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Between Culture and Knowledge:
A Research Agenda**

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**MANAGING THE DYNAMIC INTERFACES
BETWEEN CULTURE AND KNOWLEDGE:
A RESEARCH AGENDA¹**

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Setting the stage

Many observers have proclaimed the dawning of a new age – known as the new economy or the knowledge economy – in which society itself is on the verge of transformation through the use of knowledge. The flood of literature on the new economy and knowledge society associates a wide range of features to the contemporary business environment. However, when looking beyond the hype, the interest converges around a few of these features. The most distinguishable ones are the unleashed power of creative destruction leading to a call for rapid pace in innovation and the far-reaching impact of the development of digital information and communication technologies. These characteristics can be tracked back to the argument that knowledge has become the most important resource in today's business environment.

The shift from the “knowledge organization” to the “knowing organization” reflects the change from a conceptualization of knowledge as an object or a thing that has to be acquired toward a broader view of knowing as an ongoing process of social construction and collective action that is embedded in organizational tasks, relationships, and tools (Choo, 1998). An activity view of knowing (Vygotsky, 1978; Engeström, 1991; Blackler, 1993; 1995) sees knowing as being associated with doing, and doing as leading to making sense in the context of both the organization and the environment. At present, knowledge production is heterogeneous and international. The specific knowledge production and application relevant to the value creation in the individual organization is no longer limited by the boundaries of

¹ This Working Paper is based on the project proposal “Managing the dynamic interfaces between knowledge and culture” submitted to the LOK Program at Danish Social Sciences Research Council in September 2001. The project is running from 2002 to 2004 and is financed by the LOK Program, the project corporate partners and

the organization. Instead it takes place under the labels of virtual organization in dynamic organizational forms such as loosely coupled networks. Moreover, the ability of knowledge-based companies to develop and exploit new knowledge efficiently and innovatively is highly related to their networking capabilities. Accidentally random as well as purposeful interactions install particular forms of knowledge work (networking being one of them), and the discourses that support and shape these activities and their associated shifting subjectivities (Knights et al., 1997).

Knowledge creation, sharing and utilization takes place in a certain cultural context. The relationships between culture and knowledge management however, are not explored in depth in a coherent manner in mainstream texts. A number of writings conclude that cultural aspects are extremely important to consider in the processes of knowledge creation, sharing and utilization without providing neither deeper theoretical nor detailed operational insights into the issue. The present project aims at filling this gap in the extant literature.

The information technology (IT) industry is particularly interesting as a field within which to conduct our research due to its extremely dynamic nature: even the most astute and powerful player can be blown off course by unpredictable events and the emergence of new actors on the network stage. The sectoral conditions are changing rapidly which implies multiple translations of original goals, continuous reworking and changing of actors' relations and the existence of networks that are far from maintaining a normalized, routinized and codified condition. Companies working within IT and consulting depend especially on their ability to 1) develop new knowledge both internally and in the interplay with other organizations and in both more temporary and rather stable organizations, 2) identify and transfer this knowledge within their organization and outside organizational boundaries, and 3) leverage knowledge.

The above points include the process of developing new knowledge together with clients and business partners. Often clients require the analytical capacity of the consultants/developers and their own contribution is basically limited to giving the necessary information required for the development of new knowledge/new solutions. This process may take place in project groups or ad hoc groups, where both developers and internal resources

participate on equal terms (physically this might take place on the clients' ground or just "virtually").

The development of new knowledge internally may also include sharing and developing knowledge between IT/strategy sub-cultures. This may be between strategy consultants, creative/content consultants and/or hard-core technicians. This kind of companies are at present called SIS companies (delivering Strategic Internet Services). In other cases the clients are buying pure capacity (body-shopping). They already have internally based knowledge and need short-term capacity being willing to take responsibility regarding knowledge transfer themselves (in relation to the consultants). In some cases, however, it is demanded that the knowledge is not transferred to other organizations and this is often stated in contracts.

The process of leveraging knowledge developed in one part of the organization/network/among business partners/clients to the rest of the organization or business partners may be conducted in both structured and less structured ways. Including professional networks, knowledge databases placed on LAN (Local Area Networks) knowledge databases may also be placed outside a local network giving access to external players.

Management of knowledge

At present, there is a paradigm shift from focusing on understanding and managing physical goods to concentrating on corporate intangible assets such as knowledge. Knowledge is a critical source of resource development of the firm. Hence, effective management of knowledge can be considered one of the main sources of competitive capabilities of today's companies.

The following dimensions outline our initial standpoints:

- Knowledge is justified through beliefs in the sense that the justification and hence, knowledge is partly constructed and it serves particular needs at a particular time (Shum 1998).
- Knowledge is not valuable per se. It becomes valuable due to its ability to enable value creation in the company.

- The knowledge management literature often postulates that tacit knowledge is the opposite of explicit knowledge (Choi & Lee, 1997). However, in line with Polanyi's (1966) work, we assume that all kind of knowledge includes a tacit dimension. Between the two poles, knowledge is partly explicit or articulated and partly tacit. Hence, applying explicit knowledge requires mastery of the associated tacit knowledge.
- Knowledge work and management of knowledge are characterized by diversity and ad hoc behavior patterns.
- Management of knowledge is about managing people involved in knowledge creation, transfer and application.
- Knowledge generation takes more and more place through the informal exchange within the so-called communities of knowledge workers as an emerging form of social aggregation that can be neither planned nor installed but that can only be detected (Borghoff and Pareschi, 1998).
- Mutual trust is crucial for facilitating knowledge creation across functions and disciplines (Smith et al., 1995; Simonin, 1999). Trust matters in terms of knowledge reliability both inside and outside the organization. Hence, it influences the willingness to base actions on the knowledge of others. Trust also facilitates cooperation in knowledge networks (Sherman, 1992).

Firms that effectively expand, disseminate and exploit knowledge internally, that protect knowledge from expropriation and imitation by competitors, and that know how to accumulate and distribute knowledge effectively and efficiently, enjoy a competitive advantage. This project focuses on the creation and sharing of new knowledge and knowing practices combined with a cultural perspective. This combination of theoretical choices enables us to study new dynamic organizational configurations which become relevant in the new economy. Since the contemporary business environment calls upon the ability to continuously adapt and deal with new situations, events and contexts, effective knowledge creation matters more now than ever before. However, knowledge creation and utilization are not always unified in time and space. Thus, firms may potentially enjoy great benefits by focusing on knowledge sharing as well.

Knowledge is also created between organizations. Such joint knowledge creation processes are best understood in terms of inter-organizational relationships and networks. It had been shown that relationships offer both sides direct and indirect economic values. In terms of knowledge creation and sharing the indirect value functions are of interest, including innovation development and market access. Organizations create and share knowledge about new products and services and about market developments and firms' behavior respectively. Knowledge creation is not limited to one relationships nor it can be isolated. Rather, relationships are interconnected and as such, knowledge creation becomes a network issue where different network configurations produce different outcomes (Gemünden et al., 1996).

The development of IT is a crucial factor in putting knowledge management on the managerial agenda. However, we do not subscribe to the IT based approach to knowledge management where it is believed that knowledge can be stored and disseminated meaningfully by the help of IT-systems and where emphasis is put on the administration of existing information. Assigning IT a central role in knowledge management has the potential negative consequence that knowledge management is practiced within a constricting paradigm as opposed to a transformative and more dynamic paradigm characterized by an obsession with measurements and rigid routines and the belief that knowledge can be controlled.

Culture

In the project we consider four levels of culture:

1. professional subcultures
 - a. based on different functional areas in the same company and
 - b. based on different industries
2. organizational cultures
3. cultures in inter-organizational networks
4. national cultures

Although the role of *subcultures* is largely neglected in the literature (Trice & Beyer 1993), we regard them as an explicit level of analysis: subcultures tend to develop their own identities and specific language, they develop shared beliefs that guide the identification, selection and interpretation of organizational events, and they apply their own criteria in

defining knowledge. Functional areas influence beliefs (Dearborn and Simon, 1958). The specificity of the industry in which organizations are operating influences to a great extent the way they behave, the norms they subscribe to, the way they choose to structure themselves etc. (Gordon 1991). Consequently, we need to consider the level of industry while addressing the research questions in the study. As already mentioned, our sample will be defined by companies and other kinds of organizations operating in the IT industry.

Organizational cultures are central to knowledge creation, sharing and utilization and they are increasingly recognized as a major barrier to leveraging intellectual assets (De Long & Fahey 2000; Gordon & DiTomaso 1992). The focus on the existing subcultures within an organization can be translated into studying organizational culture from a differentiation perspective (Martin, 1992). From this standpoint organizations consist of a number of subcultures based on differences in power, areas of interest, and professional practices. Following the fragmentation perspective (Martin, 1992), organizations are seen as webs of individuals who are loosely and sporadically connected. From this perspective organizations lack consensus and their boundaries are blurred. Consensus, consistence and clarity are central features of organizations approached from the integration perspective (Martin, 1992; Schein, 1992).

The absence of more critical work on *inter-organizational networks* – a field that while present in some organizational study texts (Clegg, 1990; Morgan, 1990) is conspicuous by its absence from others (Reed, 1992; Thompson and McHugh, 1990) – is associated with a continuing fixation on intra-organizational work processes. This has continuously deflected attention from the significance of inter-organizational networks between nominally autonomous organizations. Our study focuses on establishing and developing knowledge networks, both intentionally (formally) and unintentionally (informally), as a predominant way of organizing. Earlier studies have identified that a firm's corporate culture influences its network competence, i.e. the firm's networking activities and the networking qualifications of the employees (Ritter, 1999).

The shift towards network configurations implies the need for more deeply-set environmental inter-connectedness as a precondition for anticipating and successfully managing environmental threat and opportunity (Reed, 1992). From this perspective, we are interested in exploring how the knowledge work involved in building networks is

accommodating the divergent demands of companies and their intermediaries. It is also important to show how, as networks develop, knowledge workers are continuously engaged in a reworking and reconstitution of their position, commitments, and involvement.

A number of studies support the existence of differences among *national cultures* in world views and values (Quinn and Holland, 1987; Fischer, 1988; Trompenaars, 1993; Hofstede, 2001; Bigoness and Blakely, 1996) as well as in beliefs and behaviors of organizational members (Geletkanycz, 1997). We intend to keep this dimension of analysis as the broader context of our study since a) national culture provides the basic mental models of society in general and especially in the context of increasing internationalization of organizations and b) all knowledge is produced within a particular culture and set of social arrangements. However, we do not regard context as something external that influences the processes studied. Contextualization does not imply a dichotomy between inside and outside; rather it suggests a spectrum of complex interactions between potential and use, constraints and stimulants (Nowotny et al., 2001).

The theme of the study and research questions

There is valuable critical work on knowledge management and culture (defined at different levels) as single areas of research. In the extant literature, however, ideas and studies that integrate these complex concepts in close interaction with the “market”/industry have yet to enter the foreground of academic debate.

The central theme in the project is the nature of the relationship between knowledge management and culture. The focus is on the content and the form of intermediation which constitutes the substance and shape of the interface between these two domains. This theme is the connecting thread running through the project, which naturally contains a range of disciplines, perspectives, and interests.

The project departs from voluntaristic analyses that assume certain conditions and choices to be combined with different actors to create new conditions of “normality” (Foucault, 1979). We support the view that new regimes of truth, and the knowledge objects that underpin them, undergo a process of multiple translation and accident as their champions rethink, and are challenged, subverted, and blown off by recalcitrant actors and unexpected intermediations. The project allows for the opportunity to question the adequacy of

conventional conceptions of both knowledge work and networking. As pointed out by Knights et al. (1997: 154), “rather than seeking simply to describe, elaborate, or refine common-sense knowledge of networks, a challenge for critical organizational analysis is to study networks as a vehicle for understanding power-knowledge relations in particular instances of their genesis, reproduction, and transformation: to show, that is, how networks, as practices and discourses, are sustained by power relations that are themselves supported by particular regimes of truth”.

Table 1: Research questions

	Professional subcultures - within companies - within industries	Organizational cultures	Inter-organizational networks (across companies and institutions + across businesses and industries)
Knowledge creation	- How to bring the creative ideas from different professional cultures to shared business opportunities? - How to assure the ability to adapt to changing business environments?	- How to create an enabling context? - How to avoid costly errors in knowledge creation?	- How can knowledge creation and utilization be coordinated among companies and organizations with different cultures? - How is the value of knowledge creation divided between different players with different cultures?
Knowledge sharing	- How to avoid knowledge hoarding? - How to develop bottom-up incentives for sharing knowledge across subcultures?	- How to increase the availability of individual knowledge in the organization? - How to actively disseminate knowledge within the organization?	- How to overcome the Not-Invented-Here-Syndrome? - How to exploit diversity of knowledge and diversity of cultures in the process of knowledge sharing?

All questions and implicit relationships listed in the matrix in Table 1 are legitimate research questions that can be made into testable propositions. The matrix shows explicitly that people are assigned the role of active agents in the processes of knowledge creation and sharing. There is a need for people from different professions, functions and organizations to

cooperate for solving integrated management problems in the light of their complex nature. Especially in the IT industry, management solutions tend to focus on technical aspects and ignore or underestimate human and organizational dimensions, which are important for the effective management of the enterprise. The need for “cooperative management” (Ray, 2000) is becoming stronger than ever before.

The research questions outlined in the above matrix represent a diversified research terrain. They are empirically based issues inspired by both the latest development of the knowledge management literature and some of the empirical experiences of the project’s business partners. The research team needs to exercise a high level of flexibility in terms of taking up issues and problems as they generate from the field data.

Below are listed a few examples of relationships we intend to study:

- What are the cultural barriers to knowledge management (creation and sharing) in the organization and how can they be dealt with from a managerial perspective;
- What are the cultural barriers to knowledge creation and sharing between members of a knowledge network and how can they be dealt with in companies;
- How the concepts of culture and knowledge management are being refined through the development of IT in and between organizations;
- How knowledge and knowledge management on the one hand and cultural awareness on the other hand influence the (re)production of managerial identities;
- What is the role of symbols, myths, and metaphors in terms of another way of understanding knowledge management;
- How can organizational cultures and subcultures be aligned with knowledge management goals.

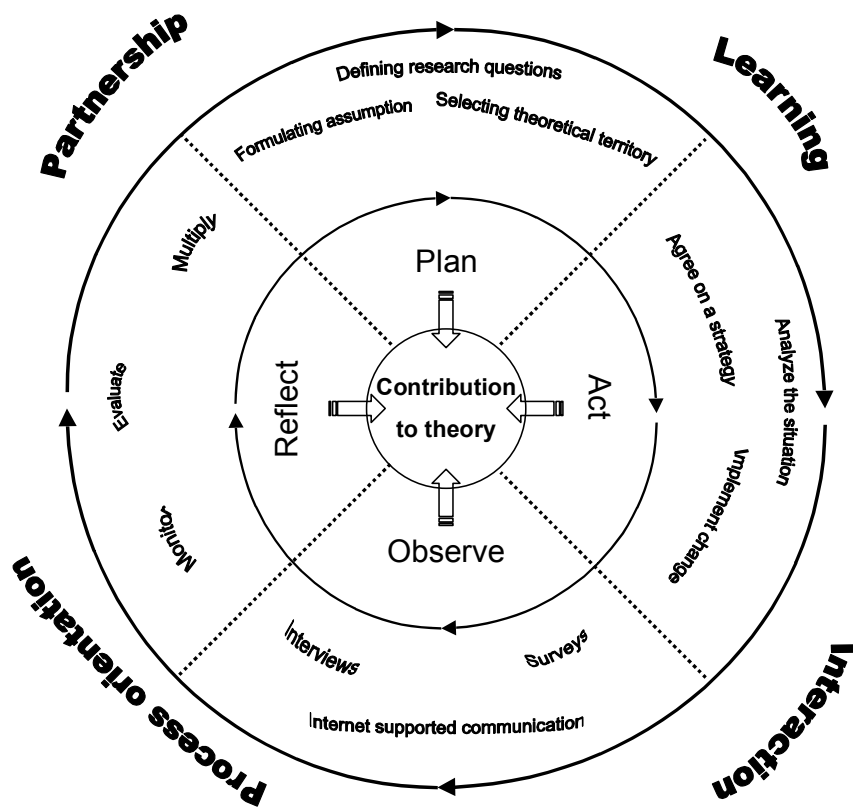
The answers to these questions will make up a polyphony of arguments covering a range of problems. The aim is to develop critical perspectives that will be:

- sources of insights and interesting new research ideas;
- directly relevant to the practices of the partner companies, e.g. in terms of development and implementation.

Research Design

We are proponents of a methodological pluralism. No single method or discipline can ever capture the richness and complexity of organizational reality; a single perspective is always only a partial view and unnecessarily restrictive. There is much to be gained if a plurality of research methods is effectively employed to study the phenomena under investigation. This methodological pluralism is naturally related to the pluralism of substantive research topics and theoretical approaches as well as to the diversity of the project partners. The study will go through a number of phases and will combine qualitative and quantitative methods (Figure 1).

Figure 1: The project's methodological life cycle



As indicated in the model depicted in Figure 1, the project is based on a triangulation of various methods and techniques. The model illustrates the different phases of the project's life cycle and the central activities we intend to initiate and carry out.

In the *planning phase* the conceptual frameworks and the basic assumptions will be defined by using the competencies of the research team and the involved partner companies. Three types of knowledge will be necessary at that stage. The first pertains to theories and conceptualizations regarding knowledge, knowing, and learning. The second type relates to appropriate theoretical frameworks on culture analyzed at different levels important to the study: professional subcultures, organizational culture, cultures in inter-organizational networks, and national culture. The third type is associated with local knowledge regarding the organizational context of the study and consists of defining qualified assumptions about the specific issues and challenges with which the partner companies are dealing.

In the *act-phase* the situation will be examined in detail in light of the chosen frameworks (in depth analysis and modeling existing situations). The co-operation with the partner companies will result in an agreement concerning the strategy for changes. This is a necessary condition for the joint meaning construction of the available data in the later stages of the project's life cycle. Changes are initiated and implemented in this phase.

The largest part of the collection of empirical data will take place in the *observation phase*. Conducting surveys will enable us to test hypotheses, widen the basis for empirical generalization, verify and generate theoretical models. The surveys will be based on questionnaires containing closed format questions.

Conducting case studies will enable more accurate and in-depth elaborations of the issues under investigation. The techniques for collecting the case studies data will include historical analyses, interviews, observations, video-recording (if possible), and taking field notes. The models we aim to develop will be based on our best cases as opposed to summary procedural abstractions. Internet supported communication (e.g. bulletin boards and discussions groups) will be applied as a new tool for creating and collecting empirical data. The potential strength of this new "instrument" is that it is a) speeds up the communication process, b) captures the communication for latter analysis, and c) allows the researcher to monitor dialogues between the members of the discussions group. The case- and survey data will be used for repeated data collection (longitudinal studies).

“Proposing and checking” (Strauss & Corbin, 1990:23) is an essential part of the *reflecting stage*. The research activities and the interaction with the companies will provide the opportunity to develop new / modified analytical frameworks, concepts, and tools for deeper understanding of the addressed problems. At this stage we will move beyond the actors’ points of views, since monitoring, evaluating and multiplying the results is at the heart of this stage of the project. The “reflection-on-action” implies both participation in order to come close to the particular situations and distancing in order to be able to objectively describe and analyze them.

The research paradigm that has most applicability and usefulness for achieving the project’s aims is Action Research (AR). AR produces knowledge that informs action and that “requires a conception of practical knowledge that goes beyond the common conception of choosing means to achieve predetermined ends” (Argyris et al., 1987). It is a legitimate, authentic, and rigorous approach to inquiry which pushes the development of both theoretical and practical knowledge (Rapoport, 1970; Elden, 1983; McTaggart, 1996). We focus particularly on emancipatory (critical) AR, based on the Frankfurt School of Critical Theory. Various recent schools of AR emphasize different aspects of its application: participation and cogenerative learning (Greenwood et al., 1992), development of local theory and dialogue (Elden, 1983), the development of communicative processes and local mobilization (Levin, 1988, cited in Spjelkavik, 1995). Emancipatory AR is seen as different compared to technical AR which aims to improve effectiveness of educational and managerial practice and practical AR which, in addition to effectiveness, is concerned about the practitioners’ understanding and professional development (see Zuber-Skerritt, 1996:4). Emancipatory AR is mostly concerned with contributing to theory by improving and deepening the researchers’ understanding of the phenomena under study. It is process oriented and closely related to the learning concept (it facilitates organizational learning). The approach chosen is based on partnerships between the business community and us as researchers and involves continuous interaction on a mutually negotiated and agreed upon basis.

References

- Argyris C.; Putnam R. & Smith D. 1987. *Action science: Concepts, methods, and skills for research and intervention*. San Francisco and London: Jossey-Bass Publ.
- Athanassiou, N. & Nigh, D. 2000. Internationalization, tacit knowledge and the top management teams of MNCs. *Journal of International Business Studies*. 31(3). 471-487
- Bigoness, W. J. & Blakely, G. L. 1996. A cross-national study of managerial values. *Journal of International Business Studies*. 27(4): 739-752
- Blackler, F. 1993. Knowledge and the theory of organizations: Organizations as activity systems and the reframing of management. *Journal of Management Studies*. 30(6): 863-884
- Blackler, F. 1995. Knowledge, knowledge work and organizations: An overview and interpretation. *Organization Studies*. 16(6): 1021-1046
- Borghoff, U. M. & Pareschi, R. (Eds.) 1998. *Information technology for knowledge management*. Berlin: Springer
- Choi, C. & Lee, S. 1997. A knowledge-based view of co-operative interorganizational relationships, P. Beamish & J. Killing (Eds.) *Co-operative strategies: European perspectives*, San Francisco: The New Lexington Press.
- Choo, C. W. 1998. *The knowing organization: How organizations use information to construct meaning, create knowledge, and make decisions*. New York: Oxford University Press
- Clegg, S. R. 1990. *Modern organizations*. London: Sage
- Dearborn, D. C. and Simon, H. A. 1958. Selective perception: A note on the department identification of executives. *Sociometry*. 21: 140-144
- DeLisi, P.S. 1990. Lessons from the steel axe: culture, technology and organizational change. *Sloan Management Review*. 32(1). 83-93
- De Long, D. W. & Fahey, L. 2000. Diagnosing cultural barriers to knowledge management. *Academy of Management Executive*. 14 (4): 113-127
- Elden, M. 1983. Democratization and participative research in developing local theory. *Journal of Occupational Behavior*. Vol. 4: 21-33

- Engeström, Y. 1991. Developmental work research: Reconstructing expertise through expansive learning. M. Nurminen and G. Weir. *Human jobs and computer interfaces*. Netherlands: Elsevier. 265-290
- Fischer, G. 1988. *Mindsets: The role of culture and perception in international relations*. Yarmouth ME: Intercultural Press
- Foucault, M. 1979. *Discipline and punish*. Harmondsworth: Penguin
- Galetkanycz, M. A. 1994. The salience of "Culture's Consequences": The effect of cultural values on top executive commitment to status quo. *Strategic Management Journal*. 18(8): 615-634
- Gemünden, H. G.; Ritter, T. & Heydebreck, P. 1996. Network configuration and innovation success: An empirical analysis in German high-tech industries. *International Journal of Research in Marketing*. 13 (5): 449-462.
- Gordon, G. 1991. Industry determinants of organizational culture. *Academy of Management Review*. (April). 396-415
- Gordon, G. & Ditomaso, N. 1992. Predicting corporate governance from organizational culture. *Journal of Management Studies*. (November). 784-798
- Greenwood, D. et al. 1992. Industrial democracy as process. *Social science for social action: Toward organizational renewal*. Vol. 1, Stockholm: The Swedish Center for Working Life
- Hofstede, G. 2001. *Cultures consequences: Comparing values, behaviors, institutions and organizations across nations*. Thousand Oaks: Sage Publication
- Hostede, G. 1994. *Cultures and organizations*. London: HarperCollins
- Jordan, B.; Goldman, R. & Eichler, A. 1998. A technology for supporting knowledge work: The RepTool. Borghoff, Uwe M & Pareschi, Remo (eds.) *Information technology for knowledge management*. Berlin: Springer. 79-97
- Kluckhohn, C. 1946. *Culture and behavior*. New York: Free Press
- Knights, D.; Murray, F. & Willmott, H. 1997. Networking as knowledge work: A study of strategic inter-organizational development in the financial service industry. Brian P. Bloomfield, Rod Coombs, David Knights, and Dale Littler (eds.) *Information technology and organizations*. Oxford University Press. 137-159

- Martin, J. 1992. *Cultures in organizations: Three perspectives*. New York: Oxford University Press
- McTaggart, R.. 1996. Issues for participatory action researchers. *New Directions in Action Research*, Zuber-Skerritt Ortrun (ed.), The Falmer Press. 243-255
- Morgan, G. 1990. *Organizations in society*. London: Macmillan
- Nowotny, H.; Scott, P. & Gibbons, M. 2001. Re-thinking science: Knowledge and the public in an age of uncertainty. MA: Blackwell
- Olson, M.H. 1982. New information technology and organizational culture. *MIS Quarterly*. 6(5). 71-92
- Polanyi, M. (1966). *The tacit dimension*. Doubleday, New York
- Quinn, N. & Holland, D. 1987. Culture and cognition. D. Holland (ed.). *Cultural models in language and thought*. Cambridge: Cambridge University Press. 3-40
- Rapoport, R. 1970. Three dilemmas in action research, *Human Relations*. Vol. 23, No. 6
- Ray, P. K. 2000. *Cooperative management of enterprise networks*. New York: Kluwer Academic/Plenum Publishers
- Reed, M. 1992. *The sociology of organizations*. London: Wheatsheaf/ Harvester
- Ritter, T. 1999. The networking company: Antecedents for coping with relationships and networks effectively. *Industrial Marketing Management*. 28 (5): 467-479
- Schein, E. 1984. Coming to a new awareness of organizational culture. *Sloan Management Review*. 25(2). 3-16
- Schein, E. 1992. *Organizational culture and leadership*. San Francisco, CA: Jossey Bass
- Sherman, S. 1992. Are strategic alliances working? *Fortune*. September 21: 24-29
- Shum, S. B. 1998. Negotiating the construction of organizational memories. Borghoff, Uwe M. & Pareschi, Remo (Eds.) *Information technology for knowledge management*. Berlin: Springer. 55-78
- Simonin, B. 1999. Ambiguity and the process of knowledge transfer in strategic alliances. *Strategic Management Journal*, 20: 595-623
- Smith, K.G., Carroll, S.J. & Ashford, S.J. 1995. Intra- and interorganizational cooperation: Toward a research agenda. *Academy of Management Journal*, 38(1): 7-23

- Spjelkavik, Ø. 1995. Applied research or action research? *Research in Action*, O. Eikeland & H. Finsrud (eds.), Oslo: The Work Research Institute. 269-296
- Straub, D. 1994. *The effect of culture on IT diffusion: e-mail and fax in Japan and the US*. 5(1). 23-47
- Strauss A. & Corbin J. 1990. *Basics of qualitative research: Grounded theory, procedures and techniques*. London: Sage
- Thompson, P. and McHugh, D. 1990. *Work organizations: A critical introduction*. London: Macmillan
- Trice, H. & Beyer, J. 1993. *The cultures of work organizations*. Englewood Cliffs, NJ: Prentice Hall
- Trompenaars, F. 1993. *Riding the waves of culture*. London: Economist Books
- Vygotsky, L.S. 1978. *Mind in society*. Cambridge, MA: Harvard University Press
- Zimmerman, J.; Grande, S. & Johnston, S. 1994. Adding value by working differently: enabling the learning culture. Baskerville, R.; Smithson, S.; Ngwenyama, O. & DeGross, J. (Eds) *Transforming organizations with information technology*. North Holland, Amsterdam. 437-450
- Zuber-Skerritt, O. 1996. Introduction: New directions in action research. *New Directions in Action Research*, Zuber-Skerritt Ortrun (ed.), The Falmer Press. 3-9