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# THE ROLE OF ORGANIZATIONAL CULTURE IN ORGANIZATIONAL CHANGE - IDENTIFYING A REALISTIC POSITION FOR PROSPECTIVE IS RESEARCH

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## Abstract

*Organizational culture – a popular but also a very complex concept – has been identified as an influential factor affecting the successes and failures of organizational change efforts. Many empirical organizational culture studies have been carried out in information systems (IS) research. However, culture is a very versatile concept, and there are many controversies in both defining and applying it. Therefore, this paper reviews different conceptions of organizational culture in the existing literature – in anthropology, organizational studies and in IS research. Also recent criticism on the existing conceptions is presented. Furthermore, organizational change is also a complex concept, due to which this paper discusses also differing conceptions of organizational change and conceptions of change employed in the empirical IS literature. Finally, a framework for the analysis of organizational culture and change is developed. The framework identifies three positions on organizational culture and change: optimist, pessimist and relativist, and discusses their implications. The optimist position is criticized of relying on very naïve notions of culture and change. The pessimist position can be criticized of lacking relevance to practice. Finally, the relativist position is recommended as the most realistic position for the prospective IS research on organizational culture and change.*

*Keywords: Organizational culture, organizational change, information systems, information systems implementation, information systems development*

# 1 INTRODUCTION

This paper analyzes existing research on organizational culture in the context of organizational change in information systems (IS) research. The paper focuses on research on culture and change in IS development and use contexts, which have been identified as central research areas in IS research (Lyytinen 1987). The organizational contexts of IS development and use should be explored in depth to understand their effects on the development and use processes (Grudin 1996). Both IS development and use are full of difficulties and recurrent problems, and most causes of these problems are social (Lyytinen 1987). Related to this, also the importance of understanding organizational culture has been brought up in (Avison – Myers 1995). Altogether, culture has been a popular focus of analysis in studies on organizational change in IS research. The studies are related to the development, implementation or use of IS in organizations. Especially the effects of organizational culture in IS implementation has brought about a body of studies (e.g. Brown 1995, Brown – Starkey 1994, Cabrera et al. 2001, McDermott – Stock 1999, Pliskin et al. 1993, Robey – Rodriguez-Diaz 1989, Ruppel – Harrington 2001, Tung et al. 2000). Recently many studies have been concerned with the part culture plays in achieving total quality through Total Quality Management (TQM) (e.g. Al-Khalifa - Aspinwall, 2001, Dellana – Hauser 1999, Fok et al. 2001, Kekäle 1998, Lewis – Boyer 2002, Pool 2000).

The studies have revealed a multitude of ways organizational culture affects organizational change efforts. Some studies highlight that compatibility between change effort and culture is a very important criterion for success. The studies have defined compatible culture types for different kinds of change efforts, e.g. a ‘group culture type’ is a major facilitator of diffusion of telecommuting (Harrington – Ruppel 1999), ‘adhocracy’ and ‘group’ culture types are suitable for TQM (Dellana – Hauser 1999), mature TQM organizations have proactive and collaborative cultures (Fok et al. 2001), and ‘adhocracy’ and ‘hierarchy’ culture types are correlated with early adoption of intranets (Ruppel – Harrington 2001). However, other studies have shown problems in the implementation efforts to be caused by a mismatch between a unique organizational culture and an implementation effort. The studies show that an IS implementation was resisted because the organization was presumed to have different organizational culture than it actually did (Pliskin et al. 1993), an enterprise resource planning packages implementation problems were caused by a mismatch with the values of the organizational culture (Krumboltz – Maiden 2001) and differences between the cultures of implementers and adopters caused difficulties in an IS implementation (Robey – Rodriguez-Diaz 1989). Finally, studies on culture highlight that different meanings can be attached to same change efforts in different contexts. Accounting was vested with different meanings in different cultures (Dent 1991), and planned change was interpreted in different ways in different subcultures (DiBella 1996).

However, the results of these studies have been achieved with very different approaches to culture. The studies differ greatly in relation to what actually has been studied, and how it has been studied. Therefore, before drawing conclusions from the existing research, it needs to be carefully analyzed. Culture is a very complex concept and there is much debate about both defining and applying it, in IS literature, organizational studies as well as in anthropology (Alvesson 1990, Avison - Myers 1995, Kroeber - Kluckhohn 1952, Smircich 1983). It has also been argued that there is a lack of methods and theoretical models with which to reliably, systematically and meaningfully analyze organizational culture (Alvesson 1990, Avison - Myers 1995, Smircich 1983). Therefore, this paper categorizes different conceptions of culture from existing literature. Prevailing culture conceptions in anthropology, organizational studies as well as in IS literature are brought up. In addition, recent criticism on existing conceptions is presented. Afterwards, the paper categorizes differing views related to organizational change. Finally, a framework for studies on organizational culture and change is developed. The framework identifies three positions on organizational culture and change: optimism, pessimism and relativism (following Hirschheim 1986) and discusses their implications.

The paper is organized as follows. Next section discusses different conceptions of organizational culture. Furthermore, empirical IS research on organizational culture is categorized according to the dif-

ferent culture conceptions the studies employ. Third section discusses different views on organizational change. The results of empirical organizational culture studies in IS literature are also analyzed. Fourth section outlines a framework for the analysis of organizational culture and change to be utilized in IS research. The framework takes into account recent critique in anthropological literature and organizational studies that maintains that existing studies on culture and change rely on naïve notions of culture and change. Finally, limitations of this study and paths for future work are outlined

## **2 CULTURE (IN ORGANIZATIONS)**

### **2.1 Different Culture Conceptions**

Smircich (1983) has analyzed different conceptions of organizational culture in relation to the anthropological schools. Organizational culture has been conceived either as a variable or as a root metaphor for conceptualizing organization. The studies can be divided into two areas; organizations have been regarded as cultures ('is' approach) or having a culture ('has' approach). In the latter culture is a feature belonging to an organization. Culture is an instrument satisfying certain needs, or an adaptive and regulative mechanism. Culture is seen as controllable by management and contributing to the overall balance and effectiveness of an organization. (Smircich 1983.) The 'is' approach, on the other hand, relies more strongly on the tradition of cultural anthropology. Generally, in anthropology culture refers to the socially transmitted patterns for behavior characteristic of a particular social group. It refers to a way of life among particular people. The definitions highlight culture as historical, as including beliefs, values and norms that guide the action of cultural members, as being learned and as an abstraction from behavior and products of behavior (Keesing - Strathern 1998, Kroeber - Kluckhohn 1952). The concept is seen as 'an abstraction created for analytic simplification needed for describing the shared elements of socially distributed knowledge' (Keesing - Strathern 1998).

Especially cognitive and symbolic schools have had a central position in the field of anthropology within past few decades. According to cognitive perspective culture is a system of shared rules or cognitions. Researchers seek for implicit rules that lie behind behavior. Symbolic anthropology, on the other hand, sees culture as a system of shared symbols and meanings. (Smircich 1983.) Geertz, a famous anthropologist within the symbolic school, states that "man is an animal suspended in webs of significance he himself has spun, I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretive one in search of meaning." (Geertz 1973, 5.) Within the symbolic school researchers seek out local interpretations in order to reveal cultural meanings 'from the native's point of view'. (Geertz 1973, Smircich 1983.)

However, to complicate the picture further, also a 'postmodern' conception of culture has emerged. The view of culture as a harmonious, static, shared pattern or whole has been questioned in anthropology. Researchers within this approach maintain that cultures are always interpreted and reinterpreted; they are always plural and open to interpretations. Meanings are continuously negotiated. The view of culture as distinct entity with clear boundaries and a unified essence has been rejected. Cultures should not be viewed as fixed set of shared beliefs, but instead as fragmented, emergent, pluralistic phenomena. If cultures are seen as systems of meanings, one anyhow needs to acknowledge that the meanings are continuously contested, negotiated and struggled over. Therefore, culture is also a political phenomenon. It has been argued that the concept of cultural aspects should be preferred instead of the concept of culture, since the viewpoints presented above, as well as the concept of cultural aspects, highlight the fragmented, emergent, pluralistic nature of culture. It has been argued that if the concept of culture is used, then the phenomenon is already essentialized and reified. The term cultural reminds of the fact that the researchers are dealing with an anthropological construction, not a living entity. (Borofsky 1994, Clifford - Marcus 1986.)

Similarly organizational cultures should be characterized by differentiation and diversity. A view of organizational culture as a separate, harmonious, shared, distinct entity is criticized of being too sim-

plistic and static. Instead, also organizational culture needs to be seen as contested, changing and emergent, and researchers should examine how meanings are created and recreated in organizations. (Avision – Myers 1995, Czarniawska-Joerges 1992, Lucas 1987, Robey – Azevedo 1994.) Organizational culture appears as fragmented, pluralistic phenomena when one acknowledges all divergent organizational subcultures and occupational communities within any organization. Researchers should pay attention to the inconsistencies and lack of consensus in the cultural content produced and reproduced by the divergent subcultures. (Czarniawska-Joerges 1992, Lucas 1987, Wenger 1998.) Organizational culture might be viewed as ‘a negotiated order’; as a sum of the ways the subcultures have been able to resolve their differences (Lucas 1987). Altogether, organizations should be seen as multicultural, and clashes and conflicts as distinctive features. The notion of uniform organizational culture is only a normative managerial ideology. (Czarniawska-Joerges 1992.) Within critical theory organizational culture can also be viewed as organizational hegemony – as a tool for repression, domination and hegemonic reproduction of the elite group (Ogbor 2001).

However, some researchers have taken even a step further. A crisis of representation emerged during the 1980s in anthropology. At this point the research turned to the rhetorical troupes and story telling in research. It was argued that researcher can’t capture lived experience, as was assumed in anthropological research, but instead, the experience is created in the text written by the researcher. These researchers maintain that cultural accounts are always incomplete and based on systematic exclusion. There is no ‘whole picture to be filled in’. Cultural accounts are merely artificial texts, ‘true fictions’, produced by the researchers. Ethnographies (descriptions of culture) are just texts the anthropologists have produced. They are fiction in the sense of something made or fashioned. Now the critics argue that the focus should be on production of these texts, in which writer’s voice always dominates and situates the analysis. Therefore, the focus should be on modes of authority. Authority to represent cultural realities is not equally shared. Anthropologists have had a full control to interpret other cultures. They have studied not (wo)man, but primitive (wo)man. They have gazed the exotic, primitive, small, non-western cultures – the other. This dominant group has also marginalized the other. The marginalized group has not been allowed to argue against, or even have a dialogue with the authoritative voice of the anthropologist. (Clifford - Marcus 1986, Clifford 1988, Denzin - Lincoln 2000.)

Altogether, very different conceptions of the culture construct have been revealed. Organizational culture can be viewed as a way of life among particular people, as cognitive rules guiding the behavior of the cultural members, as a shared system of meanings, as an emergent, constantly interpreted and reproduced, fragment, political phenomenon or as a text – true fiction - produced by the researcher.

## 2.2 Culture Conceptions in IS Literature

There is a multitude research approaches within which organizational culture studies have been carried out (Czarniawska-Joerges 1992, Smircich 1983). An anthropological approach to culture, including a long period of intimate study and participation in the everyday activities of the cultural members, is only one possible approach the researchers have adopted. The approaches to organizational culture utilized in IS research on organizational change can be divided into comparative, interpretive and clinical (Iivari, 2002), of which only the interpretive approach relies on the notion of culture derived from anthropology. Within the comparative and clinical approaches, on the other hand, culture is viewed as a variable belonging to an organization (Smircich 1983). Within the comparative approach culture is viewed as an independent, explanatory variable (Ouchi - Wilkins 1985, Smircich 1983). Culture is studied as comparative traits or dimensions. Culture is often measured; as values, norms or attitudes. Aim is to group and profile cultures, and to search for cause and effect relationships. Studies are based on an analytical framework defined a priori. The framework is generalized for all organizations studied. (Schultz and Hatch, 1996.) In IS literature a large proportion of organizational culture studies seem to rely on aspects typical to this approach (e.g. Chengalur-Smith – Duchessi 1999, Harrington - Ruppel 1999, Kappos – Croteau 2002, Kekäle 1998, McDermott - Stock 1999, Pliskin et al. 1993,

Ruppel - Harrington 2001, Sousa-Poza et al. 2001, Tung et al. 2000, Weber – Pliskin 1996). Many of the studies utilize survey instruments in the analysis of culture.

The clinical approach, on the other hand, is distinctive in its view of culture as a manipulable, controllable, dependent variable (Ouchi - Wilkins 1985, Smircich 1983). These studies adhere to the pragmatist view of culture, which assumes that culture is a phenomenon, which is supposed to change. The research should support the change by identifying mechanisms of change. Culture is seen as an adaptive mechanism that can be guided and controlled for better adaptation. (Alvesson 1990, Czarniawska-Joerges 1992.) The research effort is guided by the needs of the client. The clients are usually the managers of the organizations. Mode of analysis is clinical and therapeutic. Aim is to address organizational problems and dysfunctions, and how they contribute to the survival of the organization (Schein 1985). Within this approach an extreme is that managers are seen as manipulators of organizational culture, and researchers only assist them in the pursuit of excellence (Czarniawska-Joerges 1992). This approach has been criticized as unscientific. Czarniawska-Joerges (1992) warns that within this approach studies on organizational culture are often connected to anthropology, but in many cases anthropology is used just as a label, not as an approach. However, in IS research the distinctive features of this approach can be found from a considerably large proportion of empirical organizational culture studies (e.g. Al-Khalifa - Aspinwall 2001, Cabrera et al. 2001, Dellana - Hauser 1999, Fok et al. 2001, Harper – Utley 2001, Kanungo et al. 2001, Lewis – Boyer 2002, Pool 2000).

Furthermore, interpretive approach is an approach that aims at providing thorough understandings from the native's point of view, concentrates on issues important to the cultural members and is a 'traditional' and 'generally accepted' approach for culture studies. Within this approach the concepts of culture developed within anthropology are in use. The approach starts from an assumption that cultures are socially constructed phenomena; cultural members create and maintain their culture. Researchers seek out local interpretations in order to reveal the 'native's point of view'. Constructs for describing the culture should be suggested by the analysis. Researchers should spend long periods of time in organizations and participate in the daily activities with the cultural members (Schultz - Hatch 1996, Smircich 1983). These studies adhere to the purist view of culture. Purists maintain that cultures don't change easily. Instead, cultural change is evolutionary and unpredictable by nature. Purists argue that it is very difficult for the ones managing the change to predict the reactions caused by the change (Alvesson 1990, Czarniawska-Joerges 1992). Culture studies relying on this type of an approach have been carried out quite extensively also in IS research (e.g. Brown 1995, Brown – Starkey 1994, Davison – Martinsons 2002, Dent 1991, DiBella 1996, Dube 1998, Dube - Robey 1999, Kaarst-Brown – Robey 1999, Krumbholtz - Maiden 2001, Robey - Rodriguez-Diaz 1989, Walsham – Waema 1994).

Finally, also a critical, 'postmodern' approach for organizational culture studies (Schultz - Hatch 1996, Deetz 1996) has been identified. This approach is distinctive in its focus on partiality, discontinuity, incompleteness and flux. Deconstruction and critique on theorizing practice are characteristic. Reflexive accounts are emphasized. (Calas - Smircich 1999, Deetz 1996, Schultz - Hatch 1996.) Within this approach language is in a critical role: language doesn't represent reality - it produces it. While doing research on organizations language is in a critical position. Different cultural and social contexts produce different discourses. Discourse is a specific manner of speaking, a form of language use. Discourses are historically specific and competing with each other. Struggle over the meanings takes place in the language. Also scientific community participates in and contributes to these discursive fields. (Calas - Smircich 1999, Deetz 1996, Weedon 1987.) Therefore, researcher is not a neutral observer, but a producer of knowledge. Science is a social process and also epistemological assumptions are distinctive social practices. (Clifford – Markus 1986, Deetz 1996, Weedon 1987.) Within this approach the researchers maintain that cultural accounts are always partial and based on systematic exclusion. Cultural accounts are merely artificial texts, 'true fictions', produced by the researchers. However, this approach has not resulted in empirical studies on culture and change in IS research.

As one can see, there are clearly divergent conceptions of culture and divergent ways of analyzing it in the existing IS literature. The different conceptions of culture can be summarized as follows. Organizational culture can be viewed as:

- A explanatory, predefined, (measurable) variable – the comparative approach
- A pattern of meanings or cognitions – the interpretive approach
- A manipulable, controllable tool – the clinical approach
- A dynamic, emergent, constantly interpreted, fragment, political phenomenon or a text – true fiction - produced by the researcher – the critical, postmodern approach

However, these culture conceptions are by no means equal. Both the comparative and clinical approaches are problematic from the viewpoint of culture studies. The main problem associated with the comparative approach is its conception of the culture construct. Culture is conceived as a variable – a variable that is not to be designed or manipulated for better adaptation, but as a simplified, measurable, comparable variable. This view of culture has very little to do with anthropological notion of culture as a system of meanings or cognitions. Furthermore, the evaluative, instrumental, utilitarian aspects that are the most distinctive features of the clinical approach make this approach even more problematic than the comparative approach. These aspects contradict the notion of culture developed within anthropology, and are in sharp contrast with the ethical concerns culture studies typically share.

### 3 CHANGE IN ORGANIZATIONS

Also organizational change is a very complex concept and it can be viewed by utilizing differing logics (Robey - Boudreau 1999) and perspectives (Orlikowski 1996). The divergent logics and perspectives have been derived from studies that concern technology-based change and controversial organizational consequences of information technology (IT), but they are assumed to be applicable altogether related to different kinds of organizational change efforts. Robey and Boudreau (1999) state that typically IT has been viewed as a determinant or enabler of organizational change. The logic employed in these studies is called the logic of determination – IT is in the role of external agent capable of transforming organizations, or IT is viewed as a tool for managers for fashioning new organizational designs. The authors also outline the logic of opposition, which explains organizational change by focusing on forces that promote or oppose change. The authors present a set of theories that according to them incorporate the logic of opposition. Organizational culture is one of these theories. The authors summarize that this type of studies emphasize the importance of symbolic meanings of IT and the difficulty of implementing systems into resistant cultures. This type of studies also show that IT may produce paradoxical or ironic consequences in organizations. (Robey - Boudreau 1999.)

Orlikowski, on the other hand, presents four perspectives on organizational change. A planned change perspective assumes that managers are the primary source of organizational change and they are able to straightforwardly implement the changes needed. This view has been criticized because change is viewed as an entity that can be managed separately. Criticized is also the assumption that managers can rationally direct and manage change. A technological imperative perspective, on the other hand, relies on the view of IT as a primary and autonomous driver of change. This view has been criticized because of its ignorance of human agency. Furthermore, a punctuated equilibrium perspective assumes that change is fast, periodic and radical. Environmental changes or changes in internal conditions activate punctuated discontinuities. This view is criticized of being based on the premise of stability. Finally, Orlikowski herself advocates a perspective of emergent change. This kind of change is grounded in the organizational members' ongoing practices. Organizational change is seen as 'ongoing improvisation enacted by organizational actors trying to make sense and act coherently in the world' (Orlikowski 1996: 65). Organizations are enacted – the view of change relies on the assumption of action, not stability. Organizational members continuously improvise and adjust their work practices, due to which change needs to be seen as inherent in everyday practice. (Orlikowski 1996.)

The conclusions of the empirical studies carried out within the different approaches identified for culture studies – within the comparative, interpretive and clinical approaches – can be related to this discussion. Within the comparative approach, the studies on the role of culture in organizational change

efforts have typically ended up highlighting the importance of cultural compatibility in their recommendations for practice. The studies have either proposed compatible culture types for different kinds of change efforts (e.g. Harrington - Ruppel, 1999, Kappos – Croteau 2002, McDermott - Stock 1999, Ruppel - Harrington 2001) or compatible implementation strategies for different culture types (e.g. Kekäle 1998, Pliskin et al. 1993, Ruppel – Harrington 2001, Sousa-Poza et al. 2001). The studies within the clinical approach, on the other hand, typically end up in defining ideal states (e.g. an ideal TQM culture) that should be, and according to the studies can be, aimed at, and offer guidelines for manipulating culture towards this more ‘appropriate’ direction (e.g. Al-Khalifa - Aspinwall 2001, Cabrera et al. 2001, Dellana - Hauser 1999, Fok et al. 2001, Harper – Utley 2001, Kanungo et al. 2001, Lewis – Boyer 2002, Pool, 2000).

Finally, studies within the interpretive approach highlight that a multiplicity of meanings can be attached to same change effort in different contexts and the need to align the change effort with the context. The concepts of ‘alignment’, ‘compatibility’, ‘fit’ and ‘congruence’ are brought up in these studies (Brown 1995, Davison – Martinsons 2002, Dube 1998, Krumbholtz – Maiden 2001, Robey – Rodriguez-Diaz 1989). It is also argued that the change efforts are interpreted and reinterpreted in the cultural context in an emergent process of sense making (Brown 1995, Davison – Martinsons 2002, Dent 1991, DiBella 1996, Dube 1998, Dube – Robey 1999, Kaarst-Brown – Robey 1999, Walsham – Waema 1994). Furthermore, the dynamics between the change effort and the context are highlighted also from the opposite point of view, so that the change efforts are argued to be capable of producing new forms of cultural knowledge and changing the cultural context in a reciprocal relationship. It is argued that cultural formation cannot be predicted nor controlled and managers should understand that meanings attached to any change effort are subject to constant interpretation and reinterpretation not directly controllable by the management. (Brown 1995, Dent 1991, DiBella 1996, Dube - Robey 1999, Kaarst-Brown – Robey 1999, Walsham – Waema 1994.) Finally, these studies remind us that we are dealing with an extremely complex phenomenon, and the difficulty of deriving causal relations is highlighted (DiBella 1996, Dube - Robey 1999, Robey - Azevedo 1994).

Next these empirical studies are related to the different logics and perspectives on organizational change identified. Within the clinical approach the aim was to manipulate the cultures towards more ‘appropriate’ direction and it is assumed that cultures can be managed and designed by the management. This view is in alignment with the pragmatist view of organizational culture change (Alvesson 1990). Related to the different logics employed in studies on organizational change, some of these studies even seem to employ the logic of determination (Robey - Boudreau 1999) in the sense that change efforts are viewed as tools for managers for fashioning new organizational designs. Altogether, these studies seem to employ a very simple view of organizational change. Organizational consequences of the change are not in the focus. Paradoxical or unexpected reactions and consequences are not discussed. Instead, it seems like it assumed that change either is accepted in the compatible cultures, or accepted in the cultures that are manipulated to be compatible.

Within the comparative and interpretive approaches, on the other hand, the studies rely on the ‘purist’ view on organizational culture change (Alvesson 1990). Within the comparative approach cultures are not to be manipulated nor managed. Technology is not viewed as a determinant or enabler of change. Neither does TQM initiate change; TQM implementation might as well cause resistance. However, these studies still employ quite a simple view of organizational change. The studies do not acknowledge symbolic meanings attached to any change effort or the paradoxical or ironic consequences of change (Robey - Boudreau 1999). Furthermore, the perspective of emergent change (Orlikowski 1996) is totally missing – accounts of the subtle, emergent changes, improvisations and adaptations are lacking. Instead, it seems like it is assumed that the change efforts will be straightforwardly accepted in compatible cultures, or simply resisted in incompatible ones.

Finally, within the interpretive approach the studies highlight the multiplicity of meanings that can be attached to change efforts and the need to align the effort with the context. The studies emphasize that cultural formation cannot be controlled and change efforts are subject to constant interpretation not manipulable by the management. The uncontrollable nature of organizational change is emphasized,



and paradoxical, ironic and unexpected reactions and consequences are acknowledged. These studies clearly employ the logic of opposition (Robey - Boudreau 1999). However, as mentioned, also the culture conception of the interpretive approach has been criticized as being too static and simplified. Based on this criticism one might assume that within the interpretive approach the notion of change might also be quite simplified and ignore the subtleties of the constant, everyday improvisations and adjustments (Orlikowski 1996). The critical, 'postmodern' approach might be best equipped to acknowledge the perspective of emergent change, since within this approach also the culture construct is viewed as a dynamic, emergent, fragmented, constantly interpreted phenomenon. Then it would be natural also to view change as constant and inherent in everyday practice.

#### 4 A FRAMEWORK FOR ANALYSIS OF CULTURE AND CHANGE

The existing conceptions of culture and change are summarized in table 1. Furthermore, criticism related to the existing conceptions and practical implications of the studies applying these conceptions are outlined. Finally, three positions on organizational change are identified: optimism, pessimism and relativism (Hirschheim 1986). The positions - their implications are addressed in end of this section.

	<b>Comparative</b>	<b>Interpretive</b>	<b>Clinical</b>	<b>Critical, postmodern</b>
<b>Culture</b>	Culture an independent explanatory variable - consists of predefined traits or dimensions, measured as values, norms or attitudes	Culture a pattern of meanings or cognitions – a socially constructed phenomenon to be studied from the 'natives point of view'	Culture a dependent variable – a tool controllable and manipulable by the management, utilizable in problem solving	Culture a dynamic, emergent, constantly interpreted and reproduced political phenomenon or a text – true fiction - produced by the researcher
<b>Change</b>	Logic of opposition  Organizational change a straightforward process	Logic of opposition  Organizational change a complex process that can have paradoxical, ironic and unexpected consequences	Logic of opposition or determinism  Organizational change a straightforward process controllable and manipulable by the management	Logic of opposition  Radical change inherent in this approach – aim is to emancipate the ones oppressed  Notions of change researchers' constructions, that are to be critically analyzed
<b>Criticism</b>	Very naïve notions of culture (a variable) and change (a straightforward process)	Naïve notion of culture (a static, harmonious pattern or whole)	Extremely naïve notions of culture (a designable dependent variable) and change (a straightforward, manipulable process)	Lack of practical implications?
<b>Practical Implications</b>	<b>OPTIMISM</b> Tailor the change effort to fit the culture	<b>RELATIVISM</b> Tailor the change effort to fit the culture. Management can't control the change process, multiplicity of meanings attached to any change effort	<b>OPTIMISM</b> Tailor the culture to fit the change effort, the change effort can be controlled and utilized as a managerial tool	<b>PESSIMISM</b> Question the managerial agendas of change efforts. Criticism of the existing conceptions of culture and change, but has not resulted in practical implications?

Table 1. A Framework for the Analysis of Culture and Change in IS Research

In IS literature the optimist position has been popular related to organizational culture and change. Optimist view postulates organizational change as a positive accomplishment that leads to increased productivity, organizational efficiency and quality of working life. Organizational change efforts are seen as neutral and apolitical. They are opportunities to be exploited. The only problem is to figure out how to exploit the change efforts the most efficient way. (Cf. Hirschheim 1986 on impact of office automation.) Studies within the clinical approach seem to be quite certain that one should just tailor the target culture to fit the change effort, and the change efforts can be utilized by management in fashioning new organizational designs. Culture can be controlled and guided for better adaptation. Furthermore, also studies within the comparative approach show confidence in rational planning and management related to organizational change. It is assumed that the change efforts can be successfully implemented as far as they are compatible with the culture in question. Either it is assumed that the change efforts need to be tailored to fit the culture or the culture in question needs to be suitable for the change effort in the first place. Either way, the apolitical and positive nature of change efforts and the straightforwardness of their implementation are assumed.

However, this position relies on naïve notions of culture (a variable, maybe even a designable, manipulable variable) and change (a straightforward, designable, directly controllable process). This position can be criticized of relying on very mechanistic assumptions about organizations and people. Especially naïve are the assumptions about culture and people being controllable and directly manipulable by the management. On a more practical level one can warn that implementation strategies and models of organizational change relying on this type of assumptions cannot take into account the complexity involved in any organizational change in any cultural context. Therefore, there is a clear risk in their application in real life environments, in which one cannot escape the complexity.

Pessimist view, on the other hand, postulates change efforts as not neutral, but as very value laden and political. Furthermore, the change efforts are viewed as negative until proven otherwise. The change efforts are seen only as managerial tools for disempowering the workers. (Cf. Hirschheim 1986.) Some critical studies related either to organizational culture or change have been carried out. Casey (1999) has studied the consequences of a “new organizational culture” organized around TQM. This “new organizational culture” served mainly as a mechanism of regulation, discipline and control of the employees. Gärtner and Wagner (1996), on the other hand, have analyzed political frameworks of system design and participation. They argue that agenda setting related to the IS development is very important, as well as legitimation of certain agendas over others. (Gärtner – Wagner 1996.) Furthermore, it has been argued that IS development altogether is conflictual and political, and IS researchers, instead of defining improved IS development methodologies and accepting managerialist agendas of IS development, should carefully analyze this conflictual and political context and question the managerialist agendas. Related to the organizational change efforts, the term empowerment needs to be seen only as a rhetorical tool that tries to hide the fact that change efforts are always carried out for economic purposes. (Howcroft – Wilson 2003.) The critical, postmodern approach identified above clearly shares this pessimist, management-hostile, suspicious view of organizational change.

However, the pessimist view can be argued of lacking relevance to practice that is a very important goal in IS research (Benbasat - Zmud 1999) - relevance being limited to the relevance to managers. However, as a defense for the pessimist position one might argue that relevance can be achieved in many ways. For example, researchers can act as a conscience for society (Lee 1999), or reshape the practitioners thinking and actions in longer perspective (Lyytinen 1999) - also these issues have been interpreted to be relevant for practice. Therefore, the critical, postmodern approach should also be considered useful while studying organizational culture in the context of organizational change.

Finally, the relativist position views technology as well as change efforts as raw material that can be tailored and modified by human actors. This view is strongly volitional: it is assumed that people are capable of deciding whether to accept the change effort and if so, how to interpret and modify it to suit their purposes. Therefore, consequences of change efforts can be both negative and positive depending on how they are used and modified. (Cf. Hirschheim 1986.) Studies within the interpretive approach share this volitional view of organizational change: the change efforts are to be tailored to fit the con-

text, and people will carry out this tailoring work in any case. Management can never directly control the change process, but instead a multiplicity of meanings will be attached to any change effort in practice. Furthermore, the paradoxical, ironic and unexpected reactions and consequences are highlighted, since interpretations cannot be controlled or directed.

Altogether, we argue that sensitivity to the cultural issues in different kinds of organizational change efforts is important. We end up recommending the relativist position related to organizational culture and change. This implies that it should be understood that cultural context and any organizational change effort mutually influence and reinforce each other and this interaction might produce also unexpected consequences. Acknowledging this can provide most realistic basis for implementation of different kinds of change efforts, since the complexity related to this phenomenon is at least acknowledged, even though one might never be able to control or directly manipulate the process.

Regarding the limitations of this study, even though thorough literature reviews on empirical organizational culture studies have been carried out, there still might be relevant literature not yet included in the analysis. Studies that examine similar type of issues but do not explicitly state to study organizational culture were not included. Regarding the paths for future work, clearly more empirical organizational culture studies are needed to understand in depth the turbulent and constantly changing contexts of IS development and use, and the role culture plays in the implementation of the different kinds of organizational change efforts. Related to this, this paper stresses the importance of a priori assumptions regarding the object of study. It depends on the conceptions of culture and change the researcher has adopted how s(he) sees and understands the world, and what kind of conclusions s(he) arrives at.

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