Understanding IT-Culture Conflicts to Drive Successful Technochange Projects – a Case Study

Short Paper

Sissy-Josefina Ernst   **Andreas Janson**

University of Kassel
Information Systems
Pfannkuchstr. 1, 34121 Kassel, Germany
[sissy.ernst, andreas.janson]@uni-kassel.de

Christoph Peters   **Jan Marco Leimeister**

University of Kassel/University of St. Gallen
Information Systems/Institute of Information Management
Pfannkuchstr.1, 34121 Kassel, Germany/Müller-Friedberg-Strasse 8, 9000
St.Gallen, Switzerland
[peters, leimeister]@uni-kassel.de/[christoph.peters,
janmarco.leimeister]@unisg.ch

Abstract

The introduction of new information systems oftentimes requires organizational changes to realize improvements in a company's performance. Still, many attempts to bring such technology driven organizational change (i.e., technochange) into practice fail. In this regard, cultural misfits are described to be a decisive cause for organizations' resistance to change. With this paper, we outline our case study approach of investigating culture caused misfits in technochange projects using the theory of IT-culture conflicts. By ascribing cultural values to IT, we will identify potential cultural misfits concerning IT in a comprehensive and theory guided way. Based on insights we gain from a case study conducted during a Customer Relationship Management system integration in the energy sector, we will provide guidance on how to overcome cultural misfits in technochange projects as a practical contribution. As a theoretical contribution, we contribute to the exploration of culture and its influence on organizational outcomes in technochange.

Keywords: Technochange, organizational culture, IT-culture conflicts

Introduction

When introducing new information systems (IS), technochange is a major phenomenon that can and oftentimes must occur in organizations to ensure a successful adoption, and thus integration of the IS in

the organization (Markus 2004). The term technochange refers to technology driven organizational change (Markus 2004). Despite general IT projects, technochange projects comprise transformation in work operations, organizational business processes and units to design a solution that is likely to be used within the organization. Technochange projects can either emerge as a consequence of the IT implementation process, or be thoroughly planned and executed (Markus 2004; Shakir and Viehland 2006). However, as Markus (2004) states, both types of the change process can fail due to misfits.

Technochange solutions that are misaligned with organizational characteristics, such as culture, are likely to be misused or rejected by company employees (Markus 2004). Hewlett-Packard (HP) is a prominent example of a company that struggled in technochange, whereby failure analysts see one cause in missing alignment to organizational values. To manage its complex logistic operation and manufacturing processes, HP decided to replace its legacy systems with the standard enterprise SAP R/3 system. With the new system, the company wanted to combine the existing landscapes of two sub-divisions (HP and Compaq). The migration of the sub-division of HP that is described as risk-averse and very systematic and Compaq's culture that is known to be very aggressive and risk-loving, resulted in serious operation problems. Due to cultural heterogeneity, alignment between the organization's culture and the technochange solution was difficult to reach. The cultural heterogeneity as one reason for the technochange failure resulted in a damage which amounted to five times the ERP project's estimated costs (cf. Chaturvedi and Gupta 2005). However, not only heterogenous organizational values can bring technochange projects to fail; also the IT solution can conflict with culture shaping the software introduction context, as described by Leidner and Kayworth (2006). If values of the IT solution coincide with values of the organizational subunit adopting the IT, such implementation projects are more likely to succeed (Cabrera et al. 2001). This is consistent with Markus (2004), who suggests the key role of culture for the introduction of an IS in organizations. When not explicitly considered in the introduction process, culture can create certain misfits during technochange that may strongly affect IS implementation in a negative way. Consequently, resistance to use or misuse of an IT solution are oftentimes caused by cultural misfits.

"To analyze why (…) [people] behave the way they do, we often look for the values that govern behavior (…)" Schein (1984, p. 3). In this regard, IS research refers to the theory of IT-culture conflict, which considers culture conflicts that result from the intersection of IT values, values embedded in a specific IT, and organizational values (Leidner and Kayworth 2006). By drawing on IT-culture conflict theory as a guiding framework, we are able to analyze different value types throughout the technochange process and are able to better understand culture conflicts as a cause for resistance to use and misuse the IT solution. Investigating cultural misfits in technochange, we base our research on the following research questions (RQ):

RQ1: Why do IT-culture conflicts occur in technochange projects and how do they impact organizational transformation?

RQ2: What managerial interventions can reduce IT-culture conflicts in technochange?

We aim to use empirical data derived from a case study to better understand cultural misfits in technochange, which are a decisive cause for technochange projects to fail. By applying the upfront theory of IT-culture conflict that ascribes cultural values to IT, we can observe and explain culture conflicts that emerge due to contradicting values from a technological and cultural perspective as demanded by Jackson and Philip (2010). The technological and cultural perspective allows us to focus on either values that shape the organization's culture, values that reflect the employees' perception of IT in general and of the technochange solution. Thus, we can trace back culture conflicts to causal organizational values. Investigating the organization's efforts to resolve culture conflicts, we will gain insights on how conflicts can be influenced by management interventions. Methodologically, we aim to investigate the case longitudinally with each time of investigation referring to a specific technochange phase. Conducting the case study, we will act as observers and access other's interpretations and experience through our own conceptual considerations. Thus, we contribute to theory by providing a process view on an organizational transformation process as well as on cultural misfits and their impact on technochange. In addition, we will provide a better understanding for managerial interventions and their influence on occurring conflict.

The remainder of this research-in-progress short paper is organized as follows: The next section focuses on the theoretical background of technochange, culture in technochange projects, and the theory of IT-culture conflicts, which we used as a guiding theory (Gregor 2006) for explaining and investigating the case and

interpret the case study observations. Next, we describe the methodological approach of our case study including the research design and data collection. The paper closes with a presentation of the expected results regarding cultural misfits in technochange projects and efforts to resolve them. Furthermore, we indicate how we plan to contribute to theory and practice with our research before the paper finishes with a brief conclusion.

Theoretical Background and Foundation

Technochange

The introduction of new IT at a large scale can require organizational changes to realize its intended potentials. Technology driven organizational change, or in brief "technochange", projects describe significant transformations in organizational areas like organizational processes, business units, respective tasks, performance evaluation or management changes that are driven by those IT introductions. Notwithstanding the involved business areas, the organizational transformation processes always include people, who are affected by the changes. Thus, factors like e.g. people's attitude towards change, personality or capability to change play an important role for the success of transformation processes (Uhl 2016). By creating new processes and products specified by IT, improvements in organizational performance can be achieved that would not be possible if the IT was fitted to the existing processes (Markus 2004). Since the required transformations oftentimes disrupt established routines of employees, managers, and customers, technochange projects are often very complex, and thus require the involvement of all relevant stakeholders within the respective sociotechnical system (Peters 2016) including the IT department, users, project leaders, and the management (Harison and Boonstra 2009). In this regard, the interplay between IT parts and non-IT, traditionally provided parts of such transformative innovations, need to be designed (Peters et al. 2016; Kleinschmidt et al. 2016). Regarding this, technochange projects distinguish themselves from straightforward software introductions and IT projects that do not include the complementary organizational changes (Chae and Lanzara 2006; Markus 2004). To manage these complex change processes and to carry out the technochange project in an effective way, managers have to adopt a technological and cultural perspective (Jackson and Philip 2010). Therefore, they have to possess distinct knowledge in both IT and organizational areas (Harison and Boonstra 2009) while considering new underlying mechanisms of the technological advancements and corresponding business models that come with these projects (Peters et al. 2015).

Technochange projects have a process character which demands a focus on divergent phases of a lifecycle concerning the planning and management of activities (Jackson and Philip 2010). According to Markus (2004), the typical technochange lifecycle is divided into four phases starting with the phase of "chartering". During this phase, the technochange idea is proposed, approved and funded. The desired framework for the technochange solution as well as solution constraints, change requests, and key performance indicators are discussed and determined. A project manager is appointed and resources are provided and allocated. The second phase is the "project" phase in which the technochange solution is developed and the technology is built. Essential preconditions for the successful technochange project are created. This includes the development of the implementation plan, end-user trainings and all activities to guarantee its effectiveness like e.g., the provision of training materials, or ensuring high-quality IT solutions through activities such as testing. Furthermore, complementary changes in the organization are planned and communicated by project managers as part of the change management. The third phase "shakedown" starts by going live with the technochange solution and IT is appropriated by the users (Janson et al. 2017). The organization starts to implement the new technochange solution und thus to operate in new ways. Comparable to an apple tree at the harvest time during which the apples are shaken off the branches, problems associated with the new IT solution and workflows become apparent by managing day-to-day operations in new procedures. The problem identification and troubleshooting in form of increasing staff capacities, additional trainings, technical fixes as well as alterations in processes are conducted. A smooth running day-to-day business according to the new processes is the objective of this phase and prerequisite for the next phase, called "benefit capture". Benefits and advantages of the new procedures become apparent and are recorded to evaluate the technochange outcomes. To allow for continuous improvement, measures like technology upgrades, staff retraining and skill building are initiated (cf. Markus 2004).

Examples for technochange projects are implementations of large-scale information systems (IS) like enterprise resource planning systems (ERP), customer relationship management systems (CRM) or supply chain management systems (SCM) (Harison and Boonstra 2009; Markus 2004), since these implementations involve not solely a new enterprise software for the organization, but come along with new work processes and organizational designs to transform the business (Chae and Lanzara 2006).

The Role of Organizational Culture in Technochange

In regard to technochange projects, organizational culture is of great importance since successful technochange projects call for an alignment between the organizational characteristics, such as culture, and the IT solution (Markus 2004).

Culture can be considered from a variety of perspectives; it is difficult to define und to study (Davison and Martinsons 2003). Considering norms and values that characterize a culture and distinguish one culture from another is a frequently used approach to explain culture (Leidner and Kayworth 2006; Srite and Karahanna 2006; Gallivan and Srite 2005; Hofstede 1980; Janson et al. 2014). Furthermore, culture is not only connected to different definitions of what represents culture but also to different layers of applicability. In this context, Karahanna et al. (2005) proposed a model of interrelated levels of application. Following this approach and examining an organization's culture, it can be stated that the organizational culture is shaped by its surrounding national, as well as professional, culture. It can also be divided into subcultures that influence an individual's work behavior (Karahanna et al. 2005). An individual's culture as the core of the model is the product of all surrounding levels (Karahanna et al. 2005). The term organizational culture was coined by Schein (2004), who influenced IS literature (Cabrera et al. 2001; Koch et al. 2013; Scheibe and Gupta 2017; Leidner and Kayworth 2006) with his three-level model of assumptions, espoused values (Janson et al. 2016), and artifacts to describe the subject. According to Schein, organizational culture is: "a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems" (Schein 2004, p. 25). Since values are more comprehensible than, for example, invisible basic assumptions or indecipherable artifacts (Schein 1984), we follow the value-based approach to make the organizational culture tangible.

Why is it important to focus on organizational culture when it comes down to technochange? Part of the answer can be found within Schein's definition of organizational culture. Schein (2004) refers to assumptions that have been proven valid and passed on to others. In contradiction to Schein's definition, technochange works only if people in the organization are willing to change processes and structures, that have been proved valid. Redesigning jobs and changing the way work has to be done often meets employees' skepticism and rejection (Delaney and D'Agostino 2015). According to Markus, "designing technochange solutions for implementability is designing to avoid resistance to change (while still accomplishing organizational change goals)." (Markus 2004, p. 14). Investigating causes of employees' resistance to change, Markus (2004) refers to certain misfits that exist between an organizational setting and the new IT solution. Even though misfits can be experienced differently, they are always described as incidents. Working with the new IT solution, employees experience an incident or misfit when they observe that the new IT solution arrests work processes and hinders the execution of organizational operations (Strong and Volkoff 2010). In this regard, Strong and Volkoff (2010) identified potential misfits in six domains examining an enterprise system implementation. Among other identified misfits, cultural misfits were described to be a decisive cause of resistance in technochange projects (Strong and Volkoff 2010; Markus 2004; Cabrera et al. 2001).

Despite extensive research in the field of culture in IS (Kummer and Schmiedel 2016; Leidner and Kayworth 2006; Kummer et al. 2012), cultural studies in the context of technochange projects are scarce. A closer look at the literature reveals that most studies investigate cultural issues in technochange projects by conducting case studies. Examining culture from a national perspective, many studies focus on ERP Implementations in developing countries (based on the time when the studies were carried out) like e.g., Sri Lanka, China, or Pakistan (Avison 2008; Rajapakse et al. 2006; Soh et al. 2000; He 2004; Hamid 2009). Regardless of the case study approach, studies focusing on organizational culture do not follow a homogeneous approach. For instance Cabrera et al. (2001) focus on technical and social subsystems and their interrelations regarding the organization's infrastructure, strategy and capabilities in their case study

of a technochange project in a Turkish financial organization. Jackson (2011) followed a three perspective approach to grasp the culture of a higher education college in the UK including the perspectives of integration, differentiation and fragmentation according to Martin (2002). Jackson (2011) gained deep insights investigating the case using in-depth interpretative and longitudinal methods, but did not emphasize the cultural implications regarding the implemented IT. In the course of another research project Jackson took three different perspectives: technological determinism, cultural determinism and techno-cultural determinism to investigate the relationship between organizational culture and technochange (Jackson and Philip 2010). Considering three cases, Jackson und Philips' insights indicated that neither a mere technological nor a cultural perspective are suited to manage technochange projects. They concluded that for a successful management, a technological and cultural perspective is needed (Jackson and Philip 2010).

In summary, research examining organizational culture in the field of technochange is wide-ranging, and uses various approaches to investigate culture. However, no study could be identified that included both cultural values of the IT solution and the organization's culture. Using the theory of IT-culture conflict as a guiding theory, we comply with the request to focus on both technological and organizational aspects as demanded by Jackson and Philip (2010).

IT-Culture Conflicts as a Guiding Theory

The theory of IT-culture conflict provides a value-based perspective (Schein 1984) on culture. It allows for a holistic view on the linkages between IT and culture, as it attributes cultural values to IT and emphasizes IT's impact on culture, culture's impact on IT, and IT culture (Leidner and Kayworth 2006). Based on the assumptions by Hofstede (1980), Schein (1985) and Trompenaars (1996) that cultural aspects remain mostly invisible, Leidner and Kayworth (2006) argue that people are mostly unaware of their own culture unless they are confronted with a counterculture. In this regard, Leidner and Kayworth (2006) refer to culture conflicts that can occur between two contradicting values. Differentiating IT values, group member values and values embedded in a specific IT, three different conflicts can emerge: the vision, system, and contribution conflict. The following figure indicates the correlation between the value- and conflict types.
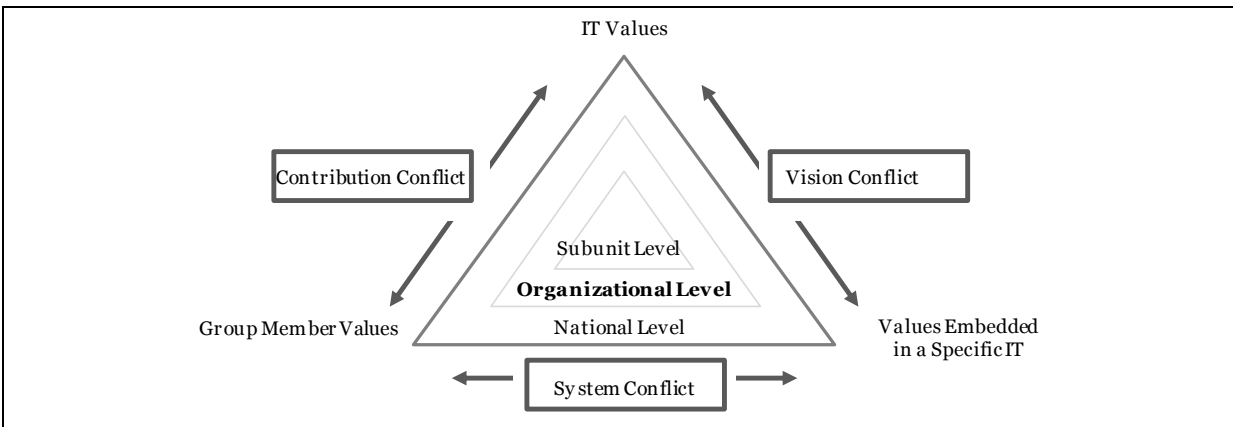

Figure 1. View of IT-Culture Conflicts. Adapted from Leidner and Kayworth (2006).

The group member values are representative for espoused beliefs about what is important to a group. The IT values are the values a group of individuals ascribes to IT, whereas the values that are embedded in a specific IT artifact correspond to the work behavior that the IT is designed to enable or to prevent. Within these value types three conflicts can occur. All conflicts can result from the intersection of national, organizational and subunit cultures (Leidner and Kayworth 2006). Since cultural values on an organizational and subunit level are vital for this research paper, we will outline each conflict type on these levels of applicability. First, the system conflict occurs when group member values contradict the values that are embedded in a specific IT artifact the group uses. For example, a group of employees who have always experienced lecturer-centered software training must use a computer program that doesn't provide any instructions and guidance for developing their qualifications. The group's belief about good training offerings is challenged by a specific IT artifact. Second, the vision conflict describes the tension caused by

contradicting IT values and values embedded in an IT artifact. For example, a group of game designers who value smartphones for their hedonic characteristics must install and use a mobile app on their smartphones for training purposes. Thus, the IT values related to mobile devices are challenged by the compelled usage of an app for learning. Third, the contribution conflict explains the contradiction between group member values and the values the group associates with IT in general. This type of conflict can occur when a relationship-oriented group uses IT, even though the group views IT in general as a tool to promote isolation between people.

Methodology

Research Design

In this planned study, we seek to identify cultural misfits that occur in technochange projects and measures that are taken by the organization to avoid those misfits. Since values and beliefs that represent the core culture of a group are difficult to identify (Davison and Martinsons 2003), we chose a case study approach for an in-depth investigation of the subject matter. By applying the theory of IT-culture conflict as a guiding framework, we seek to single out the espoused values important to the employees.

The case study is an empirical research approach that allows investigation of a specific phenomenon within its real-life context, in particular if the boundaries between the context and the observed phenomenon are not clearly evident (Yin 2013). Case studies are described as a suitable instrument to study context-rich socio technical systems and useful to study causal relationships (Yin 2013). In particular, we follow an interpretivist case study approach applying the recommendations of Yin (2013), Klein and Myer (1999), Hays (2004), Eisenhardt (1989) and Walsham (1995). Applying the interpretivist research paradigm allows us "to understand the deeper structure of a phenomenon, which it is believed can then be used to inform other settings" (Orlikowski and Baroudi 1991, p. 5). More specifically, we explore the phenomenon of culture conflicts as a cause of resistance in technochange projects with the aim to get a better understanding of how these conflicts can be resolved. According to Walsham (1995), we will provide findings in the form of the contribution of rich insights regarding a process theoretical understanding of the evolving nature of IT-culture conflicts. Investigating the case, we see ourselves as impartial observers, but accessing other's interpretations and filtering this information through our own conceptual considerations (Walsham 1995) applying the guidelines of Klein and Myer (1999). We will not intervene or actively participate (e.g. help managers finding decisions). On the contrary, we plan to observe managerial interventions and their outcomes with the aim to get valuable insights into management interventions and their impact on prevailing cultural values.

We chose to conduct a single-case study examining the case of a CRM implementation in the energy sector, since the chosen case represents a typical project among enterprise software implementation projects. Furthermore, the chosen organization constitutes an average small and midsize company in the energy sector. In the following we will refer to this company by using the pseudonym TransEnergy. According to Yin's rationale for single-case study designs (Yin 2013) the case can be defined as representative for the subject matter. To identify cultural misfits throughout all phases of the technochange project, we start conducting the case study and collecting data during the phase of "chartering". Following the recommendations of Jackson (2011), we plan studying the single case longitudinally at four different points of time, each referring to a different technochange phase according to Markus (2004). Making sense of the process data, we will follow the narrative strategy for data analysis, as it allows study of the different viewpoints on a process as completely as possible (Langley 1999).

The literature has highlighted the need to study technochange projects from a technological and cultural perspective to manage successful technochange projects (Jackson and Philip 2010). By applying theory of IT-culture conflict, we can analyze different value types throughout the technochange process. Thus, we can better understand IT-culture conflicts that emerge between contradicting employees' perceptions of TransEnergy's cultural values and values of the CRM system (1a), employees' perception of IT in general and the perception of the CRM system (1b), as well as employees' general IT values and their perception of TransEnergy's values (1c). Also (2) TransEnergy's efforts to resolve these culture conflicts will be analyzed throughout the technochange process. Conducting a longitudinal study, we reveal when values emerge or change during the technochange and when related conflicts occur, as depicted in figure 2.
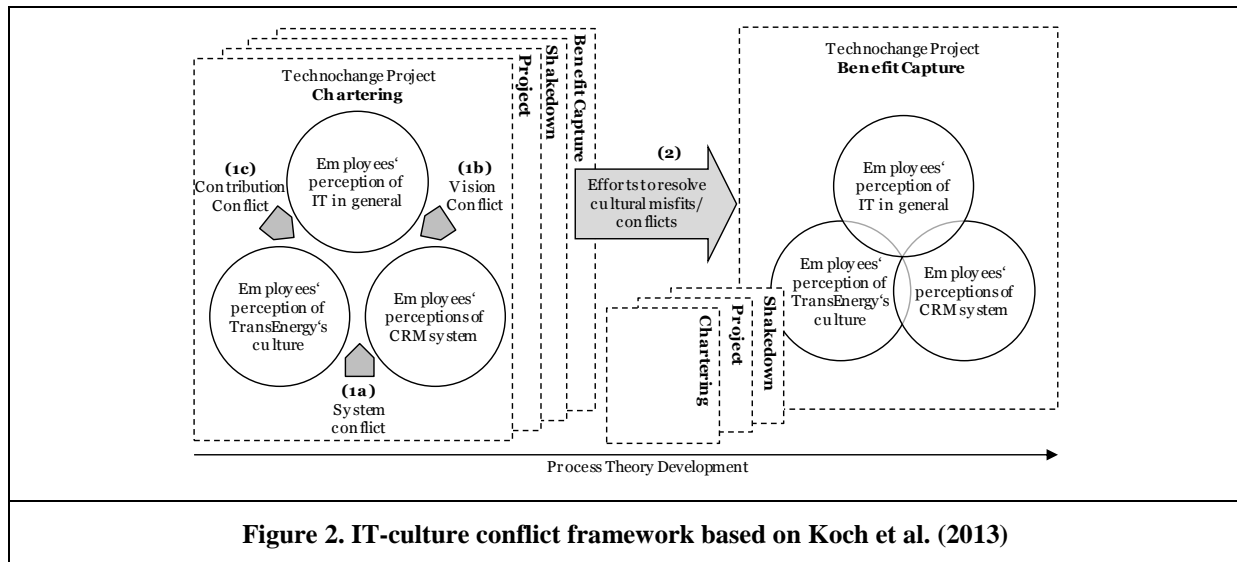
Figure 2. IT-culture conflict framework based on Koch et al. (2013)

Data Collection

For data collection, we combine data from different sources of evidence that are derived with different methods to gain a broad picture of the investigated case and to ensure validity (Bonoma 1985; Yin 2013). For data triangulation, we will collect data as a combination of document analysis, face-to-face semi-structured interviews and direct observations. The document analysis will include documents from internal and external sources, i.e., the corporate website, press articles, and public presentations. Furthermore, documents regarding the CRM implementation, i.e. training material, lists of requirements, and the cost/benefit analysis are analyzed. Interviews are one of the most important sources of case study information and are an efficient method to gather rich insights (Yin 2013). Against the backdrop of examining organizational culture, interviewing key members of an organization is a suitable instrument to grasp cultural values, which are hard to observe without working in the company (Schein 1984). Relying on the concept of saturation according to Guest et al. (2016), the number of interviews we plan to conduct will depend on insight richness and saturation. When conducting the interviews, we will work in teams of two. One researcher will interact with the interviewee while the other records observations and notes, according to the approach of Eisenhardt and Bourgeois III (1988). We plan to use open-ended questions, e.g., "Which processes of your everyday work are influenced by the CRM introduction?", "What organizational changes have emerged in the last year?", or "How might this change the way you work?". Open-ended questions require the interviewee to respond in a narrative form using their own frame of reference and allows them to express their feelings on emotional topics, thus eliciting information that would not have surfaced otherwise (Edwards et al. 1997). Designing our questionnaire, we will follow Seidel et al. (2013) as a good example for gaining insights regarding transformation processes. To apply the theory of IT-culture conflict, we seek to gain insights into the employees' attitude towards IT in general and into the values that are important to the group of employees that is affected by the CRM implementation. Since the CRM implementation involves multiple business units, like e.g., public relations, quality management, customer service, and maintenance and sales, we seek to interview key members of each business unit. In order to identify and select those key members, we will ask key informants that are privy to the case study as well as interviewees for recommendations (Yin 2013). Furthermore, we use insights we gained from meeting observations to identify key members. Besides meeting observations, we seek to observe several training sessions involving the CRM implementation team members, end-users, and the software provider. To gain rich insights into the values that are embedded in the CRM system, we also conduct interviews with the CRM provider and analyze the operating manuals. Furthermore, we hope to gain in-depth insights by accessing data from the organization's internal issue tracking system. Overall, the case study will be conducted in a group of three persons. However, one investigator will not be involved in the case investigation to "bring a very different and possibly more objective eye to the evidence" (Eisenhardt 1989, p. 538).

For data analysis we will follow the analytic strategy of "relying on theoretical propositions" by Yin (2013), since we apply the theory of IT-culture conflicts as an theoretical framework for our study. Thus, propositions derived from theory will help us organize the analysis and will indicate explanations to be examined. Besides our overall analytic strategy, we will follow the technique of pattern matching for our case analysis. We will compare theorized and observed cultural values and will try to find matching patterns between our theoretical and case insights, which will also strengthen our case study's internal validity (Yin 2013). To also ensure reliability we plan to develop a case study protocol and build an intervention model similar to Gehman et al. (2013) to clarify company actions and events. The case study protocol will include information regarding the data collection and analysis. Furthermore, we will transcript all interviews and give the transcripts back to the interviewees for correctness. For the qualitative data analysis we will make use of techniques recommended by Miles et al. (2013).

Expected Findings and Contribution

Based on literature, we expect to make the following observations during our case study. We expect the system conflict to be the most prevalent conflict during the technochange process, which is in line with Koch et al. (2013) who state that conflicts predominantly occur in the area of system conflicts. In our case the introduced CRM system will bring the employees' awareness of their organizational culture to the surface. According to Leidner and Kayworth (2006), we assume most employees are unaware of their own culture unless they encounter the counterculture of the CRM system. Based on the example of an ERP implementation failure at HP (Chaturvedi and Gupta 2005), which has been outlined in the introduction section of this paper, and according to Leidner and Kayworth (2006) we expect the possible system conflict of TransEnergy's employees to be greater, if there are distinct differences between the CRM provider's and TransEnergy's organizational values. As a possible implication of this conflict, users could use the system in unexpected ways by trying to reinforce their existing values on the CRM system (Leidner and Kayworth 2006). Since such use and the intended use may differ strongly, we expect TransEnergy to intervene. To increase user expectations towards the CRM system, literature refers to increased interaction between the CRM developers and business units affected by the CRM implementation (Salih et al. 2013; Ives and Olsen 1984). As an effort to resolve this conflict, we expect TransEnergy to increase the number of user trainings and testings in the project phase of the technochange process. As people are more likely to use an IS when their own values fit the values embedded within the technology (Leidner and Kayworth 2006), we also expect TransEnergy to adapt the CRM system during the project phase in order to achieve a balance between the employees' values and values embedded in the CRM system. Regarding the vision conflict, we do not expect the employees' perception of IT in general to change during the first phases of the technochange process, but we do believe that the employees' perception regarding IT can change due to a positive experience of time savings, complexity reduction, or new opportunities resulting from the CRM use. We assume to observe this cultural change during the phase of benefit capture and thus, to record ongoing improvements regarding both technology and culture throughout the technochange process in accordance to Brown's findings (Brown 1995). She stated that IT values appear to be within an organization's control and can be changed due to diverging experiences with a new software. Similarly, we do not expect the contribution conflict to occur during the first phases of the technochange process. As depicted in figure 2, both value types involved in the contribution conflict are not directly connected to the employees' perception of the CRM system. Thus, as a necessary precondition for the contribution conflict existing values must change first.

Moreover, we will observe how the management strategically supports the technochange process, considering culture conflicts. According to Tomlin (1991), we will note all observations regarding suitable management interventions to shape an organization's culture and to foster the organization's IT goals. In this regard, Reichers et al. (1997) point out that some management styles, like e.g., employee involvement in decision making, or publicizing successful changes can have a positive impact on the employees' acceptance of change. In addition, Markus (2004) highlights that the management has to set a good example and furthermore has to act as sponsor and champion of change. According to Leidner's and Kayworth's proposition, we assume that a management that promotes shared IT values can reduce all forms of conflicts, since the risks of not using or misusing the IT solution due to contradicting IT values will decrease (Leidner and Kayworth 2006). It remains to be seen what managerial interventions can also resolve upcoming conflicts or prevent conflicts to happen.

According to Davison and Martinsons (2003), culture is difficult to define and to study. In regard of our case study, we believe that our observations throughout the case will be difficult to read and to interpret, since observational insights solely allow us to grasp the organizational culture on the level of visible artifacts according to Schein's levels of culture, which are oftentimes not decipherable (Schein 1984). Regarding our planned interviews, we will have to assume that what people say is connected to their behavior, even though this connection is not completely reliable (Schein 1984). Besides difficulties to grasp someone's culture by data analysis, we also see ethical aspects that may influence our planned data collection. We assume that some interviewees might fear to speak freely about how things are managed in the organization. We plan to inform everybody affected from our case study that we handle all insights with great care and confidentially. Furthermore, we expect IT-culture conflicts to happen during the technochange process, which is in line with Markus (2004) and Strong and Volkoff (2010), who both deduced cultural issues as one main reasons for technochange projects to fail. Notwithstanding that culture conflicts are most likely to happen, conflicts may fail to appear when for example actions like participatory design are deployed cf. Ernst et al. (2016).

With our planned empirical study, we make important contributions to both theory and practice. From a theoretical perspective, there are only a few empirical studies that focus on cultural issues in technochange. Especially when it comes down to organizational culture, studies are scarce. In our study we follow the recommendation of Jackson and Philip (2010), who conducted one of the few empirical studies on this subject and investigate technochange using a longitudinal study approach from a technological and cultural perspective. By applying theory of IT-culture conflict as an upfront guiding theory, we can get an in-depth understanding of distinct cultural values over the technochange lifecycle and thus provide a better understanding of employees' resistance towards change. Hence, with our completed research, we will provide a process theoretical understanding of the evolving nature of IT-culture conflicts. Besides the impact of cultural values on IT use and adoption, we also expect findings regarding IT's influence on culture from a longitudinal and, thus, process perspective, which has received little attention (Leidner and Kayworth 2006) and contribute to the body of literature (Doherty and Goig 2003; Doherty and Perry 2001; Karanasios and Allen 2014; Leidner 2010). Furthermore, we will also take the organization's efforts to resolve culture conflicts into account, which will provide insights into what interventions are suitable to resolve or weaken conflicts. Whereby the latter particularly influence the practical contributions of this study. From this perspective, our implications for enterprise software providers as well as the technochange project management are twofold. First, we give insights in how contradicting cultural values can result in resistance to change. By assigning cultural values to the technochange solution, cultural misfits can be recognized and anticipated in advance, which permits thoughtful management interventions and contributes to an organization's IT strategy. Second, we prepare the technochange management to weaken or resolve culture conflicts during the technochange process by considering strategic measures. In addition, we provide a deeper understanding of technology driven transformation processes and how management strategies can support the IT adoption, e.g., promoting shared IT values or employee involvement in decision making. Thus, our research will contribute at the intersection between IT und business strategy.

Conclusion

With this empirical study, we aim to understand cultural misfits in technochange. This short paper provides a framework and a research agenda for our planned case study. As an upfront theory, we elaborate on the theory of IT-culture conflicts, which allows us to analyze occurring IT-culture conflicts that emerge due to contradicting values from a technological and cultural perspective as demanded by the current state of research. Furthermore, we plan to observe managerial interventions to resolve these conflicts. Thus, we hope to gain a better understanding of how the management can resolve or weaken conflicts. The case study will be investigated longitudinally referring to the phases of the technochange process to get a process view of cultural misfits and their impact on technochange. For achieving this contribution, we will work closely in our research project with our case partner and start with the data collection immediately.

Acknowledgements

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