

GÖTEBORG UNIVERSITY  
DEPARTMENT OF PSYCHOLOGY

**Innovation climate in a virtual organization  
– co-workers' point of view**

Erik Douglasson and Anna Gunlycke

Master degree paper, 10 weeks  
Occupational and Organizational Psychology  
The Program for Human Resource  
Development and Labour Relations  
First semester 2007

Tutor: Max Rapp Ricciardi

# **Innovation climate in a virtual organization – co-workers' point of view**

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*Abstract:* The number of virtual organizations in modern society has increased due to globalization. Participation in these geographically distributed teams affects co-workers' everyday work. The aim of this study was to investigate and describe co-workers' view of how working in a virtual organization affects the innovation climate. Fourteen co-workers participated in the study, which was implemented by three focus group interviews. The results of the study concern fields within organizational, group, and individual levels. Major areas affecting the work climate were the relation global–local, comprehensive view, openness and trust, team member relations, co-worker liability and clarified expectations on the individual co-worker. Communication was considered essential to the success of a virtual organization.

We live in a globalizing world and with increasingly global interaction. In this context, it becomes natural for organizations to support this new expanding environment. Drori, Meyer and Hwang (2006) conceive the organizations as reflecting models of their environment. Organizations tend to change over time to reflect the surrounding environment. Formerly centered on national culture and law, organizations today are more often built upon global ideologies, models and rules. Changes, innovations, and trends in organizations span the world. The expansion of the organization also results in a rationalized and empowered organization (Drori et al., 2006).

Already 1980 Schein discussed the turbulence in the environment surrounding organizations. The environment started to change from being relatively stable and predictable, to increasingly face rapid changes. He meant these changes put different kinds of requirements upon the organization (Schein, 1980). The development of new technology created new position for organizing and manage organizations. The information based organization became a reality. The urging need of quick adaptation and change to reflect the market, made the flexible organizations to grow stronger and the network based organization became a common solution (Bruzelius & Skärvad, 2004).

Changes in the global economy and technological advances are also increasing the geographic distribution of work. Teams are spread across different cities and countries. Joint ventures and multi-organizational project entail work in many locations. Hinds and Kiesler (2002) suggest that distributed work arrangements can be flexible, innovative, and highly successful. At the same time, distributed work complicates workers' professional and personal lives. Distributed work alters how people communicate and how they organize themselves and their work, and it changes the nature of employee–employer relationships (Hinds & Kiesler, 2002). Market globalization and migration across nations increase the need to understand effects of

diversity in groups and the organizational outcome (Williams & O'Reilly, 1998). Schein (1980) highlight the importance of understanding the reality of organizations:

‘... we live in an organizational society and if we do not make at least an effort to understand organizational phenomena we run the danger of becoming victimized by them. What we must seek is sufficient understanding to be able to influence organizations’ (p. 212).

The following will present how the new global environment and distributed work can affect the innovation climate in organizations. Innovation climate is a rather vague described concept but can include organizational, group and personal conditions (Ekvall, 1988). Main areas which will be examined in this paper are organization structure, effects on the team work, expectations on the individual co-worker, and communication.

*Organization structure.* Already 1966 Katz and Kahn broadened the perspective of organization theory as they defined organizations as open, complex systems in constant interaction with their environments. The changing environment also forces new internal adaptations, since organizations have to perform and fulfill goals at many levels and in varying degrees of complexity and evolvments. Due to this reality, it becomes unrealistic to define an organization from a single point of view, but instead stating a series of propositions (Katz & Kahn, 1966; Schein, 1980).

The organization should aim to build an architecture that coordinates all parts into an integrated system. Davis (1987) argues that the old hierarchic structure, made the information flow slowly and through many levels and passages. The structured matrix organization can not satisfy the purposes in a fast changing environment. With an information based network structure, it will be possible to integrate autonomic teams, even if they are located with far distance (Davis, 1987).

In the middle of 1990s, the term “Imaginary Organizations” appeared in the international management literature. Imaginary organizations are often embedded in old enterprises in different ways today. Organizations exist far outside their old “boundaries” in business administration which affect the whole structure of the organization. Hedberg, Dahlgren, Hansson and Olve (1997) mean it is essential to identify and develop these new aspects of organizing modern business. They argue that the new enterprise in the imaginary organization is built by shared values, a clear and attractive vision, empowerment, leadership, value creation for and with customers, partnerships, imagination and information technology (Hedberg et al., 1997).

New forms of organizing support widespread organizational innovation, since changes in structure, processes and boundaries increasingly emerge. Pettigrew (2000) continues:

‘Flatter structures demand more interactive processes; interaction is concentrated within more tightly drawn organizational boundaries; moreover, focus reduces the need for tall hierarchies of control. These multidimensional changes may work best together, not singly’ (p. 256).

*Virtual organizations.* The virtual organization is an emerging research topic in the context of both inter-organizational and intra-organizational relationships. Despite this fact, the existing literature on the subject provides varied and multifarious perspectives of virtual organizations, and no clear delineation of its facets is shown (Sandhya, 2006).

Persson (2007) use the dimensions location, time, culture and boundary to explain the differences between a traditional organization structure and a virtual organization.

Figure 1. Dimensions differentiating traditional and virtual organizations (Persson, 2007).

<i>Dimensions</i>	<i>Traditional</i>		<i>Virtual</i>
Location:	Sited together	←→	Distributed
Time:	Synchronous	←→	Asynchronous
Culture:	Uniform	←→	Multi-cultural
Boundaries:	Intra-organizational	←→	External

Chudoba, Wynn, Lu and Watson-Manheim (2005) discuss the parts of how “virtual” a certain setting is by using geography, time zone, and organization as elements, which resemble Persson’s (2007) view. In addition to this, Chudoba et al. (2005) include national culture, work practices and technology as parts of virtuality. The vague definition of virtuality makes it difficult to measure when a team is to be called virtual team, and in extension how it affects team performance.

*Relation global – local.* A key challenge for multinational organizations is to maintain global coherence, at the same time as encouraging the development of advantages for each subsidiary. An essential task for top management is therefore to create a good structure and a cooperative relationship between headquarters and subsidiaries (Chung, Gibbons & Schoch, 2006).

Generally organizations have multiple functions and purposes, and some of which may conflict. Some functions may be primary while others are secondary, yet none of them can be abandoned (Schein, 1980). Classical organization theory emphasize good coordination in a company includes, bringing all activities in an organization in unison with each other to facilitate for efficiency and success. All departments must work in collaterality and with knowledge of their own part in the whole process and in what way they need to support one other. Expectations and arrogations on the departments can not be contrarious, but necessity corresponds, to create a collaborative environment (Fayol, 1965; Kahn, Wolfe, Quinn, Snoek & Rosenthal, 1964).

The modern organization often incorporates different sorts of inconsistent principles of authority, for example environmental or human resources standards versus requirements of production. These competing principles are organized systems overlapping each other, rather than bounded from one another. Modern organizations are also, in general, entangled with other external organizations, like suppliers and customers. Consequently it becomes difficult to sustain a consistent loyalty towards the focal sovereign organization structure (Drori et al., 2006). The complex environment surrounding modern organizations put duties and demands upon them, thus reducing the autonomy (Brunsson, 2006).

*Controlling and monitoring structure.* Some researchers argue management control, as a result of globalization, has become more isomorphic. However, Chung et al. (2006) claim that organizations from different nationalities diverge in their practices, according to their studies. Drori et al. (2006) describe how the development of elaborate organizations transforms all sorts of social domains. It affects variations in issues, locales and resources. They argue that: ‘The transformed world simultaneously empowers and constrains people, groups, and societies. There is vastly more

rationalization, though perhaps not more rationality, and there is vastly more authority, though perhaps not coordinated centralization' (p. 258).

Already 1988 Ekvall claimed increased transformation tendency and flexible organization structures are difficult to implement. The difficulties are due to the dominating organizational principles, which historically have not aimed towards changes and innovation but instead control and stability. Creative behavior and innovation is stimulated or entrained by organizational conditions like structure, emotional climate and leadership. A creative thought by an individual becomes an innovation when it is applied in a context. Innovation is hence always a social interaction process, and a result of cooperation by individuals (Ekvall, 1988).

*Coordination management.* Managers in multinational organizations are increasingly dependent on lateral linkages and networks for coordination, rather than formal structural process. To establish connections between emergent structure, strategy and performance is essential. Manev (1998) studied how the emergent structure of ties across distance influences managerial action and the performance of organizational units. He found the emergent structure strongly affected the formation of units' strategies, since they inducted similarity. The intra-corporate evolving structure appeared to influence performance. The research showed the managers who are more central and well-connected in the network of their organizational unit make them grow at a higher rate (Manev, 1998).

Some leaders or managers have the ability to get followers to identify themselves with him or her on a very personal level. This is one of the most powerful bases for eliciting loyalty and subordination (Schein, 1988). When organizations use teams to coordinate and manage work, it results in broader spans of control, fewer supervisors and more reliance on self-management (Williams & O'Reilly, 1998). Decentralized co-worker responsibility is a simple and effective method for controlling, and hence implicates a paradoxical combination of freedom and control (Hällsten & Tengblad, 2002).

When groups need to share information across functional and cultural boundaries they naturally bring their diverse view and background with them. This group situation puts extra pressure on being successfully managed. Harrison, Price, Gavin and Florey, (2002) claim that managing diverse groups is one of the most difficult challenges for modern organizations.

*Team work.* Organizations are moving toward a flatter and more decentralized structure. In contrast to traditional hierarchical and centralized organizations, these new forms are established around teams and task forces this to a much greater extent (Jehn, Northcraft & Neale, 1999). Boundaries between departments and functions within organizations of today are opened and flexible. Employees are involved in projects, teams and committees, crossing organization units, levels and hierarchies (Ekvall, 1988). The team work has become of greater importance in organization activities and to reach and actualize goals. Due to the movement from an industrial society to a post-modern consumer society, the character of the work life has changed. As an extension to this development, new requirements and expectations are put upon the working group (Thylefors, 2007). High-performance organizations are built on relatively autonomous groups with their own warrants, powers and resources to manage the everyday work, without need of superior supervision (Thylefors, 2007; see further Katzenbach & Smith, 1993; Rubenowitz, 2004).

*Virtual teams.* Teams have traditionally been composed of people in the same physical location, but co-workers employed by global organizations are increasingly part of

geographically distributed teams (Chudoba et al., 2005). Recent development in communications technology makes it possible for groups to work together even though they physically are situated in different locations. These work groups are today often labeled virtual teams (Bruzelius & Skärvad, 2004; Jarvenpaa, Knoll & Leidner, 1998). Despite the increasing prevalence of virtual teams with diverse composition, Kayworth and Leidner (2000) assert there is a dearth of deeper studies examining effects of diversity in virtual teams.

Some effects in distributed and virtual teams have however been identified. One important issue highlighted, is cultural differences, which may influence how individuals perceive information, act upon it, and interrelate to others in the team (Kayworth & Leidner, 2000). Chudoba et al. (2005) revealed that the distribution itself did not have an impact on the team performance. Yet, cultural diversity and work process variety, as well as employee mobility, had a negative impact on the team performance. The work in a discontinuous environment was mitigated by how predictable and social the work practice was. Researchers have been attempting to identify factors that contribute to virtual team success. Jarman's research (2005) following two virtual teams for over six-months, shows that the outcome from the teams was outwardly very poor. The team members considered yet themselves as successful in relation to the circumstances in which they work. This result concludes that working in distributed teams can be problematic if there is lack of understanding in teamwork processes. Brewer (1979) refers those kinds of problems to categorization and social comparison processes within individuals. These processes result in people perceiving out-group members as less honest, trustworthy and cooperative than people within the own group and category. Schein (1980) also claims there is a risk employees form "anti-management" groups if they feel threatened, demeaned and unappreciated.

*A culture of trust.* Creating a culture of trust is essential in the context of the virtual organization and to be able to dismantling intra- and inter-organizational boundaries (Jones & Bowie, 1998). Trust within the virtual team is also critical due to high levels of uncertainty in a global and technological based environment (Jarvenpaa & Leidner, 1999) and to understand the relationship between group diversity and trust in virtual groups is vital for successful management (Krebs, Hobman & Bordia, 2006).

Trustworthiness is fostered by personal identifiability for both in- and out-group members. When individuals are not identifiable, trusting behavior is instead based on expectations of reciprocity inferred from group membership (Tanis & Postmes, 2005). In virtual organizations where individuals are not always identifiable, this actuality can affect the performance. If relationships between members in a group are accomplished, trust is also gained between the individuals, and expectations are elucidated. The credence to one another includes expectations on behavior, performance, capacity and ambitions as well as honesty and friendship (Hällsten & Tengblad, 2002).

Research on virtual teams reflects concerns about the development of trust and fondness, and about the performance of co-workers who work in absence of face-to-face interaction (Walther & Bunz, 2005). Considering trust is a socially developed attitude, virtual teams may have difficulties developing trustworthiness. Yet, Jarvenpaa and Leidner's study from 1999 shows trust can be developed in culturally diverse virtual teams, but the trust appears to be temporary and fragile. A research by Krebs et al. (2006) claims computer-mediated contexts groups initially may experience lower levels of trust, but over time and with repeated interactions, this effect decreases. As O'Hara-Devereaux and Johansen (1994) put it: 'trust is the glue of the global workspace – and

technology doesn't do much to create relationships' (p. 243). Instead trust develops through repeated social interactions (Mayer, Davis & Schoorman, 1995). A study presented by Walther and Bunz (2005) suggest that collaboration rules and norms set within the group reduces uncertainty and enhances trust in distributed work teams.

*Changed expectations on the co-worker.* Co-workers of today are not only expected to manage their own tasks and be loyal towards their focal organization but are also expected to be innovative and encourage to changes (Hällsten & Tengblad, 2002). When the perspective of workers changed to be viewed as human beings, this also changed the way workers were managed. "A happier worker was more productive" became the logic extension from research focused on the workers environment (Mayo, 1945; McGregor, 1960). Luo (2006) describes how the changed perspective affects how the individuals are considered in an organization today. He continues: 'Further, as individuals were thought of as thinking and choosing actors, embodying professional expertise and capable of rational and creative behaviour, solutions to organizational problems were likely to be regarded as located in individuals' (p. 230). With this background, personal development as creative thinking and leadership started to be perceived as useful tools (Luo, 2006; see further Meyer, 1992; Pfeffer, 1994).

People today often belong to a wide range of groups, in their work life and private life. They can be more or less stabile, and with overlapping members and norm systems. People are expected to easily be able to adapt in new groups and also to move from one group to another. This exposition to different group compositions, set with sometimes contrarious expectations, put a lot of pressure on the individual, to be confident and to have an inner security and social competence. If the social system is relatively uniform and stabile, it gives people confident and a group identity is easier developed (Thylefors, 2007). Schein (1988) describe different kinds of emotional issues that every person faces when they enter a new group. Four parts is mainly highlighted: the problem of identity, the problem of acceptance and intimacy, the problems of needs and goals, and the problem of power and influence.

*Unwritten agreement between co-worker and organization.* Already by the 1960s, organizational scientists had highlighted the importance of understanding the implicit expectations that are created between the co-workers and an organization. The concept is known as the "psychological contract" and implies that there is an unwritten contract that runs alongside the formal, written contract, operating between every member and manager within the organization. The concept invokes that each role in the organization has a set of behavioral expectations. Employees, for example, expect to receive tasks and facilities that fulfill their needs. They expect to be provided with opportunities to grow and learn in the working environment and also to receive feedback on their given tasks. Employees and managers create their expectations from inner needs, from norms and traditions, their own experiences and from what they have learned from others. The organization has corresponding expectations - for example, that the employee will be loyal and enhance the image of the organization and be motivated to do their best. Since the organization and the member's needs, as well as external forces change over time, the psychological contract must constantly be renegotiated. Even though the psychological contract remains unwritten, it is very powerful, and affects the behavior of the entire organization (Schein, 1980).

## *Communication*

Persson (2007) emphasize that face-to-face communication are preferred by most people, since it gives a broader picture, as body language, social climate and spatial context is integrated in the communication. The personal relation is essential for cooperation. With a good personal relation, joint decisions are easier conceived and problem solving processes are often shorter. Swedish research shows the social relations at workplaces increase job satisfaction as well as autonomy (Persson, 2007; see further Rubenowitz, 2004).

In distributed work groups there is a considerable uncertainty about others' behaviors, and the importance of awareness and communication is therefore greater than in traditional work groups. This uncertainty can be reduced by clear and continuous interaction about the others' work. Virtual teams perform better if members reveal information about themselves and their work, at the same time as they gather information about the other team members. The continuing communication is vital for sharing information and knowledge both regarding individual and team activities. To be updated with the work progress is essential for a successful performance. Feedback about other team members work progress is easier achieved in face-to-face groups, and can often be accomplished passively. For example can members be part in hallway conversations, or glance over another persons' desk, to see how the work progress is going. In distributed teams, in comparison, long time can pass by before members get updated about the other members' activities. The only feedback they often get is emails or other messages appearing on the computer screen, which they have to rely on. Delayed or inaccurate feedback can also be common, which requires iterations for clarification. Other annoying moments, appearing in virtual teams, are when answering emails become effortful and time-consuming, as messages are long and unavailable. In situations where important information is lost, it may create members acting independently or hiding need for interdependence. This problem can affect the team performance by reducing coordination, trustworthy and commitment to group goals (Weisband, 2002). It is recommended that new ways of informal communication are developed among virtual teams and geographic localities. This may be necessary to socialize new members and to enhance identity processes (Shumate & Pike, 2006).

*Communication technology contributions.* It is frequently discussed in literature and research about the contributions of communication technology. Davis (1987) means electronically information systems make it possible for separate parts in the organization to communicate directly with each other, where hierarchically structures earlier have entrapped. The network can support extensive interaction channels through the whole organization. The company can in that way concurrently both be centralized and decentralized. The decentralized mechanism exists in the structure, and the coordinating mechanism is part of the system (Davis, 1987).

Technical and IT applications produced for group meetings are called groupware and include for example electronic meeting systems - EMS, videoconferences, audio conferences and email. This new technology creates innovative possibilities to work on distance and to cooperate in distributed teams (Persson, 2007). Dickey, Wasko, Chudoba and Thatcher (2006) argue that miscommunications are not the result to technology systems, but instead due to lack of shared understandings among individuals communicating.



In a research by Wilson, Straus and McEvily from 2006, the development of trust and cooperation in computer-mediated teams are compared to face-to-face interacting teams. Prevailing assumptions that trust is arduous to develop in computer-mediated teams, are challenged. The results show that trust started lower in computer-mediated teams, but over time, trust increased to levels comparable to the face-to-face team. However, the study indicated that miscommunication, like misunderstandings and sore remarks affected the development of trust more negatively in computer-mediated teams than in face-to-face teams (Wilson et al., 2006). Earlier studies of virtual teams also demonstrate the decisively to get sufficient time to develop strong member relationship. If the teams also get time to adapt to the communication medium, they can be able to communicate as efficient as face-to-face teams (Chidambaram, 2006; Hobman, Bordia, Irmer & Chang, 2002; Irmer, Chang & Bordia, 2000).

*Importance of face-to-face meetings.* In situations when a group needs to generate and appraise ideas, Persson (2007) brings up the importance to meet face-to-face. The dynamic process is necessary to be able to value ideas brought up by individuals in the team. To get this collective process with dynamic friction you need a wide interaction not only spoken communication. The probability to affect each others opinions is also easier in the face-to-face meeting because of social and cultural conventions, which make the group aim towards consensus. The face-to-face meeting is also essential in conflict situations. The physical presence gives trust into conflict solving meetings (Persson, 2007).

Results from a research by Kristiansson (2003) indicated that flexible and smooth communication increases the possibilities of differentiated thinking, and hence preparation for innovative performance. Creativeness in face-to-face groups was compared to computer-mediated groups. Communication by means of virtual environments did not contribute to the creativeness. Video-conferencing showed less incubation in the creative process, possibly due to the involvement of more technically-demanding interaction, which makes the information exchange less flexible. The face-to-face group did also regard their innovation process as more satisfactorily. Kristensson argue (2003): 'If the management of creativity is to be successful, it will need to provide for communication, and thus, connection opportunities' (p. 60).

*Virtual team work performance.* Difficulties and problems existing in traditional work groups are also found in virtual teams, ascertained in a new doctoral thesis. This can be all about obscurities and dissimilarities in opinions about goals and aims; and about different roles – who is accomplished to do what. It regards decision making – when and what should be decided, and by whom; but also conflict situations – how they are to be solved. Difficulties, which can be seen in both traditional and virtual teams, also concern communication, different reference frames, language, cultural differences etc. (Jansson, 2005). Lipnack and Stamps (1997), two American consultants working with developing successful virtual teams, mean companies are too concerned about communication technology. Focus should not be the hardware, but instead human relations. Things which can fail in face-to-face communication can become devastating in virtual teams. It is necessary to work with team relations, conflict solving and developing a prosperous leadership. Critical factors are often communication and language, coordination and management, as well as the individual competence and maturity (Lipnack & Stamps, 1997). Effectively coordination and activities among interdependent people at a distance is challenging, yet it is indicated that project leaders make a substantial difference in how teams perform (Weisband, 2002).

## *Case description*

The studied organization is a knowledge-based global company sited in 20 countries; around in Europe, North America, Asia and Oceania. The company's headquarters is located in Central Europe and the organization totally has approximately 1850 employees. Two sites are located in Sweden, one larger and one smaller office, with about 120 employees. The employees are mainly software system engineers, developers and technicians.

The organization is structured as a global matrix organization, with no manifest dividing line between countries, after a re-organization a few years ago. The managing functions are divided depending on divisions, work areas and projects. Co-workers can often be located in another cities or countries than their manager and/or other team members.

The company requested a study of how the global structure affects the work climate for the co-workers sited in Sweden. It was also required to start a dialogue in the subject, to create an understanding about organization members' different roles within the organization.

## *Aim*

Researchers, business leaders, and union representatives all agree that organizations need to be able to adapt to a rapidly changing business market and technological environment. As a result, it is essential for companies to learn how to adapt and be innovative (Ekvall, 1988). Traditionally, work groups have been composed of co-workers in the same physical location, but developments in communication technology have allowed the formation of teams with geographically distributed members, *virtual teams* (Jarvenpaa et al., 1998). These trends increase the need to understand and examine the effects of diversity on group and organizational outcomes (Harrison Price et al., 2002). Despite the increasing occurrence of virtual teams with diverse composition, there is a dearth of research investigating the effects of diversity in virtual teams (Kayworth & Leidner, 2000).

This research aims to describe co-workers' view of how working in a virtual organization affects the innovation climate. The purpose of the study includes an investigation of co-workers' conceptions of what a good innovation climate is characterized by in a virtual organization.

## Method

### *Participants*

14 persons participated, divided into three focus groups; seven women and seven men, aged 31-64 years, with an average of 50 years. The educational level of the participants ranged from high school to university degree. The average period of employment in the company, was among the participants 18 years.

The selection of participants was based on voluntaries. An email was sent out to describe the aim of the research, and co-workers signed up to participate in the study. The participants represented a range of working areas within the organization: technical engineers, project leaders, consultants, service technicians, administrative personnel, and economists. The participants also represented both sites in Sweden.

### *Instruments*

Three focus groups were implemented, of which two of them were of a structured kind, and a template was used during the process (see further down). The participants and the company could, in use of the template, immediately after the session get a summary of their valuation and grading of the dialogue. The third focus group was held without a template, because the method was less time consuming. This decision was made in agreement with the company.

The chosen focus area was “What is a good innovation climate in a virtual organization?” The question was operationalized by asking the informants what characterizes a good climate. *Good* innovation climate was chosen to emphasize the focus on operating functions.

A template was used in the two structured focus groups (based on Obert & Forsell, 2000). The template was divided into three steps: creating factors, valuation, and grading. During the first step, the participants created sentences (factors) about good innovation climate. Every sentence started with the words: ‘Good innovation climate is characterized by...’. The factors created by the participant group were copied into a valuation form, where the participants individually put marks for those factors they valued the most. Finally, the factors were graded individually within the range of 1-5, where 1 meant “don’t agree at all”, and 5 meant “totally agree”.

A laptop was used during the two structured focus groups, allowing the factors created by the participants to immediately be composed and typed into the template. A printer was used to print the created factors for the valuation and grading. The focus group sessions were recorded on MiniDisc. The recorded material was transcribed as near as word-for-word and coded in the qualitative data-processing programme QSR NVivo.

### *Procedure*

The HR manager informed the participants about the study and that participation was voluntary. A description of the structured focus group method, including the templates, was emailed to the scheduled participants prior to the sessions. The data was gathered during three separate days. Two of the focus groups met in office rooms at the company sites, while the third held their session at a conference centre. The participants were guaranteed anonymity, as no names or specific work tasks are presented in the paper.

*Implementation of focus groups.* The session started with a briefing about the focus group procedure. The head point of the participants’ role was elucidated, as the purpose was not to form a shared view in the group, but to give as many imaginable factors of a good innovation climate in a virtual organization as possible. In total, the focus group sessions lasted for two-three hours.

The purpose of the valuation and grading in the two structured focus groups with a template were to give an indication of the apprehension to the studied company, hence not to be used in the research. The aim of the study was not to give a company specific view, but instead to broaden the picture of innovation in the virtual organizations.

*Coding diagram.* An abductive approach was adopted since the contents from the gathered data were unknown beforetime (Alvesson & Sköldbberg, 1994). The coding diagram was therefore created during the analysis process.

### *Research design*

In accordance with the aim to get co-workers' conceptions and thoughts, a qualitative case-study approach was chosen. In dialogue with the HR managers, focus groups were selected as a method for the research, as phenomena in a group perspective wanted to be captured. Another purpose for choosing focus groups as a method was to start a group process where ideas and thoughts could be shared. The interaction between informants was meant to help elucidate differences and similarities and to create a multifaceted picture of the study subject. The chosen method could also inspire further dialogue among the co-workers within the organization.

### *Analysis of data*

The analysis of data from focus groups starts already during the focus group sessions. The collection of data and analysis are thereby parallel processes (Krueger, 1998; Wibeck, 1998). The analysis of the transcribed material started with a perusal review, to get a comprehensive impression and an overall picture. Subsequently, the data from each individual focus group were analyzed. Relevant paragraphs were marked and coded into themes and sub-themes, as raised during the analysis process. Adjustments of classifications and tags in the analyzed material were gradually made, and in some cases paragraphs were moved to another theme or sub-theme. The data were finally integrated to a clear coding diagram.

A compilation of factors, valuation and grading was made for the focus group sessions. This data were only on behalf of the company, and were not used as material in the analysis.

## Results

The results from the three focus groups are categorized into four main themes; (I) organization, (II) interpersonal relations, (III) individual co-worker and (IV) communication (see Table 1).

The categories are arranged from an organizational view, further to a group perspective and to an individual viewpoint. The result finishes in the category 'communication' which pervades all organizational levels. Those four categories are not separate, but rather dependent on each other, and should be viewed as different perspectives integrating within the same phenomena.

Table 1

*The result from the analysis, divided into main categories and subcategories.*

Main categories	Subcategories
I. Organization	<ol style="list-style-type: none"> <li>1. Structured for innovation</li> <li>2. Contrarious goals</li> <li>3. Relation: Global - Local</li> <li>4. Controlling bureaucracy</li> <li>5. Comprehensive view</li> </ol>
II. Interpersonal relations	<ol style="list-style-type: none"> <li>1. In-group / Out-group</li> <li>2. Get to know each other</li> <li>3. Openness and trust</li> <li>4. Cultural differences</li> </ol>
III. Individual co-worker	<ol style="list-style-type: none"> <li>1. Personal goals</li> <li>2. Co-worker liability</li> <li>3. Expectations on the co-worker</li> </ol>
IV. Communication	<ol style="list-style-type: none"> <li>1. Face-to-face meetings</li> <li>2. Information</li> <li>3. Feedback</li> <li>4. Communication technology</li> </ol>

### *I. Organization*

*1. Structured for innovation.* The participants stated that there must be a certain structure in the organization to create a climate that encourages innovation. There must be a plan for being innovative and a spirit of innovation throughout the company. One participant said:

*'I don't think it's possible to simply allot time for being innovative, instead everything around you must rather work in a certain way so that an organization can be innovative...and then it is a culture within the company, it is... ehh... peoples openness, peoples opportunities to express things to speak out, really...'*

A continuously developing organization, constantly developing co-workers, and openness were identified as necessary for creating a good structure for innovation. One focus group believed that it does not matter if the members of an organization are located in different countries if they are all committed to making it work. In another focus group, the participants were of the opinion that it is hard to work together when located apart from each other. It is easier if everyone can meet periodically. These meetings inspire a feeling of togetherness and allow participants to feel that they are all

working towards a common goal. Some participants felt that they did not have enough of freedom to be innovative. When they were working in the field, they enjoyed their freedom, but when they returned to the site, they sometimes felt their ideas were not listened to and adopted. The organization did not make use of their innovations either because there was insufficient time or because the controlling structure was inadequate. One participant stated:

*'If you don't have the extra resources to change, the wheel is just spinning around. You cannot steer this wheel in one way. And we feel we are in this dilemma because the navigators are the managers, but they are so occupied by the control machinery, they don't have time for changes and adaptations.'*

Another participant preferred to see the organization structure as it was, including the good and the bad, and to keep working, trying to be innovative and creative within the limits of the organization.

2. *Contrarious goals.* Goals at different levels within a large, extended organization can sometimes be contrarious and vague, some participants claimed. One focus group discussed the ways in which an individual worker may define the boundaries of the organization. They asked themselves, "What do we consider 'our' organization?" One participant said:

*'When I talk about the organization, I mean the aftermarket organization in Sweden.'* [Another participant continued]: *'My organization is Europe as a whole.'*

Problems with contrarious goals were expressed in connection with workers participating in different projects, in several countries. Some participants felt a lack of continuity as team members repeatedly left and returned to projects. Due to frequent changes in the prioritization of work items, these team members were often unable to complete their work.

The focus groups also discussed different views of priorities. Some participants suggested that there are two separate "religions" within the organization, one focused on the large customers and the other committed to working towards the smaller customers. They observed that these different aims can be difficult for managers to deal with and noted that this sometimes creates ignorance towards managers.

3. *Relation: Global - Local.* The situation of working in different locations and countries is seen as both a constraint and an opportunity. Although all three focus groups said that it was easy to see the downsides, globalization and a competitive market force the organization to operate broadly. A question was asked, wondering where the boundary between local and global regions is drawn, in our modern time. This participant suggested that it is more about cultures than of distances. Another participant proclaimed the importance of having a decentralized organization to be able to be innovative in the everyday work. He thought that responsibility must be placed at the local level. This quotation states his view:

*'Think global act local, that is... we should work local and then... we should make use of global competences and resources.'*

4. *Controlling bureaucracy.* The focus groups expressed a feeling of being hindered by a controlling bureaucracy. A lot of energy is put on global structures and directives, which reduces the innovative spirit. They thought that a lot of their working time is used to handle bureaucracy instead of being creative or innovative that could lead to new profitable projects. They spend too much time on issues internal to the organization instead of looking outwards on the potential market. Participants claimed that if surveillance becomes too demanding, they will lose their motivation for being innovative. One participant said:

*'It is not important what you do anymore, only put it in the right account number and fill in the right paper.'*

Some participants claimed that their managers have too much paperwork and not enough time to be involved in their projects, which give them the picture of being "accountants". One participant summarized the discussion and said:

*'I think it might be possible to combine the global company with a local innovative spirit, if we don't have a too strong controlling bureaucracy, so that we don't hinder the energy that people have in this company.'*

5. *Comprehensive view.* All three focus groups emphasized the importance of a comprehensive view within the organization. A participant used the metaphor of a chain to describe separate parts linked together in the organization. The focus groups also proclaimed that it is essential to see the company as a whole to be able to exploit all resources and competences within the organization. Already in the planning stage of new projects, one must not just look at a local level but also how a new project affects the company as a whole, one participant said. It is, in addition, important to figure out which other teams might be good to include in the project to achieve the best possible result. To be able to work globally, the participants claimed that they need to use each others' knowledge and to be able to openly ask for support, wherever the help is needed. Ideally, everyone in the company follows a comprehensive perspective, seeing the whole chain. In doing so, the competition within the company can be neglected. The strive for territory opposes a collective innovative aim, some participant argued. When talking about profits and costs, the comprehensive view is vital, since in the end, the advantages of working together bring out the best performances of everyone. Some participants said that this comprehensive perspective must be set by the managers, and subsequently going down the hierarchy. Without a joint view in the top management, it is difficult to work together on the 'shop floor'. One participant said:

*'if everyone doesn't approve, it could be disastrous, as it would be very hard to keep the work as distributed as it is.'*

## *II. Interpersonal relations*

1. *In-group – Out-group.* Participants talk about the understanding of each others' work on the local level and the support team members give each other. One participant described the connection in their department as "sitting in the same boat." It was

expressed as if they felt less understanding about their jobs, higher up in the hierarchy. One participant meant the organization is too big to get a feeling of belongingness:

*'If a director is entering the building, we can be nice to him, but we don't really care. We cut ourselves off from what he is doing. He wants to stand here and have talks about us all being a team and that we are integrated to each other... Don't mind if he believes so, but that's not the truth. It could never be so in a large global company.'*

Some participants said they did not feel togetherness with other teams. If they are assigned to different locations, even if it is just two different floors, it becomes hard to get a joint feeling, since they do not meet often enough. They feel that they are not always organized in a way where they can take advantage of each other's knowledge.

2. *Get to know each other.* The importance of getting to know each other was constantly emphasized in the focus groups. The social aspect is considered to be an important part of a successful cooperation that promotes an innovative environment. One participant expressed it like this:

*'Yeah, it's always easier if you have met and had discussions with someone before starting to cooperate. If you have never met, it becomes very hard.'*

Some participants suggested that there is a need for them to meet outside the ordinary work environment. Joint lunches or after works could be good ways of getting to know each other better personally. All three focus groups agreed that meeting at coffee breaks is a good way of feeling togetherness, but for several reasons, those gatherings are not very common. Lack of time is one reason; another reason is different location, maybe even if just because of working on different floors. All three focus groups brought up the relation to colleagues in other countries. They argue it would be easier to cooperate if they got to know each other better, and meet more often. There have been international conferences where people meet and discuss common interests. Some participants proclaim those big gatherings made the work easier afterwards, as they got better personal relations to colleagues in other locations and countries. The participants also thought that the cultural gap between co-workers becomes smaller. One participant expressed it:

*'When we work with our colleagues in the different countries, ... in spite of everything, there are cultural differences, then it's good, they disappear when you get to know each other, to a large part.'*

3. *Openness and trust.* All three focus groups brought up openness and trust in different ways. They pointed out the importance of fellowship, creating a spirit of togetherness between team members and co-workers. Different people stimulate innovative thinking and you are dependent on each other. Being innovative means you need to think open and free together. One participant said:

*'The openness is..., it implicates exchange of ideas and cooperation. Innovation is often a result of team work, one could say.'*



It is essential that the work climate is good and that people enjoy working together, some participants expressed. It does not have to be negative that it is such a large organization, since it is more about creating basic conditions for a good innovative environment. The focus groups participants argued that openness and trust can be accomplished if people enjoy their work and there is an open climate where people are not afraid of doing mistakes, dare to try new things and are able to communicate freely.

4. *Cultural differences.* Participants described different views on the effects of cultural differences. Some thought that the way of thinking differs too much between countries, even the Nordic countries, to be able to cooperate easily. According to some participants, the valuation systems differ too, which in turn affects the cooperation. Another example of cultural difference, mentioned in the focus groups, was different behavior towards people with titles and with a strict hierarchism. The view of women in high positions was also brought up. There are different ways of working, and it is important to understand that there are differences. Some participants also discussed the effect of being headquartered in Central Europe with executive board from the same country. They thought it might be different with other nationalities represented on the board. The culture differences would in that way get more visible. One focus group discussed the Swedish way of working. They said that Swedish co-workers often feel controlled and that they lose out of liability in international organizations. If the top management realize there are those cultural differences and let co-workers in different countries work in “their” way, it would be easier. It is first when differences are accepted, they can be managed and overcome. One thought is shown in this quotation:

*‘Maybe efficiency depends on which culture you originate from.’*

There is also confusion about languages within the organization. The official language is English, but since it is not the main language for many co-workers, miscommunication is not uncommon. A few participants expressed another view of cultural differences, suggesting that differences within the globalizing environment does not have the impact everyone says. They considered communication problems, hierarchical controlling structures, and changes in management ideas enemies of the peace. A participant said there are cultural differences, but that it rather is an individual condition.

Another participant claimed it definitely makes it easier just to meet each other. If you get to know the other in person, you learn how cultural differences are working.

### *III. Individual co-worker*

1. *Personal goals.* The participants expressed the importance of having an open mind and being receptive to opportunities and changes. To be able to develop as a person, one must be open to new areas and the possibility of working with new tasks. One participant said:

*‘One needs to have energy which makes it possible to be innovative. You need a positive energy, a go-ahead mentality, to move forward, and which stimulates you as a person.’*

There are some people who are worried and afraid of changes. People have different goals, which may collide with and be contradictory to the goals of the company. The possession of excessively strong personal goals may inhibit to cooperation. An individual's personal agenda might affect a lot.

2. *Co-worker liability.* The ability to influence one's own work, was brought up in all focus groups. The ability to influence how one works with one's own tasks, and the belief that decisions are not taken without consulting all workers who are affected, were considered important. Participation involves the ability to express one's opinions and desires and have them heard. Co-worker liability is very important. That the co-worker can work freely, but with responsibility, without having to constantly ask for permission. A participant expressed this idea as:

*'..for an organization to promote an open and creative environment, it must have a certain freedom and allow its members to be responsible for their own work.'*

3. *Expectations on the co-worker.* The participants brought up thoughts about how different expectations affect their work. A participant stated:

*'There is too much pressure from all directions, too many disturbances things that is entering and disturb and which is claimed to be done instead, and so on.'*

An expansion of one's responsibilities can be good, but one needs also to be given the opportunity to learn how to complete new tasks and to understand the associated expectations. New responsibilities should not be assigned arbitrarily, without the possibility for education or supervision. In this changeable world, education is essential for personal development of workers within an innovative organization.

#### *IV. Communication*

1. *Face-to-face meetings.* The participants discussed the main advantage of working in a team whose members are collocated. They stated that it is easier to follow the other team members' progress and to communicate and continuously keep updated. A participant highlighted the importance of quick and direct feedback in their creative work, since the others' thoughts and opinions are especially valuable. It can be difficult to explain and describe thoughts in a project process via a powerpoint presentation, and when this method is used, the valuable feedback is therefore often lost. One participant expressed this idea as follows:

*'We had a better overview of what was going on within our, of course much smaller, area in comparison to when we are distributed in another way. But it was, at the same time, in my opinion anyhow, easier to keep the group together and work together in a team when we were located at the same place.'*

All three focus groups brought up the need for periodic face-to-face meetings. Some of the participants had been to international conferences where they met colleagues

working with the same things in other countries. They regarded this as very profitable since they had the opportunity to get to know each other and to exchange every day work experiences, many of which were common.

2. *Information.* The participants in one focus group expressed a need of more open and broader information flow within the organization as a whole. They often feel they are not updated with the latest information about areas other than their own. They expressed a feeling of isolation and noted that they sometimes they here things in a roundabout way. One participant described the differences in organizational communications since the company became internationally owned. The participant concluded that the information flow boundaries became stricter and tighter.

*'In my employ, it feels like... "they down there do not need to know that". It is like... so strongly demarcated what kind of information is allowed to be given, and therefore I think there is no information given at all.'*

Another participant felt that it was easier to ask for and get information before the company was internationally owed. Now there is more of a 'close-the-door'-mentality. According to participants' statements, there is a lot of information available on the intranet, but there is often insufficient time to be able to search for the right information. They suggested that the most important information be highlighted or summarized to make it easier to access and adopt. They also expressed the importance of individual access to central information. Some participants stated that access to information, including organization-level and area-specific news, is needed to enable innovation. For example, they identified a need for time to get updated with new technical solutions. The participants also noted that there is a central group which charged with disseminating information regarding co-workers' knowledge and skills.

3. *Feedback.* The focus groups discussed the need for giving and receiving feedback. This exchange allows co-workers to develop an understanding of how others feel they are performing. One participant said:

*'Well, it is important when you do a job to get a response as to whether it was done correctly or incorrectly, if your performance was good or bad, and it is important that you continuously get feedback on what you are doing.'*

The participants expressed that they needed a lot of feedback from both their management and their peers. Some of the participants felt that their organization provided insufficient feedback. They also argued that there should exist a balance between positive and constructive feedback. This feedback is not provided to disparage the individual but to enable personal growth and professional development. During the participants' discussion on feedback, the importance of acting in response to constructive criticism was noted. An individual must not only listen but also adopt good recommendations and act in response to warranted constructive criticism.

4. *Communication technology.* The participants had different needs for, and experiences with, using communication technology. Participants in one focus group said they had a telephone meeting every fourteenth day to keep updated with what their colleagues in other countries are doing. One participant said that a lot has happened since they started using the computer communication tool Skype. They no longer need to have long and expensive phone calls. It is possible to interact freely with Skype, and

the distances between co-workers separated by a distance are thereby bridged. However, despite the usefulness of communication technology, one participant said:

*'The technology is important, but it can never replace face-to-face dialogue, so to speak. It will never do that.'*

## Discussion

The aim of the study was to describe co-workers' view of how the virtual organization affects the work climate, and their thoughts about what a good innovation climate is characterized by. The participants in this research claimed there are both advantages and disabilities about to live and work in a virtual organization. They argue that the essential part is to realize that the virtual organization demands elaborated coordination and interaction between separate parts, especially due to diffuse boundaries. In accordance to Persson's (2007) definition of a virtual organization, it is necessary to bridge the diversity within location, time, culture and boundaries.

### *Organization*

The participants in the focus groups proclaimed the importance of finding a good relation and balance between the global and the local organization. To be able to be innovative, the co-workers feel a need of freedom and liability in their everyday work. They sometimes experienced a difference in perspectives of how an organization should be managed, due to differences in top management cultures. This description is in compliance with Chung et al. (2006) reasoning about multinational organizations' key challenge; to create a successful relationship between headquarters and subsidiaries. As classical organization theories emphasize, for example Schein (1980, 1965), Fayol (1965) and Kahn et al. (1964), all departments must work in collaterality and with knowledge of their own part in the whole process. They also highlight the importance of corresponding goals throughout the organization, to create a collaborative environment. This complex of problems is apparent as some participants in the study express a frustration with the feeling of sometimes working against each other. A comprehensive view and clear goals in the organization was also mentioned as insufficient sometimes.

Co-workers within the research mean there is too much focus on reporting in their work, due to controlling bureaucracy, which entrammels their creativity and innovation. Some of them expressed that they feel the company work too much inwards their organization, instead of towards the potential market. Earlier research shows the coordination and management among interdependent people on distance, such as in a virtual organizations, are challenging and difficult (Harrison et al., 2002; Weisband, 2002). However, according to Ekvall (1988), the difficulties to implement flexible organization structures are due to dominating organizational principles aiming towards control and stability rather than changes and innovation. Thylefors (2007), Rubenowitz (2004), Katzenbach and Smith (1993) claim high-performance organizations are built on relatively autonomous teams without the need of superior supervision. Earlier studies also suggest decentralized co-worker responsibility and reliance on self-management, to

coordinate and manage team work (Hällsten & Tengblad, 2002; Williams & O'Reilly, 1998).

The participants in this study stated the organization is too large and distributed to be able to get the feeling of being integrated to one other. There is an understanding and support of each others' work on the local level, but to feel belongingness in a global perspective is difficult. Some participants even claimed, it is difficult to create togetherness when they are located on different floors, since they do not meet each other often enough. Those situations can be interpreted through classic research of in-group and out-group processes. Out-group members are often seen as less honest and cooperative than members in the own group. This categorization and social comparison is common human processes and must be expected, and hence be successfully managed. (Brewer, 1979; Jarman, 2005; Schein, 1980). Thylefors (2007) claims group identity is easier developed and people get more confident, if the social system is relatively uniform and stabile. The participants in the focus groups emphasize the importance of social communion, even outside of the daily work, to create an atmosphere of togetherness.

### *Interpersonal relations*

Openness and trust between team members were areas highlighted in the focus group discussions. As they saw innovation as a team work, an open climate where people dare to try new solutions and not being afraid of making mistakes, was seen as essential. Some participants argued the size of the organization does not matter, as long as the co-workers get time to create a good innovation climate and that they enjoy their work. Earlier research concludes a culture of trust is crucial in the context of virtual organizations, especially due to unclear boundaries and high levels of uncertainty (Jarvenpaa & Leidner, 1999; Jones & Bowie, 1998). Tanis and Postmes (2005) claim trustworthiness is fostered by personal identification, and since co-workers in virtual organizations sometimes do not know each other in person, trusting behavior instead become based on expectations. Some researchers argue the absence of face-to-face interaction, makes it very difficult to create a deeper feeling of trust in virtual teams, yet only temporary and fragile (Jarvenpaa & Leidner, 1999; Walther & Bunz, 2005). On the other hand, a study where computer-mediated teams were compared to face-to-face teams, the result shows the levels of trust in the computer-mediated groups, increased over time when they were able to interact continuously (Krebs et al., 2006). The participants in the focus groups may be right about the size and diversity of the organization does not affect trusting behavior, as long as co-workers are given time for getting to know each other and creating a trustworthy atmosphere.

### *Individual co-worker*

The participants in the study expressed they have to be receptive to changes and have an open mind. They also need a positive energy and a go-ahead mentality. Sometimes people are too worried and afraid of changes, some participants claimed. At the same time it was emphasized that there is too much pressure from all different directions, which interrupt and disturb their work. They want to feel liability but also discussed the need to learn what is expected from them as individual co-workers. Research in this

area proclaims co-workers these days are expected, not only to successfully manage their own tasks, but also to be innovative and adapt to rapid changeovers on different organizational levels. Problems in doing so are often concerned as personal problems, more than organizational issues (Hällsten & Tengblad, 2002; Luo, 2006). Similar expectations on the individual co-worker exist regarding entering and adapting to new groups. Since co-workers today increasingly work in a wide range of teams, sometimes stable ones and sometimes temporarily, they are expected to easily adapt to new colleagues. This put a lot of pressure on the individual co-worker to be confident and to have social competence (Thylefors, 2007). To highlight implicit expectations between co-workers and organization is vital, according to classical organizational research. The unwritten “psychological contract” includes role setting and behavioral expectations in the organization. The expectations are for example shaped by traditions, experiences and what is learned from others. Since the organization and external environment as well as the members’ requirements, change over time, the “psychological contract” must frequently be renegotiated (Schein, 1980). Personal development and self-management should be perceived as useful tools in the organization, and to make this successful, the organization must understand and elucidate for implicit expectations.

### *Communication*

The co-workers participating in the research discussed the difficulties of working separate from each other, in a communication perspective. They referred to when they are able to work face-to-face, they can easily communicate and keep updated with the other members’ progress. They expressed that it is easier to keep the group together and they can have a better overview of the team performance. When working on distance, it becomes difficult to describe thoughts and ideas, and be sure the other part understands the aim. Immediate feedback is often lost, due to virtual interaction conditions, and lack of time. The participants also desiderated an opener and broader information flow within the organization. Some of them expressed a feeling of isolation, since they were not updated with the latest information. Earlier research confirms that people generally prefer face-to-face interaction, since body language and social context is included in the communication (Persson, 2007). The research by Weisband (2002) about distributed teams, shows communication becomes of a greater importance, compared to face-to-face teams, since there is a considerable uncertainty about others’ behaviors. If there can be a continuously flow of information between all team members, virtual teams perform better. However, the option to glance over someone’s shoulder and having hallway conversations to get updated about the team’s progress is impossible. Consequently lack of implicit feedback is common in virtual teams, which the participants in the study experienced. Inaccurate or delayed feedback is also common, due to computer-interaction difficulties and misapprehensions. Shumante and Pike (2006) recommend organizations to develop new ways to communicate informally among spread geographic localities and virtual teams.

New communication technology was described by some participants as useful tools to easier communicate between team members. Skype, for example, was mentioned as making it possible to interact freely and without delay. Participants using this tool expressed a feeling of distances becoming overbridged. However, despite affirmations of the importance of new communication technology, it was also claimed that techno-

logy never will replace the face-to-face dialogue. This confirms the view of earlier studies, where it is asserted technology will never be able to create relationships (O'Hara-Devereaux & Johansen, 1994). The contributions of communication technology have frequently been discussed in research. The technology has generated new possibilities to cooperate and innovate in virtual teams (Hinds & Kiesler, 2002; Persson, 2007). Earlier studies conclude virtual organizations can be able to communicate as effectively as face-to-face teams if they get time to adapt to the communication medium (Chidambaram, 2006; Hobman et al., 2002; Irmer et al., 2000). Yet, research shows miscommunication becomes even more crucial in virtual teams, since strong team member relationships are not as commonly developed as in face-to-face teams (Wilson et al., 2006). In accordance Dickey et al. (2006) argue miscommunications arise from lack of shared understanding among individuals communicating, and not from technology systems. In situations when a team is to generate ideas and be innovative, meeting face-to-face are even more important, since the dynamic process in face-to-face interaction increases differentiated thinking (Kristiansson 2003; Persson, 2007). These points of views were also confirmed in this study, as the need of face-to-face meetings to create a joint and innovative atmosphere, was requested by the participants. International conferences were seen as profitable, since it was enunciated as a good way of getting to know each other and achieve a feeling of togetherness. Continuous meetings may be thought of as an easy way to connect the links in the chain, and accomplish belongingness throughout the organization.

Finally, we wish to end up where we started off. The issue pervaded all focus group discussions with the co-workers, was the importance of understanding what it is like, to live and work in the virtual organization. As Schein (1980) proclaimed, companies must try to understand organizational phenomena or they run the danger to become victimized by them. But as phenomena in the virtual organization are better understood, a successful innovative work climate can be founded. To shortly summarize one picture of the virtual organization, this co-worker's metaphor is telling:

*'We are a chain'.*

### *Strength and weaknesses*

The focus group method gave a wide range of data, due to the continuous interaction between participants. The chosen method could also inspire a further dialogue among the co-workers in the studied company. Bloor, Frankland, Thomas and Robson (2001) consider this method advantageous could be used in studies of subjects which are related to group norms and the meaning of those. Wibeck (2000) argue that the focus group method is good to use when the aim of the research is to examine peoples' conceptions, knowledge, attitudes and values. The researcher selects the focus question, but the participants navigate the discussion. The participants' exchange of views can lead to the formation of associations among the others and give different perspectives to the focus question. Stewart and Shamdasani (2007) argue that the benefit of using focus groups is that it gives a broad and rich amount of data expressed in the participants own words and context. The researcher is also able to ask for elucidation if it is necessary.

The first two focus groups were of a structured kind, as a template was used. In the last focus group, the template was not used. This may have affected the interaction in

the groups differently. Since the aim of the study, was not to compare the groups, but to generally describe the co-workers' view, the use of different specific methods of focus groups, was not seen to negatively influence the result. The data gathered from the valuation and grading in the template were not used in the study, but was only to give an indication of the apprehension to the studied company.

### *Future research*

Further research based on the data from this study and added with managers and top managers' views, would be of a particular interest since it would broaden the perspective of the virtual organization. It would also be interesting to make a comparing study of the effects of different organization structures, concerning co-workers everyday work. Studies of successful leadership within this kind of organization could furthermore enrich the picture of today.

## References

- Alvesson, M., & Sköldbberg, K. (1994). *Tolkning och reflektion: vetenskapsfilosofi och kvalitativ metod*. Lund: Studentlitteratur.
- Bloor, M., Frankland, J., Thomas, M., & Robson, K. (2001). *Focus groups in social research*. London: SAGE Publications Ltd.
- Brewer, M. B. (1979). In-group bias in the minimal intergroup situation: A cognitive-motivational analysis [electronic version]. *Psychological Bulletin*, 86, 307-324.
- Brunsson, N. (2006). *Mechanisms of hope – Maintaining the dream of the rational organization*. Herndon, VA: Copenhagen Business School Press.
- Bruzelius, L., & Skärvad, P-H. (2004). *Integrerad organisationslära*. Lund: Studentlitteratur.
- Chidambaram, L. (2006). GDN Special issue on virtual teams: Introduction to the special issue [electronic version]. *Group Decision and Negotiation*, 15, 297-298.
- Chudoba, K. M., Wynn, E., Lu, M., & Watson-Manheim, M. B. (2005). How virtual are we? Measuring virtuality and understanding its impact in a global organization [electronic version]. *Information Systems Journal*, 15, 279-306.
- Chung, L. H., Gibbons, P. T., & Schoch, H. P. (2006). The management of information in subsidiaries of multinational corporations [electronic version]. *British Journal of Management*, 17, 153-165.
- Davis, S. (1987). *Futurum exactum*. Stockholm: Svenska Dagbladets Förlags AB.
- Dickey, M. H., Wasko, M. M., Chudoba, K. M., & Thatcher, J. B. (2006). Do you know what I know? A shared understandings perspective on text-based communication [electronic version]. *Journal of Computer-Mediated Communication*, 12, 66-87.
- Drori, G. S., Meyer, J. W., & Hwang, H. (2006). *Globalization and organization: World society and organizational change*. New York: Oxford University Press.
- Ekvall, G. (1988). *Förnyelse och friktion – om organisation, kreativitet och innovation*. Stockholm: Natur och Kultur.
- Fayol, H. (1965) *Industriell och allmän administration* (2<sup>nd</sup> Ed.). Stockholm: PA Nordstedt & Söners Förlag.



- Harrison, D. A., Price, K. H., Gavin, J. H., & Florey, A. T. (2002). Time, teams, and task performance: Changing effects of surface- and deep-level diversity on group functioning [electronic version]. *Academy of Management Journal*, *45*, 1029-1045.
- Hedberg, B., Dahlgren, G., Hansson, J., & Olve, N-G. (1997). *Virtual organizations and beyond*. Chichester, England: John Wiley & Sons.
- Hinds, P., & Kiesler, S. B. (2002). *Distributed work* [electronic version]. Cambridge, MA: The MIT Press.
- Hobman, E. V., Bordia, P., Irmer, B., & Chang, A. (2002). The expression of conflict in computer-mediated and face-to-face groups [electronic version]. *Small Group Research*, *33*, 439-465.
- Hällsten, F., & Tengblad, S. (2002). Personalansvar och medarbetarskap – om relationen mellan organisation och medarbetare. In F. Hällsten, & S. Tengblad (eds.), *Personalansvar och medarbetarskap* (pp. 9-27). Göteborg: Bokförlaget BAS.
- Irmer, B., Chang, A., & Bordia, P. (2000). *The development of social and task cohesion in face-to-face and computer-mediated communication task groups* [electronic version]. Best Paper Proceedings, Academy of Management Annual Conference, Toronto, Canada. Collected 1 June, 2007, from <http://intl-sgr.sagepub.com/cgi/content/refs/37/6/721>.
- Jansson, E. (2005). *Working together when being apart. An analysis of distributed collaborative work through ICT from a psychosocial and organizational perspective* [electronic version]. Doctoral dissertation. The Royal Institute of Technology: Stockholm, Sweden. Collected 1 June, 2007, from <http://urn.kb.se/resolve?urn=urn:nbn:se:kth:diva-145>.
- Jarman, R. (2005). When success isn't everything - Case studies of two virtual teams [electronic version]. *Group Decision and Negotiation*, *14*, 333-354.
- Jarvenpaa, S. L., Knoll, K., & Leidner, D. E. (1998). Is anybody out there? Antecedents of trust in global virtual teams [electronic version]. *Journal of Management Information Systems*, *14*, 29-64.
- Jarvenpaa, S. L., & Leidner, D. E. (1999). Communication and trust in global virtual teams [electronic version]. *Organization Science*, *10*, 791-815.
- Jehn, K. A., Northcraft, G. B., & Neale, M. A. (1999). Why differences make a difference: A field study of diversity, conflict, and performance in workgroups [electronic version]. *Administrative Science Quarterly*, *44*, 741-763.
- Jones, T. W., & Bowie, N. E. (1998). Moral hazards on the road to the “virtual” corporation [electronic version]. *Business Ethics Quarterly*, *8*, 273-292.
- Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. (1964). *Organizational stress: Studies in role conflict and ambiguity*. New York: Wiley.
- Katz, D., & Kahn, R. L. (1966). *The social psychology of organizations*. New York: John Wiley & Sons Inc.
- Katzenbach, J. R., & Smith, D. K. (1993). *The wisdom of teams: Creating the high-performance organization*. Boston: Harvard Business School Press.
- Kayworth, T. R., & Leidner, D. (2000). The global virtual manager: A prescription for success [electronic version]. *European Management Journal*, *18*, 183-194.
- Krebs, S. A., Hobman, E. V., & Bordia, P. (2006). Virtual teams and group member dissimilarity: Consequences for the development of trust [electronic version]. *Small Group Research*, *37*, 721-741.
- Kristensson, P. (2003). *Creativity in applied enterprise – Bringing impetus to innovation*. Doctoral Dissertation, Göteborg University: Psychology Department, Göteborg.

- Krueger, R. A. (1998). *Analyzing & reporting focus group results*. Focus Group Kit, vol 6. Thousand Oaks, California: SAGE Publications Inc.
- Lipnack, J., & Stamps, J. (1997). *Virtual teams: Reaching across space, time, and organizations with technology*. New York: Wiley & Sons.
- Luo, X. (2006). The spread of a 'human resources' culture: Institutional individualism and the rise of personal development training. In G. S. Drori, J. W. Meyer, & H. Hwang (eds.), *Globalization and organization: World society and organizational change* (pp. 225-240). New York: Oxford University Press.
- Manev, I. M. (1998). Keeping in touch from afar: Emergent social structure in a multinational organization [electronic version]. *Dissertation Abstracts International Section A: Humanities and Social Science*, 58, 3993.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust [electronic version]. *Academy of Management Review*, 20, 709-734.
- Mayo, E. (1945). *The social problems of an industrial civilization*. Boston: Harvard University.
- McGregor, D. (1960). *The human side of enterprise*. New York: McGraw-Hill.
- Meyer, J. W. (1992). *Organizational environments: Ritual and rationality*. Newbury Park, California: SAGE Publications Inc.
- O'Hara-Devereaux, M., & Johansen, B. (1994). *Global work: Bridging distance, culture, and time*. San Francisco: Jossey-Bass.
- Obert, C., & Forsell, M. (2000). *Fokusgrupp: Ett enkelt sätt att mäta kvalitet*. Höganäs: Kommunlitteratur.
- Persson, O. (2007). En gränslös värld – virtualiseringen av teamarbete. In I. Thylefors (ed.), *Arbetsgrupper: från gränslösa team till slutna rum* (pp. 46-63). Stockholm: Natur och Kultur.
- Pettigrew, A. M. (2000). Linking change processes to outcomes. In M. Beer, & N. Nohria (eds.), *Breaking the code of change* (pp. 243-265). Boston, Massachusetts: Harvard Business School Press.
- Pfeffer, J. (1994). *Competitive advantage through people: unleashing the power of the work force*. Boston, Massachusetts: Harvard Business School Press.
- Rubenowitz, S. (2004). *Organisationspsykologi och ledarskap* (3<sup>rd</sup> Ed.). Lund: Studentlitteratur.
- Sandhya S. (2006). Understanding the virtuality of virtual organizations [electronic version]. *Leadership & Organization Development Journal*, 27, 465 – 483.
- Schein, E. H. (1965). *Organisationspsykologi*. Stockholm: Wahlström & Widstrand.
- Schein, E. H. (1980). *Organizational psychology* (3<sup>rd</sup> Ed.). Englewood Cliff, New Jersey: Prentice Hall.
- Schein, E. (1988). *Process consultation – Its role in organization development* (2<sup>nd</sup> Ed.). Reading, Massachusetts: Addison-Wesley Publishing Company.
- Shumate, M., & Pike, J. (2006). Trouble in a geographically distributed virtual network organization: Organizing tensions in continental direct action network [electronic version]. *Journal of Computer-Mediated Communication*, 11, 802-824.
- Stewart, D. W., & Shamdasani, P. N. (2007). *Focus Groups – theory and practice*. Thousand Oaks, California: SAGE Publications Inc.
- Tanis, M., & Postmes, T. (2005). Short communication: A social identity approach to trust: Interpersonal perception, group membership and trusting behaviour [electronic version]. *European Journal of Social Psychology*, 35, 413-424.

- Thylefors, I. (2007). Arbetsgrupper är inte vad de varit. In I. Thylefors (ed.), *Arbetsgrupper: från gränslösa team till slutna rum* (pp. 15-30). Stockholm: Natur och Kultur.
- Walther, J. B., & Bunz, U. (2005). The rules of virtual groups: Trust, liking, and performance in computer-mediated communication [electronic version]. *Source Journal of Communication*, 55, 828-846.
- Weisband, S. (2002). Maintaining awareness in distributed team collaboration: Implications for leadership and performance (pp. 311-333). [electronic version]. *Distributed Work*. Cambridge, MA: The MIT Press.
- Wibeck, V. (1998). Att arbeta med fokusgrupper. *Arbetsrapporter från Tema K*, 1998:1. Linköping: Tema, Linköpings Universitet.
- Wibeck, V. (2000). *Fokusgrupper - om fokuserade gruppintervjuer som undersökningsmetod*. Lund: Studentlitteratur.
- Williams, K. Y., & O'Reilly, C. A. (1998). Demography and diversity in organizations: A review of 40 years of research [electronic version]. *Research in Organizational Behavior*, 20, 77-140.
- Wilson, J. M., Straus, S. G., & McEvily, B. (2006). All in due time: The development of trust in computer-mediated and face-to-face teams [electronic version]. *Organizational Behavior and Human Decision Processes*, 99, 16-33.