to membership. Different types fulfil different expectations. However, conceptual works often treat them as one research object and tend to overload their agenda with abundant propositions, which consequently results in mixed empirical findings. Therefore, the author suggests a typology which differentiates communities and thus allows elaborating on contradicting expectations and propositions. Secondly, expectations are only partly grounded in sound theory (as can be stated for learning communities), partly they are based on assumptions or even hypes, such as for instance the expectation of business(!)enabling capacities of new technologies per se. Thirdly, the community literature sheds much light on communities as a research object, but does not regard them in the context of the primary organisations of their members. The author suggests studying effects of community membership on the members' primary organisational background instead of only assuming this relation to be beneficial.   The author's philosophy of knowledge is based on the epistemology of social construction. Therefore she holds that progress in understanding communities can best be enhanced by a full grown cycle of conceptualisation, experiment (empirical research), reflection and generalization and re-conceptualisation. This cycle is best activated by certain formats of qualitative empirical research. The author gathers evidence from three empirical studies in the

last part of the paper. Although too different and too few to allow for meta-analysis, findings from those studies support the necessity to differentiate between types of communities. They also serve to clarify concepts of communities with regard to structure, processes and culture.

1) Roots of a recycled interest in communities.

Three trends in the business field, which are reflected in academic publications, seem to nurture the interest in an old phenomenon, though enabled by new technologies, namely an interest in communities.

1. An increasing rate of growth by internationalisation, partly achieved by cross-border mergers and acquisitions as well as by cross-border cooperative arrangements, creates the necessity to coordinate teams of experts, situated in different locations (cf. Schneider, 1997; Thurow, 1999; Tapscott; 2000)

2. An increase of sophistication and complexity in products as well as procedures and societal arrangements and an accelerated growth of the production of „knowledge"[1] in general require its fast transmission to many recipients (cf. Kaplan and Norton, 1992; Brooking, 1996; Sveiby, 1997)

3. An increase in the number and strategic sophistication of competitors, although counteracted by processes of concentration, requires fast innovation to keep competitive advantage (cf. D'Aveni, 1995)

All three developments bring about an urge to manage corporate knowledge between different locations of multinational companies so that advantages of specialisation combine with advantages of standardisation (cf. Doz et al, 2001).

At the academic level those trends are reflected in further elaborations on the resource based view of competitive advantage, such as core competencies (Hamel and Prahalad, 1990) or dynamic capabilities (Nelson and Winter, 1982, Teece et al, 1987). Those elaborations focus more or less on the appropriation of rents from organisational knowledge which is hard to imitate, creates a visible and distinctive value for customers and is sustainable over time (cf. Barney, 1991; Grant, 1991, Amit and Shoemaker, 1993). Inimitability, sustainability and uniqueness (cf. Peteraf, 1993)

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[1] According to my definition of knowledge, accumulations of structured data only turn into knowledge if processed by a human mind,. If I use the term „knowledge" I mean precisely potential knowledge.

arise from conditions of uncertainty and complexity which require a continuous feed back or "generative dance" (cf. Cook and Brown, 1999) between explicit and implicit knowledge as well as the combination and coordination of different resources into organisational practices which are contingent and path-dependent (cf. Dierickx and Cool, 1989). Those routines or practices can be understood as collective, complex and dynamic.[2] While their leakage to competitors must be prevented, their diffusion and development within a hierarchy or closely coupled network is essential to update them to the requirements of a dynamic environment. The question is how they can be constantly developed without distorting into core rigidities. General answers to this question are provided by the literature on organisational learning (cf. Senge, 1990). Although highly plausible and socially desirable, this literature has attracted critique from the practical field in two respects. On the one hand, the normative design provided by the OL literature seems too abstract and too general for application in business organisations. Most methods offered are perceived to be risky and to require high amounts of commitment and input from organisational members who feel often under pressure to outsource learning requirements. This applies to Scharmer's presencing (cf. Senge et al, 2004), to dialogue (cf. Bohm, 1998) and to reflection in general (Senge, 1990). As all three methods can be applied in communities the practical field has welcomed communities warmly as the concrete method and procedure, which they had missed so far to control organisational learning. On the other hand the OL literature's implicit assumption that businesses attempt or at least should attempt to maximize learning and knowledge needs to be reconsidered. Modern business seems more dependent on the division than on the sharing of knowledge, while needing advice as to how much coordinative knowledge and learning are required to operate the interfaces of specialised areas of capabilities (cf. Schneider, 2003 and Grant and Baden-Fuller, 2004). Again communities with their focus on a common purpose promise a solution to this problem by their quality of self-organisation.

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[2] As compared to resources which are simpler, individual and static and need to be combined to form capabilities, routines and practices

To summarize those introductory statements the concept of communities has been well received in academic as well as practical contexts as a possible answer to the three challenges, briefly described above, namely

- to cross-border cooperation within hierarchies and closely coupled networks
- to the pressure to innovate and
- to requirements resulting from an accelerated production and global accessibility of knowledge.

2. Functions of communities and expectations created by literature.

The word community can be retraced to two etymological roots, both originating from Latin. One meaning is derived from the Latin word for wall (murus) and describes a cohesive social group of people living behind a wall (that protects but also constrains) which results in a shared history and the emergence of common practices. This meaning elicits associations of belonging (identity), of solidarity and of shared values which transcend the purposes of all common activities behind the wall. Another meaning is derived from the Latin word for gift (munus) and thus marks another mode of social exchange than the anonymous market. Reciprocity, trust, solidarity come to mind if one thinks of communities as a common space to exchange gifts. Both meanings seduce to idealise the phenomenon which is reflected in definitions as the following:

"The value members find in their interactions is not merely instrumental. It also has to do with the personal satisfaction of knowing each other, of having colleagues who understand each other's perspective, and of belonging to an interesting group of people…Over time these interactions build up to a shared practice, which reflects the members' collective learning. They also build up a community which reflects the relationships and identities they have developed around that practice." (Wenger, 1999; 4)

Two expectations are expressed by Wenger:

- Communities develop a culture, they are a social space where members relate and share a common identity. This seems a very strong constitutional characteristic if one thinks of loser forms of communities with open and large membership.
- Communities foster collective learning, while individual learning occurs as a by-product. Again this could be reversed if one thinks of loser forms of communities with open and large membership.

Wenger is a representative of an early line of literature on communities, which are mainly understood as learning communities. He and his co-authors and followers ground their argument on the understanding that learning is situated and occurs in a distinct social practice:

"You know that the earth is round and orbits the sun, but you did not create that knowledge yourself. It derives from centuries of understanding and practice developed by long-standing communities. Though our experience of knowing is individual, knowledge is not." (Wenger et al, 2002; 10).

Although not required explicitly situated learning theory seems to assume that this common practice is real in so far as it is supported by face to face interaction.

Simultaneously, but unrelated to the works on communities of practice, the concept of on-line communities or virtual networks emerged at the beginning of the 1990's, starting with Rheingold's analysis of "The Well" (cf. Rheingold, 1993). Rheingold describes how people unite on a virtual platform in order to discuss matters of interest to them in a rather lose form of coupling. Rules and differentiations of roles emerge over time, the community can be said to self-organise. Major questions raised by publications on virtual communities concern the technical infrastructure and

comparisons of simultaneous versus sequential contributions, the implementation of group ware, such as chat rooms and fora (cf. Figallo, 1998) and different forms of structure through a specialisation of roles (cf. Kim, 2000). In 1997 Hagel and Armstrong added commercial utilization to the concept and pushed a whole wave of publications on communities as business models (cf. Bressler and Grantham, 2000), as a method of project management (Brunold at al, 2000) and as a possibility to win and retain customers (Bullinger et al, 2002;32). The hype was interrupted by the burst of the dot.com bubble, but the concept of "net-gain" (cf. Hagel and Armstrong, 1997) remained on the agenda. In the first years of the new millennium both lines of literature started to be integrated. For both types, for communities of learning and for business communities with a strong reliance on on-line interaction, the bottom-line question gained importance. As a third and promising type "communities across firms" entered the horizon (cf. Wenger et al, 2002; 222) Macrae stressed the potential of special interest groups and professional associations (cf. Macrae, 2002). Most publications of the early millenium underline individual benefits while maintaining some ideals of a social community. As Wenger et al write, professional communities: *"…pool resources to access outside expertise, learn from each other's experience, purchase and develop common training material, access the merit of different practices, and build a common baseline of knowledge." (*Wenger et al, 2002; 223)

A combination of these three historical lines on communities allows formulating expectations derived from theoretical analysis, as follows:

- Communities are a semi-formal phenomenon with the double function of an issue-related purpose and a social space, where *"…personal relationships* (range) *from casual acquaintance to friendship to deep emotional bonds."* (Sharp, 1997; 3)

- Communities can constitute a democratic platform where knowledge is built by pluralistic contribution (Rheingold, 1993).

- Communities as a learning space permit to bridge gaps between articulated, declarative, de-contextualized knowledge and the procedural, not articulated, intuitive context of application in a practice (Wenger, 1998).
- Communities are a way to incubate business and to add value (Hagel and Armstrong, 1997).
- Communities are a space to innovate (Siemens Case Book, Davenport and Probst, 2000).

It seems obvious that not all expectations can be met by the same type of community as they partly contradict each other. One can also suspect that some idealized expectations result from wishful thinking in academia that is not necessarily shared by practitioners, such as for instance the ideas of unlimited (!) learning, of trustful and appreciative relations and of aligned interests of organisational members. As an example, the literature on CoPs as learning communities seems to assume implicitly that all learning serves the benefit of the organisation, which hosts the community (more precisely and in the language of institutional economics this means to the benefit of principals or shareholders). Members are assumed to exchange experience in order to perform their tasks better, while the idea of revolutionary or sabotage-related practices as well as of "idle" exchange inspired by individual curiosity is not discussed. The latter may be an exception, nevertheless it has been observed in the practical field.

While contradictory expectations can be dealt with by differentiating types of communities, myths will have to be unveiled by empirical evidence. Therefore, I will suggest first a typology of communities in chapter 3 and then gather some empirical evidences in chapter 4.

3) Different types of communities

To develop a typology I will draw distinctions along the lines of the following criteria:

- **Mode of interaction**: A whole body of literature has pointed out differences in style, in learning and in trust between "real" and "virtual" communities (cf. Winkler, 2004). Online communities in their most simple form rely on written text and thus mainly focus on explicit knowledge by definition. An implicit practice of interpretation can develop over time if membership is constant and the community is small. Real or face to face communities with a constant core group of members always develop such an implicit practice and are assumed to be superior in building trust. As both modes expose advantages and disadvantages, a combination is usually advocated. Therefore I distinguish real, virtual and blended modes of interaction.

- **Purpose**: Different major purposes have been put forward in the literature. They can be differentiated along the dimensions of individual versus collective benefit and of direct versus indirect contribution to business performance. For communities of interest, business communities and professional communities the focus is rather on individual interest and learning than on its collective counterparts, although the production of common goods is assumed to occur in the process, while a collective perspective pre dominates communities of practice. Communities of interest and practice don't evolve primarily to create commercial value, although this may and should occur as a by product, while business and customer communities are intentionally directed towards "net-gains".

- **Size/Membership:** Lose networks can include a large number of fluctuating members whose identity need not be transparent to other members or can be invented as a "virtual character". However, lose networks are under constant thread to fall apart as soon as the momentum of member contributions dwindles. On the other hand, communities of practice and business

communities are restricted to a smaller number of (core) members whose identity is transparent. Both characteristics are supposed to support commitment and mutual responsibility. In practice, we find combinations of the differentiations, small/large and transparent/anonymous membership. A core group of full members is usually small and transparent, while the number of unidentified peripheral members can be large.(cf. Davenport and Probst, 2000).

- **Access** is related to the decision on size and transparency of membership. It can be open as in communities of interest and customers or closed as in business communities. Mostly it will be bound to conditions, such as the reference by other members, the supply of certain capabilities or the nomination by superiors. The hurdles to be overcome to join a community can be assumed to influence the motivation and commitment to participate as well as the cohesion within the group.

- **Structure** will emerge in self-organised communities over time but can also be intentionally created by facilitators and/or initiators and/or core members. Structure refers to two dimensions in the typology to be presented: Infrastructure, which enables interaction either face to face (space, travel allowances etc.) or virtually and role structure where different contributions are ascribed to (and/or taken over by) different members. Such roles can concern leadership, administration, content, culture etc. It can be assumed that individual benefits and contributions will increase along with the intensity of the role in a community and that the benefits and contributions of all members will increase in dependence of a functional infrastructure.

- **Degree of Formalization:** Formalization goes hand in hand with structure. It can be low (only a few roles evolve and are not instituted), medium (some roles distinguished and instituted) or high with conditions of membership, mission statement, agenda setting of meetings and the utilization of commonly generated knowledge being formally regulated and roles assigned

by formal procedures (such as elections) as well as over a longer period of time. It can be assumed that motivation, flexibility with regard to purpose and creativity are higher in informal communities while result orientation and documentation are higher in formal communities.

Table 1 presents a typology of communities as evidenced in the practical field along the criteria and dimensions suggested above.

(Insert table 1 here).

We certainly need more exploratory studies to fully understand the functioning of communities; therefore I will only present some approximate propositions, which are to be confronted with empirical evidence in the next chapter.

Proposition 1: The expectation of social bonding, mutual trust, solidarity and "free" learning is more likely to be met in communities of small size, with transparent and conditioned or closed membership, with a real or blended mode of interaction and with a mission which transcends a mere commercial purpose.

Proposition 2: The expectation of a self-organising network of equals (informal to semi-formal) is more likely to be met in communities of small size and large communities with a small core group, independent of the mode of interaction.

Proposition 3: The larger the community and the further advanced in its life cycle the more structure will be needed to keep momentum. The differentiation of roles will have a positive effect on the motivation of active and a negative effect on the motivation of passive members.

Proposition 4: To initiate and to keep alive large and lose types of communities a support structure must be provided which consists of technological infrastructure and personal facilitators.

Proposition 5: Communities which grow fast in membership and purpose are likely to develop into associations with high degrees of formalization. This feeds back positively on the probability to survive and negatively on the initiatives by "normal" members.

So far, my arguments and propositions have concentrated on communities themselves and less on their relations to their environment. However, in the end, it is the latter which is usually emphasized as the rationale of intra- and inter-organisational communities. Therefore we need to ask questions about the feed back on the primary organisation and the performance by members of communities in their primary assignments.

Proposition 6: The more actively and centrally an organisational member takes part in communities the better (s)he will perform in his/her primary environment.

Before turning to the few empirical studies available so far, the knowledge related functions of communities will be looked at more deeply. I will structure them as exposed in figure 1 into knowledge communication, innovation, knowledge representation and use of knowledge.

Insert Figure 1 here.

Knowledge communication[3] describes mutual sharing, consulting and supervision as well as the integration of bits and pieces to a puzzle or whole, which is relevant to members and can not be conveyed by official documents in a sufficient manner. The very idea of a common practice refers to ways to pass on such knowledge, which

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[3] KM literature would rather speak of knowledge transfer in this respect. I hold that the notion of transfer only applies to the data or syntax level where the analogy between mind and central processing unit + working memory of a computer does no harm. Knowledge, however, can not be downloaded to human minds. Inputs of data need to be translated and transformed which necessarily includes an aspect of generation.

constitute alternatives to the common modes of training courses, written materials and official statements. Theory predicts a superior performance of small and real communities with a purpose to learn with regard to communicating implicit knowledge as evidenced in the now famous example of Xerox technicians (cf. Brown and Duguid, 1991). If this strength can be preserved in more formalized communities under a strong influence of managers needs to be researched and could be doubted.

Innovation[4]: Whenever a group of people who are experts in their fields of activity communicate knowledge they cannot avoid but also generate it. With reference to strategic requirements I concentrate on the innovative function of communities that is on their contribution to the development of new products, processes and management techniques. Some sources (e.g. internal material by Siemens) even force up the function to include the incubation of new business ideas which should eventually be spun-off with the support of the venture part of the corporation. Apart from one case in the Siemens Case Book I have not found much evidence on this function. It can be assumed from the argument above that incremental improvement is more likely to occur in communities than quantum leap innovation.

Use of knowledge: The use of knowledge gained in communities seems to be implicitly assumed to occur in each member's environment, but there is nearly no research to test this assumption. Research should be directed versus the exploration of collective and individual benefit. Is there a measurable improvement of business results? Is there a measurable improvement of factors which moderate those results, such as motivation, diffusion of knowledge to peers, superiors, subordinates and customers? Are there individual benefits such as an increase in social capital, an enhancement of career, a higher status? How is the knowledge gained in communities fed back to the context of primary tasks?

Representation of knowledge: Do communities as a real or virtual practice generate ephemeral knowledge, which resides in their members' heads and shared practices

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[4] KM literature would speak of knowledge generation in this respect. As in my definition each „transfer" contains also generation and as innovation is a strategic challenge I will rather use the term innovation to characterize the respective function of communities.

or do they also produce boundary objects in the form of documents or prototypes? What is the effect of both alternatives on the success of a community?[5] Are virtual communities superior with respect to this function or are their members on the contrary lost in cyberspace as the structure to communicate knowledge differs from the structure which supports saving it to the memory? A lot of micro-research seems necessary to answer those questions which are resolved at the abstract and general level of defining communities by assumption. It is commonly assumed that knowledge is communicated in a sustainable way.

Social and psycho-hygienic functions: No doubt, knowledge communication and innovation are per se socially embedded functions. If I emphasize a social and psycho-hygienic function of communities I refer to the meta-levels of identity, well being and authenticity. If communities really are the informal, somehow protected space beyond the structure, processes and culture of their hosting or supplying organisations, as which they are presented in literature, then we can expect them to contribute to those functions. Communication will then be authentic, rather than strategic (cf. Habermas, 1981), provisional thoughts and ideas will be exposed to fast feed back by other members, turf wars will be kept out of the common striving for a purpose. I assume that those functions are more likely to be fulfilled in informal and self-organised communities than in communities set up and supported by management in order to exploit their knowledge-related functions.

Common purpose: Some words should be lost on the characteristic of common purpose as a precondition of communities (cf. Wenger, 1998). I assume and have observed that large communities of interest, such as for instance the European community of translators or such as professional associations serve very different interests of their members and don't always spend energy on the development of a common mission and less so on its statement. Some members benefit from access to networks, others from access to information, still others from lobbying and

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[5] Talking for a first time about success this is meant as a wild card for different indicators of success. Survival, fulfilment of a maximum of internal and external expectations or monetary business performance indicators could be used to specify success.

reputation building and some peripheral members could not care less about a common purpose but are satisfied if they get fast, reliable and useful answers to technical questions. Even for CoPs and business communities it seems more appropriate to assume an inter play of intentional and evolutionary forces in the dynamic formation of a common purpose.

In addition to the propositions developed from the typology the "if and how" of the fulfilment of knowledge-related functions needs to be further explored. In the following chapter I will gather some preliminary evidence on those functions.

4) Preliminary evidence from empirical research on inter-and intra-organisational communities

Of course, it is impossible to keep an overview on all studies which are conducted and published with reference to communities, which is not only due to the sheer number of daily publications all over the world but also to the interdisciplinary nature of the subject. Therefore the argument here is necessarily restricted to selected publications in the field of knowledge management which have attracted attention by peers. With this caveat in mind I dare saying that there is not much evidence around. This meagre evidence relies on two kinds of methodologies: Representative interrogations by semi-structured or structured questionnaires and case studies which include observation, interviews and the study of documents. Both methods have shortcomings. Questionnaires can not assess the "real" value of communities but only their perceived and reminded value. As a one-shot assessment they are dependent on contingencies which can hardly be controlled. Even a sophisticated design of questions, scales and indicators can not eliminate aspects of social desirability, of self-deception, of unreliable recall and of (inter)cultural misinterpretation. Case studies and action research therefore seem to be more appropriate to explore a common practice which is complex, dynamic and context-bound as they allow researchers to get involved in this very practice. This strength

comes at the price of representation and generalization. Results may be as contingent as the research design which produced them. Only, if case study research is grounded in sound theory we are save to assume that explorative evidence holds out as a "pars pro toto".

So far, my impression is that the agenda of communities is overloaded. Evidence can only be gained if different types of communities are defined and hypotheses are developed per type. Secondly, I hold that studies so far have only touched few isolated aspects of a community's microstructure, micro processes, micro culture and life cycle and even fewer have related those to performance indicators. Therefore I will gather evidence from three studies, which either use an integrated model of those micro aspects (Studies 1+2) or refer results to performance (Study 3).

First, I will report on two case studies accomplished by Winkler (Winkler, 2004). The researcher has compared a real and a virtual community, both focused on the same issue of knowledge management. The real community had a sophisticated design that combined biweekly meetings, project work between the meetings, supervision and facilitation by a team of researchers. It lasted over 18 months, consisted of 8 participants + 2 facilitators and was considered to be successful. The on line community was based on a virtual platform for alumni of a Master program in knowledge management. 40 members joined, it lasted only for 8 months and faded out as a failure. Winkler comes to the conclusion that five [6] dimensions are responsible for success and failure.

- Clarity and flexibility of objectives: The real community, as part of a well designed action research project, had been initiated with the intention to learn about knowledge management and to apply the knowledge gained over meetings in projects in the members' primary organisations. The virtual

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[6] The doctoral thesis contains nine factors which I have condensed here to five as the model in figure 1 covers five functions..

community's objective to build a network of alumni and a community of common interest in knowledge management was more diffuse.

- In the real community knowledge was communicated through story telling and through problem solving as the members could present concrete questions from their projects. They met frequently and on a regular basis and they developed rules for their interaction, which they were able to implement. In contrast, the on line community had no focus on specific issues, members contributed infrequently and irregularly and rejected to implement the "manifesto" or rules of interaction, a core group had imposed at the beginning.

- Members of the real community could make direct use of the knowledge gained during meetings by applying it to their knowledge management initiatives. Members of the on line community reported much loser relations to and less benefits for assignments in their primary organisations.

- The real community had the advantage that the researchers structured and documented essential content as well as some meta knowledge on how it was developed, while the on line community did not implement the function of an editor and missed out on the benefits of knowledge representation.

- Finally the real community's members commonly evaluated their process as well as their results on a regular basis, while the on line community did not (cf. Winkler, 2004; 201-202)

Although the study raises suspicions of some sort of "Hawthorne" effect, as the real community had much more attention and support by the research team while the on line community was merely observed as to their written contributions, the study fleshes out propositions 1, 3 and 4: The real community was of small size with identified and self-selected members who had committed themselves to its purpose when they joined. Facilitation was provided by outsiders, a duration of 18 months permitted trust building and authentic communication. On the other hand, the

virtual community was larger in size, participants were more or less anonymous to each other, their interactions lacked structure and did not include feed back loops and a lot of meta communication.

A second study to be reported here has been conducted by Franz (cf. Franz, 2002). He has studied the professional community of training and consulting experts in Germany with a total of several thousand members. In the discussion of his findings he stresses the self-referential tension between attractiveness to members and contributions by members: The more interesting people join the more attractive a community is to interesting people. This tension could only be overcome by structure in his case: A professional management (core group) developed formal regulations of membership and membership fees (!) and took it upon itself to constantly revitalize their members' motivation to participate by attractive offers, such as symposia, journals, lobbyism and matching platforms. Members were likely to modify an agenda suggested by management but unlikely to develop one themselves. The author derived six types of micro-processes which need to be fulfilled in a professional community:

- Initiating
- Trust building
- Supply of attractors
- Administration
- "Real work" on content
- Social and psychological work

Combining those processes with the microstructure of a core group, as well as active and peripheral members he concludes that professional communities prosper in terms of growth in members, activities and satisfaction if a core group takes care of initiating, administration and supply of attractions and if active members contribute to trust-building, social and psychological work and to real work. This is in accordance with propositions 3 to 5 as the community in question is large, with open

access and varying degrees of involvement among members and of members over time.

A third and recent study to be reported here relates communities back to members' performance of primary tasks (cf. Salomo et al, 2005). The researchers distributed a questionnaire to 222 members of 36 communities of a multinational corporation, who had pioneered the development of communities of practice. As the study is based on *"…assessment by community members a common method bias can not be ruled out"* (ibid.; 26). It is grounded on a model which studies the impact of participation in communities on performance as moderated by an increase of participants' capabilities and network positions.

Insert figure 2 here.

The results of the study emphasize in sum that *"…CoPs have the potential to support the development, exchange and application of knowledge in an organisation"* (ibid.; 26). This effect, though, depends on the intensity of participation. The more active and the more central an individual is in a community, the more likely (s)he is to perceive positive impact on performance in her/his primary environment. Those are promising results. Nevertheless, the study needs additional testing. Considering the early commitment of the multinational corporation in question to communities, the direction of causality could well be reversed. Members with high levels of competencies and central positions in the organisation will have been selected as participants of communities. Be it the one way or the other, the study fleshes up proposition 6 and reinforces the argument put forward in this paper that further research is needed to explore the relation between communities and their hosting or supplying organisations.

Discussion and Conclusion

This paper has undertaken the hazardous endeavour to sketch a research program rather than design and report a single study. A synopsis seemed necessary to the author as single studies usually do not differentiate between types of communities and isolate only a few factors of influence so that no overall picture can emerge. Our research interest[7] was first elicited by publications which seemed to overload and to idealize the agenda of communities. Communities are supposed to support learning, innovation, projects, even the incubation of businesses on the one hand and to care for psycho hygiene by providing free space where deficiencies of formal organisations can be overcome, on the other hand. They shall bind customers, reinforce democracy, build social capital and be a test environment for a network society. That seems a bit too much at a time. As the early literature has developed along two originally separated lines, namely CoPs with a focus on learning and virtual communities with an emerging focus on value creation, a comparison of apples and pairs seemed to occur. Therefore we set out to design a research program which was to guide in depth studies of

- different types of communities with regard to their mode of interaction (virtual, real, blended), to their purpose (business over learning or vice versa) and with regard to their addressees (size, transparency of membership);
- micro structure, micro processes, micro cultures of communities over time to test the concept of a life cycle which was reinforced in all three studies reported above and
- studies of the knowledge related work which takes place in communities at the level of concrete exchanges and issues.

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[7] Several dissertations elaborated at the Austrian Research Center on Intangible Assets

The last question is about to be studied in a virtual and a real case where all contributions are observed and then coded either as content-related communication, as meta communication, as social communication or as technical communication.

The three studies reported above support the basic premises of the program: There is no one community for all purposes and functions; communities need to be differentiated as suggested in our typology. Whether differentiated expectations derived from theory are met needs to be tested empirically by observing closely what really happens at the level of micro structure, micro processes and micro culture. Finally much more attention is to be focused on the relation between communities and their organisational environment and at the double role of members as participants in the community and in primary tasks. We seem to be quite at the beginning of a fascinating empirical exploration of communities.

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Type	Mode of interaction	Purpose	Size/ Members	Access	Structure	Degree of Form- alization	Examples
community of interest	virtual	learning, mutual consultation	many/ anonymous	Open	Core-team, initiator	Low	Wer-weiss-was.de
community of customers	(mostly) virtual	infotainment mutual consultation market research	some/ determined or anonymous	Open	Company provides platform	Low	BMW
business communities	blended	common commercial mission	some/ determined	Closed/ con-ditioned	Professional management lead company	Medium	Styrian, automotive cluster
professional communities	blended	enhancing purposes of members	some to many/ determined	Con-ditioned	Professional or honorary management	Medium	Rotary, Verband der HSL f. BWL
communities of practice	blended	learning innovation continuous improvement sharing	few/ determined	Open within org. units or de-termined	Core team + supporting facilities	Medium	Siemens Xerox

Table 1: Types of communities