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## **Informality meets Formality:**

When Management's and Employees' Practices of Knowledge Sharing Diverge

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# **Informality Meets Formality: When Management's and Employees' Practices of Knowledge Sharing Diverge**

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## **Abstract**

Knowledge sharing, as a significant part of knowledge management, is a difficult but important objective for organisations to achieve. Previous research in this field calls for more attention to knowledge sharing in an organisational context and studies of the means and consequences of management's and employees' diverging practices. Answering this call, the following article is based on a case study at Smart Planning Solutions AB, a Swedish IT service providing company. This study shows that knowledge sharing among employees mainly occurs within communities of practice. Moreover, we find that management wants knowledge sharing to take place formally via guidelines, IT systems and meetings, while employees adapt given instructions and share knowledge informally. These diverging practices lead to a paradox. We argue that employees need formal managerial tools which they de-formalise in order to share knowledge informally with each other. We found that de-formalisation is done in three ways: transformation, extraction and avoidance. This study shows that management can influence knowledge sharing, but not the way knowledge is shared among employees.

## **Keywords**

Knowledge Sharing, Communities of Practice, Work Practices, Paradox, De-Formalisation.

## **Introduction**

In a globalised world of increasing competition, one could contend that only organisations seeking for sustainable sources of competitive advantage succeed (Brown & Duguid, 1998; Halawi et al., 2005). The organisations that realise that knowledge is the main source of competitive advantage and manage to use all relevant knowledge, seem to be the most successful ones (Chuang, 2004; Halawi et al., 2005; Rowley, 1999; Minbaeva et al., 2003). However, the mere existence of potentially useful knowledge some place in the organisation does not automatically lead to other members of the organisation profiting from that

knowledge (Szulanski, 2000). Many authors argue that one of the most important fields of knowledge management is the spreading of knowledge within the organisation by sharing it with other members (Rowley, 1999; Argote et al., 2000; Minbaeva et al., 2003). Hence, the sharing of knowledge among members of an organisation who work in teams and communities of practice is of key strategic interest (Styhre, 2002).

The increasing understanding of the importance of knowledge sharing has caused both researchers and practitioners to pay more attention to this area (Koenig, 1999). Since the beginning of the 1990's, the concept of knowledge sharing caught the interest of academic scholars like Cook and Yanow (1993), Nonaka and Takeuchi (1995) and Davenport et al. (1998). Traditionally, researchers tended to focus the study of knowledge sharing on the use of information and computer technology tools, like manuals, guidelines, intranets and support forums (Davenport et al., 1998; Argote & Ingram, 2000). Critics have argued that those studies tend to emphasise the technological side and underestimate the human side of knowledge sharing (Alvesson & Kärreman, 2001). Lave and Wenger (1991) are of the opinion that knowledge exists in social relations among members of a community and that the organisation provides the means for the creation of social communities.

Numerous studies have been conducted in the field of knowledge sharing. Companies tend to invest in technology and IT systems to manage knowledge sharing (Diedrich, 2004). Extensive evidence exists of failed management attempts at formalising knowledge sharing (Argote et al., 2000; Szulanski et al., 2003). This implies that knowledge reuse and sharing can be challenging to attain. For instance, Huysman and de Wit (2004) studied Schiphol Airport, ING, Capgemini and IBM, where management focused on the introduction of communication technologies for knowledge sharing. However, practice showed that these technologies are not used by employees since they develop their own ways of sharing information and knowledge with each other. Another example is given by Pan and Leidner (2003) studying the chemical giant Buckman Labs, where a technology for knowledge sharing was introduced. Here, various communities of practice within the company evolved, which all used the technology in a different way than intended by management. In studies of IBM and General Electric, failed managerial attempts at formalising knowledge sharing led to a huge loss in efficiency and productivity during the transition phase (Szulanski et al., 2003).

Studies have revealed various reasons for the challenges, one being convincing the recipient that the information is useful (Szulanski et al., 2003). Another complicating side of formalised knowledge sharing is the fact that knowledge most likely develops in a specific context (Patriotta; 2003; Bechky, 2003; Dixon, 2002). These difficulties confirm Alvesson and Kärreman's (2001) claim that knowledge and management are an odd couple.

Since knowledge sharing is a difficult but important endeavour, many scholars stress the necessity of further research studying the phenomenon in an organisational context, i.e. how organisational members share their experiences and knowledge with one another (Nicolini et al., 2003; Argote et al., 2000; Rowley, 1999). Further, scholars like Yanow (2006) as well as McKenzie and van Winkelen (2004) argue that to understand knowledge sharing, it is essential to study communities of practice. In those groupings work actually occurs, in contrast to more abstract practices like technology, trainings and education courses (Yanow, 2006; Brown & Duguid, 1998; Brown & Duguid, 1991). Here, discrepancies between management's and employees' practices of knowledge sharing become evident. Therefore, it is of interest to study

how management's attempts at formalising knowledge sharing, while employees work around given instructions by sharing knowledge informally, unfold in organisations and what consequences this divergence has (Orr, 2006; Duguid, 2008).

Answering the call for more research in this field, we conducted a case study on Smart Planning Solutions AB, a small IT service providing company situated in Sweden. At first glance, management prescribes its employees to share knowledge via formal tools. However, a paradox is revealed, since the idea of knowledge sharing is handled differently from management's instructions by the employees of Smart Planning Solutions AB, henceforth SPS. The paradox is that although this may not seem so, the 'insubordination' of the employees is what makes the situation fruitful and conducive to knowledge sharing. Since employees share knowledge informally within communities of practice, while management strives to formalise knowledge sharing, the study is done from a situated learning perspective (Yanow, 2006).

Based on aforementioned consideration, this study firstly aims to investigate how the knowledge sharing process unfolds in organisations. This will contribute to remedy the lack of research in terms of explaining knowledge sharing in practice by focusing on how employees cope with the formal instructions of knowledge sharing given by management. Further, this will give an elaborated understanding of the second aim, the investigation of the consequences of management's and employees' diverging practices of knowledge sharing. With these research aims, we want to provide managers with an understanding of the implications of their attempts at formal knowledge sharing, considering that their employees practice knowledge sharing informally. Altogether, this will help to shed light on the two overall research questions of the study:

*How does the process of knowledge sharing unfold in organisations?*

and

*What consequences has the divergence of managers' and employees' practices of knowledge sharing?*

This paper firstly provides a theoretical framework of relevant concepts of knowledge sharing, namely the resource-based and the situated learning approach to knowledge sharing. Communities of practice, a concept from the situated learning literature, is chosen as the central concept. Secondly, the methodology part describes the studied organisation as well as the collection and analysis of the field material. Thirdly, the practical findings are presented and analysed considering the aforementioned theoretical framework. We start with employees' practice of informal knowledge sharing and proceed with how employees work around and adapt formal managerial tools for knowledge sharing. Thereafter, the empirical findings are discussed in terms of the knowledge sharing process within organisations and its consequences. Lastly, conclusions and implications are drawn.

### **Approaching Knowledge Sharing from a Resource-Based Perspective**

A major academic research output that greatly influenced the literature of knowledge sharing is resource-based theories. Within this field of research, a strong emphasis on technology developed since computer technology is relied on as the engine for solving problems that

occur, in particular problems regarding knowledge sharing (Davenport et al., 1998). Organisations tend to focus transfer efforts on codifying knowledge through, for instance, the use of databases, information technology tools and corporate guidelines, to collect and disseminate knowledge (Argote & Ingram, 2000). Thereby, focus is on organisational policies, systems and processes to manage knowledge sharing (Minbaeva et al., 2003).

Moreover, a great amount of literature within the field of organisational knowledge has described the concept of it as a commodity or an object that can be shared between organisational members (Nonaka, 1991; Nonaka, 1994). Understanding knowledge sharing from a resource-based approach, scholars tend to use the idea of explicit and tacit knowledge (Nonaka, 1991; Nonaka & Takeuchi, 1995; Hedlund, 1994). Nonaka (1991) introduces the idea that explicit knowledge can be classified and passed on. Tacit knowledge, on the other hand, is based on experiences and hence hard to communicate to others (Nonaka, 1991). Nonaka (1991) argues that organisational knowledge creation is dependent on the conversion of tacit and subjective experiences of individual organisational members into explicit knowledge like products, documents and services. Further, Nonaka (1994) contends that this knowledge conversion process of tacit into explicit knowledge is achieved by using metaphors. The knowledge conversion process can be attained when upcoming contradictions within the metaphors are recognised and these contradictions resolved through analogy (Nonaka, 1994).

Nonaka (1994) defines metaphors as “two contradicting concepts incorporated in one word” (p. 25). Czarniawska (2001) develops paradoxes arguing that a paradox is when contradictions and interdependencies meet. Both scholars agree that paradoxes are fruitful since the use of contradictions and paradoxes stimulate creative thinking in organisations (Nonaka, 1994; Czarniawska, 2001). In order to organise paradoxes concerning knowledge sharing within organisations, Czarniawska (2001) argues that management needs “to re-present organizational practices in a way that will demystify them while revealing their everyday dramatism” (p. 15). With this statement she agrees with Luhmann (1995) who claims that logic helps to structure and share knowledge but “is not the rule according to which the world is built” (Czarniawska, 2001, p. 15). In order to manage knowledge sharing, management uses formal tools enabling management to structure knowledge sharing (Alvesson & Kärreman, 2001).

The resource-based approach is essential to understanding management’s attempts at formal knowledge sharing. However, employees’ practices of knowledge sharing within organisations diverge from management’s instructions (Orr, 2006; Duguid, 2008; Yanow, 2006; Lave & Wenger, 1991). In order to study the divergence and the consequences of the different knowledge sharing practices, communities of practice are an adequate way (Yanow, 2006).

### **The Situated Approach: Knowledge Sharing within Communities of Practice**

Lave and Wenger (1991) introduced situated learning including communities of practice as the main theoretical concept. “Communities of practice are groups of people who share a concern, a set of problems, or a passion about a topic and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger et al., 2002, p. 4). Wenger et al. (2002) define what composes a community of practice: having a domain of knowledge, a community of people, and a shared practice. First, the domain of knowledge establishes a common ground

by characterising a set of issues the community focuses on. Second, a community of people exists that are interested in this domain and therefore interact with each other, exchanging thoughts and ideas. Thereby, relationships are built developing a sense of belonging and identity. Third, a shared practice is developed by the community in order to effectively share tacit and/or explicit knowledge through for instance stories, experiences, best practices and routines.

A community of practice does not entail visible social boundaries (McDermott, 1999) as it cannot be created by intention, but evolves through social interactions and relations in the community (Liedtka, 1999; Lave & Wenger, 1991). Moreover, communities of practice are flexible and fluctuating since individuals themselves choose to be part of them given their personal interests (Anfara & Angelle, 2008). Thus, people being members of a community and people seeing themselves as members or non-members of a community is determined by identity (Wenger, 1998). A community of practice's existence may be short or long-term and a community can vary in number of members (Wenger & Snyder, 2000), while comprising partial, part-time as well as marginal members (McDermott, 1999). Wenger and Snyder (2000) argue that every community of practice has a core of participants with energising capacity who provide leadership for the community. One significant disadvantage of communities is the creation of boundaries leading to the possible exclusion of some organisational members (Wenger, 2010). Hence, knowledge from individuals outside the community might not be accepted and the outsiders are not able to benefit from the knowledge of the communities either (Hislop, 2013).

Community members interact with one another and establish shared norms and relationships between each other (Wenger, 2010). Wenger (2010) claims that this interaction takes place when members perceive each other as competent and hence as trusted partners. Becoming a trusted partner depends on being able to engage with the community by sharing one's company-specific knowledge (Wenger, 2010). Individuals can also be part of and learn in multiple communities (Ward, 2000) whereby the members are located either in the same place or are geographically distributed (Wenger & Snyder, 2000). The activities within a community can either be personal, such as meetings, or technological, for instance through the intranet (McKenzie & van Winkelen, 2004). McKenzie and van Winkelen (2004) assert that the technological aspect is important for geographically distributed communities. However, not interacting in person may limit the sharing of tacit knowledge, which is usually created and shared within a community of practice (McKenzie & van Winkelen, 2004; Brown & Duguid, 1998). Some scholars argue that face-to-face conversations are needed in order to share complex knowledge (Ward, 2000; Bechky, 2003; Dixon, 2002). Ward (2000) and Bechky (2003) continue that meeting physically is a more efficient way to communicate, since it allows for a shared understanding of work issues in contrast to a video call where many verbal misunderstandings may occur. Connecting virtually can only be a second-best option (Ward, 2000).

Communities of practice share knowledge in various ways. Storytelling is an important way since community members can capture and make sense of the complexities of actual practice in stories (Orr, 1996; Orr, 2006; Weick & Roberts, 1993). Orr (1996; 2006) argues that social interaction and shared know-how play a significant role to solve work issues. Common know-how is gained for instance through sharing stories at coffee and lunch breaks

or calling each other for help to solve problems (Orr, 1996). By telling stories, employees' collective knowledge increases as these stories are shared and thus become part of the repertoire of all members (Brown & Duguid, 1991). Once a story is in the repertoire of the community, it can be used for solving upcoming work issues (Brown & Duguid, 1991; Orr, 1996; Orr, 2006). Further, Orr (1996; 2006) and Duguid (2008) argue that companies' attempts at formalising knowledge sharing among employees, for instance through manuals, guidelines or training courses, fail since the actual work is performed informally. Managerial manuals are insufficient for employees to solve upcoming work issues (Orr, 1996). Suchman (1987) agrees that there is a clash between the intentions of the designers of plans and the actual execution of those plans. Hence, Suchman (1987) argues that plans cannot be a means to controlling action since actual work is performed by intuition and interpretation due to a permanently changing context.

Scholars within the literature of the situated learning approach emphasise that knowledge sharing is not only influenced through social interactions, but also through the context the community is embedded in (Patriotta, 2003; Brown & Duguid, 1991). Bechky (2003) argues that within the course of knowledge acquisition a certain context-dependent meaning gets connected to the knowledge. This meaning does not automatically make sense in a different context where other individuals and social practices exist, since those individuals are incapable of accessing the situation when that knowledge was generated (Bechky, 2003; Dixon, 2002). Thus, it is complicated to share knowledge created by a specific community in a specific context with outsiders (Patriotta, 2003).

Based on such complex structures of knowledge sharing, developing and sustaining communities of practice as well as integrating them with the rest of the organisation, is challenging for a company (Wenger & Snyder, 2000). An individual's motivation to participate in a community of practice and knowledge-sharing, as well as the eagerness of the organisation to support such communities, are critical factors for the success of communities of practice (McKenzie & van Winkelen, 2004). It is crucial that both the individuals and the organisation see a heightened value in participation (McKenzie & van Winkelen, 2004). Furthermore, an organisation should support the identification of potential communities for creating and sharing knowledge, as well as develop these communities by providing an infrastructure for them, for instance through communication tools (Wenger & Snyder 2000; McKenzie & van Winkelen, 2004). This enables community members to effectively apply their competencies (Wenger & Snyder, 2000). Contrastingly, McDermott (1999) advises organisations not to formalise communities, but let them develop naturally. Organisations can only support and nurture communities, not command and control them (Ward, 2000).

In regard to our research aims, the aforementioned ways of knowledge sharing within communities of practice are important for both. First, to describe the employees' informal way of knowledge sharing in relation to management's attempts at formal knowledge sharing. Second, to detect what consequences management's and employees' diverging practices of knowledge sharing lead to.



## **Methodology: Introducing Smart Planning Solutions AB**

Smart Planning Solutions AB is a small-sized service providing organisation of scheduling and resource planning software, situated in Gothenburg, Sweden. It is specialized, according to its advertising material, in contributing “quality and cost-efficiency” within particularly the scheduling systems of higher education institutions. Since higher education institutions are mostly public and owned by the government, nations’ laws and economic situations have a significant impact on the company’s operations. SPS’ annual turnover was 22.5 million Swedish Kronor in 2015; while the profit increased exponentially over the last years, nowadays the financial growth has slowed down. For the future, the organisation aims to revert this development. The main market of SPS is Sweden, where it has 90 per cent of market share, as well as Norway, where it has 70 per cent of market share. The organisation’s growth strategy is twofold, on the one hand it grows by creating further modules for the software to gain increased income from existing customers. On the other hand, it grows by entering new geographic markets within the field of higher education and by developing additional market segments within a country. Geographically SPS is operating on the higher education markets of Sweden, Norway, Denmark, Finland and Germany, whereby the Finnish and Danish markets are taken care of by external partners. The Swedish and Norwegian markets are handled by the Headquarters situated in Gothenburg, while for the German market a subsidiary in Hamburg was founded. One sales representative operates the subsidiary and realised 1 per cent of market share in 7 years of operation. Recently, additional market segments, like theatres, rehabilitation centres, kindergartens and high schools in Sweden and Norway were tackled.

SPS employs 23 people; the CEO, 7 developers, 5 consultants, 5 sales people, 3 for the technical service, 1 for the technical support and 1 for the general administration. SPS is a knowledge intensive firm, since the software SPS sells is a complex, flexible and difficult system. Its flexibility is particularly important for answering diverse customer needs, which enables SPS to serve different kinds of market segments and customers. Within the firm, a large deal of computer scientists and consultants are employed. Those employees are unique for the organisation due to their skills at developing SPS’ software and to appropriately provide it for customers. Sales people mainly take care of customer acquisition and hand customers over to the consultants as soon as the customer decides to purchase the software. Many of the employees have been working for SPS for a long time and their work is mostly done by arrangement with each other, also between the different departments. The company’s management has a strong focus on financial and corporate growth, therefore more sales people and consultants are planned to be recruited in 2016 to serve the new market segments. Since financial and corporate growth are a priority for SPS’ management, the CEO mentions the increasing importance of providing tools in order to formalise knowledge sharing.

### **The Methods: Study Design**

It is the aim of this study to provide a deeper understanding of the means and consequences of management’s and employees’ diverging practices of knowledge sharing in organisations; hence, a case study method in Czarniawska’s (2014) sense was adopted. Further relevance for this study method is given since according to Silverman (2013), case studies afford a deeper understanding of complex business phenomena in a personal and accessible way. Regarding

the study's aims, Nicolini et al. (2003) support this method, stressing the fact that to be located in the social context of the object of investigation is the best way to approach the concept of knowledge sharing. This allowed us to see how employees at SPS interact with one another in different settings (Silverman, 2013), which was of great interest since knowledge sharing at SPS is mainly done through interaction and informal conversations and not in isolation. Additionally, a qualitative case study allows the use of different data collection methods (Silverman, 2013), which granted a wider and more diverse basis for the analysis. However, qualitative research methods are based on narratives that are not reality, rather descriptions and interpretations of it (Flyvbjerg, 2006; Czarniawska, 2014).

### **Collection of Field Material**

The collection of field material was mainly undertaken at the Headquarters in Gothenburg, Sweden. However, we did one telephone interview with the sales person responsible for the German market. The common location of the interviews allowed us to understand the subject in a contextual way and gave us the possibility to constantly compare the narratives and findings (Eisenhardt, 1989). We collected data through semi-structured interviews, observations and the study of company internal documents indicating how management and employees make sense of knowledge sharing within the company. In order to gain a better and deeper understanding of how SPS is operating and sharing knowledge, we first conducted an interview with the CEO. This provided us with an overview and first insight into management's attempts at formalising knowledge sharing. Moreover, it directed us towards which employees are key and important to interview in order to receive further information about how employees individually behave in terms of knowledge sharing. Even though this approach could have led to extents of nominator bias, this snowballing method seemed appropriate for us as outside researchers to gain a better understanding about which employees are key to interview (Kvale & Brinkmann, 2008). In order to widen the perspectives on the topic of investigation, we interviewed employees working in different departments. Field material was collected as long as we could gain new insights out of it; Glaser and Strauss (1967) refer to this as saturation. This led to 18 interviews, lasting between 45-60 minutes, which allowed us to gain more insight into issues brought up in earlier interviews and to further investigate interesting aspects that appeared during the research process. Some of these aspects were the formal tools provided by SPS' management for knowledge sharing and how employees perceived and acted upon these, as well as employees' informality of knowledge sharing. The interviews were open-ended (Kvale, 2006; Silverman, 2013) to avoid leading from our side. Consequently, we allowed the interviewees to talk freely about their work and how they perceive knowledge sharing and what consequences this leads to (Czarniawska, 2014). During the interviews we focused on listening and understanding the interviewees' descriptions of their ways of intercollegial knowledge sharing; however, we took notes for memory when further explanation was needed for our understanding (Czarniawska, 2014). The interviews were recorded and we transcribed them afterwards. Since the company only has 23 employees, all of them are referred to as "employee" in this study to guarantee anonymity. The organisation has been anonymised as well.

A drawback with interviews is that interviewees tend to please the interviewer with their answers by saying what they suppose the interviewer is after, instead of sharing what they

really think (Czarniawska, 2014; Silverman, 2013). Nederhof (1985) refers to this as the Social Desirability Bias. In this study, that effect is even increased since one of us is working for the company. Mitigating this issue, further methods of data collection were used (Silverman, 2013) and the author working for the company only conducted interviews with distant fellow workers. Hence, the author not working for SPS conducted most interviews. Due to time constraints and in order to provide both of us with an adequate picture of the situation, the author working for the company conducted six interviews. Besides interviews and internal document studies, we made observations at informal meetings and discussions. By spending time in the office and having coffee breaks with the employees, we could observe their relationships and conversations in a more natural setting. We took notes about the observations and translated them afterwards into field stories (Schwartzman, 1993). In order to avoid possible biases, we excluded observations from this study during which the author working for the company felt prejudiced. We did not chose observations as main research method since the company language is Swedish and we both lack proficiency in Swedish. Hence, mainly conducting interviews seemed to be the adequate data collection method.

### **Data Analysis**

Since the aim of the study is to describe and analyse how organisations behave concerning knowledge sharing, a grounded theory inspired study was chosen (Martin & Turner, 1986). Furthermore, a grounded theory approach was adopted since we continuously compared field material to get a deeper understanding of the topic of investigation. This is in agreement with Glaser and Strauss (1967) who maintain that an advantage of the grounded theory approach is its continuous comparative analysis of field material. Consequently, in order to gain a better understanding of knowledge sharing within organisations, a grounded theory approach was applicable.

We analysed the collected data through transcribing, coding and categorising the interviews into relevant concepts by using the concept card method (Martin & Turner, 1986). Martin and Turner (1986) argue that this could possibly lead to too many concepts and categories in the initial stage. Since this happened to be the case, we focused on the most relevant ones for the aims of the study: identifying the knowledge sharing process within organisations and its consequences. Therefore, we used concept cards regarding how management instructs and employees practise knowledge sharing and how informal rather than formal knowledge sharing was dominant within the organisation. After the identification of the different concepts, we compared the concepts with each other to detect connections, but also differences (Czarniawska, 2014). Furthermore, we coded, categorised and compared the internal documents and conducted observations with the narratives given by the interviewees. In that way, we looked for confirming evidence in two ways, both between different data sources, like interviews and internal documents, and within the same source, for instance talking about the same concept with different interviewees (Seale, 1999). On the one hand, this triangulation technique improves the validity of the findings (Seale, 1999). On the other hand, this crosschecking of field material allows for the discovery of relevant theoretical concepts.

Since employees' way of knowledge sharing differs from the management's requirements and expectations, we chose the theoretical concept of communities of practice as main theoretical tool to organise the collected field material. Martin and Turner (1986)

describe the process of connecting the collected field material with theoretical concepts as advancement of the level of abstraction. At the lower level of abstraction, we included field material the way it was presented to us, but on the higher levels of abstraction, we focused on concepts with more theoretical meaning (Martin & Turner, 1986). These concepts primarily centered on the employees' informal way of knowledge sharing forming with fellow workers communities of practice, as well as how employees adapt and work around formal managerial tools in order to informally share knowledge. Hence, in order to explain the collected data we drew on the resource-based and the situated approach to knowledge sharing to create an understanding of how knowledge is shared within organisations in contrast to management's attempts. Through the use of both context-independent theory, including former studies about knowledge sharing, as well as context-dependent theory, which was obtained from the case organisation, for the analysis we could assess the context, as proposed by Flyvbjerg (2006).

### **Communities of Practice Embody Informal Knowledge Sharing within SPS**

Due to the recent experience of growth stagnation and its future aim of entering new markets, SPS' management decided that knowledge sharing is essential and needs to be formalised. Management no longer wants to rely solely on the employees' loyalty and individual expertise since management fears that employees might decide to leave. SPS refers to itself as a knowledge-based company where individual customer service is of high importance. SPS' management structured the organisational operations in such a way that every employee is solely responsible for a specific work branch for the customer. Thereby, management expects that each employee contributes his or her "individual knowledge and expertise to treat customers adequately". The CEO gets to the heart of his employees' individual expertise by stating that when "he [an employee] leaves, the knowledge is gone". By recognising this and talking about ways to circumvent knowledge loss in the future, the CEO stresses that it is essential for the company's operations that employees formally share knowledge with each other. In order to ensure formal knowledge sharing, SPS' management introduced different tools during the years: guidelines, employee meetings, a support forum and a customer relations management system.

According to the managers, these tools are easy and essential to use. Moreover, management expects from all employees to be skilled in those tools and to use them appropriately. Yet, knowledge sharing between employees is not as easy as management assumes. According to the employees, it is much more complicated and complex to understand what the other person's issue is. This derives from employees being continuously confronted with different issues during work since work tasks are unpredictable. One employee expresses this:

I never know exactly what my day will be like, it depends on what happens. [...] Of course, it is easiest to talk to people, so we talk a lot. That is what's fun with the work, you learn constantly, you learn new ways of using the software, you learn new ways of conducting the project. But this information is too complex to share non-verbally.

Employees stress that everyone's input is important for SPS and the software the company provides. Each employee has a different task to fulfil for the customer, hence working together is "pretty much what it all depends on", to express it in the words of an employee. Many employees already work at SPS for a long time and have close relationships with their fellow workers. The close relationships are strengthened by the good atmosphere between the employees, "they are all good people working here". Employees state that information is shared mainly informally at SPS, as one employee exemplifies:

After such a long time within the company, we do it our own way. We exchange information, but very informally.

According to the employees, informal knowledge sharing among fellow workers derives, apart from loyalty to SPS, also from the employees excitement for working with SPS' software. Another employee agrees by illustrating the before mentioned informality further:

We don't have reserved meetings [consultants and developers]. More when we take a coffee or when I have a question, I can go to the developers and we can discuss about the questions or issues I have.

Employees mention that work issues are mostly solved by going over to each other's desks or when having a coffee break together. Thereby, informal discussions between employees develop which employees describe as interesting and helpful.

Next to informal discussions, employees stress the importance of reflecting after customer meetings. Thereby, employees share stories and advice gained from customer meetings with fellow workers. One employee exemplifies:

I think it's quite important to exchange customer information with my colleagues. On the way home by train, I think about what could I have done better. So I think that's a good part of the process to reflect upon yourself. I also think about what seemed to have been essential for the customer. When I am back in the office, I talk to my colleagues. We tell us what happened during our customer meetings. Then we share tips, we share tricks, we also share stuff that didn't work. But mostly we share it informally when we discuss, just talk among colleagues.

From employees' examples, it becomes evident that these informal discussions and storytelling are facilitated by employees being located close to each other. The importance of employees' proximity becomes particularly evident when including interviewees' narratives concerning SPS' German employee. Since the German employee is not present at the Headquarters of SPS, employees mention that information sharing with that employee mainly takes place by using formal tools like guidelines and IT systems. Yet, the German employee complains about lacking information. Employees working in the headquarters stress that it is important to have discussions with fellow workers to understand what is happening within the organisation. One employee explains:

It's difficult to sit in another country with another language and understand in detail what happens at SPS just by reading the officially released documents. You need more than that. If you want to have good information about updates here, you need to eat lunch with the people and drink coffee with them, because a lot of information is shared informally at this company. Of course, we have formal ways of sharing information, but that information is, well, short and concise. Let's put it like that.

Since the German employee receives less information, it indicates in accordance with employees' descriptions that knowledge is mostly shared verbally and informally within the organisation. Consequently, knowledge is created in a different context than the German employee is in.

Moreover, SPS' employees are active in multiple communities of practice. Thereby, the choice of communication partner with whom knowledge is shared depends on various factors. Most employees argue that the sharing of information has to do with sympathy and personal preferences, as one employee states:

Those colleagues that are easy to have contact with, that aren't arrogant and are easy to talk to, with those I communicate a lot more than with those that are a bit possessive. You have to be very careful with some people.

Here, an interesting phenomenon becomes obvious. SPS' employees mention that personal character traits are involved in the choice of communication partner. The employees' use of experiences concerning their fellow workers' characteristics becomes further evident when employees talk about their perception of fellow workers' competence. One employee elaborates on this:

I have favourites in every department and I go to them. X and Y those are really great guys to speak to and exchange ideas with. They are both pleasant and really good at what they do.

These statements from employees indicate that knowledge sharing is not only based on sympathy and competence connected. SPS' employees stress that quite often their choice of communication partner is based on who is knowledgeable in a certain field. Thereby, interviewees gloss over being knowledgeable as having company and product specific knowledge one can share with fellow workers (cf. Wenger, 2010). Various employees continue this idea, as one employee exemplifies:

If someone in the company needs information about the interfaces of our software with other programs, they ask me. When I have a question about our future applications, I go to X, he is the God of applications. So I always talk to him.

Next to elaborating on reasons why employees talk to fellow workers, employees demonstrate their contact with management. Most employees state that management contact is rather reserved, as one employee points out:

Going to management, I prefer to avoid that as it can be very unpleasant. I try to get the information by doing other stuff. But of course, I don't avoid it [going to management] completely. If it has to be done, I do it. But this is working really badly here.

Interviewees develop the intended modest contact with management further by giving examples of loud conflicts with management when opinions diverge. Employees dislike these experiences and do not want to be confronted with such conflicts again. According to the employees, opinions differ because management is not involved in practical work and often gives inappropriate directions for the work situation the employees are in. Since employees avoid talking to management, SPS' management is unaware of how employees actually work and share information with each other.

Further, employees mention that management does not know what each employee is working with exactly since employees' knowledge about each other determines the employees' areas of responsibility. SPS' employees have found their own ways of working and sharing information with each other since they assess fellow workers on their experiences with them and not by following formal job descriptions. One employee describes:

You have to rely quite a lot on different people. You have to learn who knows what and what they do in order to get information here.

To sum up, the abovementioned employees' statements indicate that SPS' employees continuously share knowledge with fellow workers in an informal and verbal way. Thereby, employees find themselves within communities of practice (cf. Wenger, 2010; Lave & Wenger, 1991). These communities evolve subconsciously and naturally at SPS (cf. Lave & Wenger, 1991; McDermott, 1999). Within these communities responsibilities are situated in practice, which derives from the fact that SPS' employees include their assessment about fellow workers' knowledge and competence when deciding about who to contact concerning a specific work issue (cf. Wenger, 2010; Lave & Wenger, 1991). Hence, employees use their tacit knowledge in terms of already collected experiences with one another (cf. Nonaka, 1991; Nonaka, 1994) for making their choice of communication partner.

Moreover, employees' need of sharing knowledge with each other largely results from the stage of the work process employees currently are in. In that way, the work issue is decisive for contacting fellow workers. This represents the common set of issues the community of practice focuses on (Wenger et al., 2002). Relationships are built up between fellow workers (Wenger, 2010; Wenger et al., 2002, Liedtka, 1999) and employees share general advice and specific information with fellow workers. When employees share only general advice, it implies that employees have a common pool of ideas, created within a common community and captured in common stories (see also Orr, 1996). This makes small keywords enough for community members to know what the issue is the other person is talking about. According to the above employees' accounts, employees use storytelling and informal discussions as main communication tools to represent their shared practice (Wenger et al., 2002). Storytelling and informal discussions among fellow workers are facilitated through employees' proximity. This shared practice makes it more difficult for the German employee

to receive adequate information since s/he is not working in the headquarters. This derives from the fact that knowledge created by a specific community in a specific context heightens complication of sharing that specific knowledge with outsiders (Patriotta, 2003; Bechky, 2003; Dixon, 2002).

### **Communities of Practice Meet Formal Knowledge Sharing Tools**

The above employees' stories reveal that the everyday informal knowledge sharing taking place within SPS is not in accordance with management's attempts at formalising knowledge sharing. Management wants employees to use guidelines, meetings and IT systems to share knowledge with each other.

### **Transformation of Corporate Guidelines**

SPS' management created corporate guidelines in order to guarantee that customer contact is conducted in the same way throughout the whole company. The guidelines prescribe how presentations should be held in front of customers, what they should look like and what information has to be shared. Giving customer presentations is a routine work task for almost every SPS employee. According to management, these guidelines are particularly designed to ensure that employees share knowledge about how to prepare and hold customer presentations to gain as many prospects as possible.

Employees describe the guidelines as insufficient. Since employees meet with so many different customers who all have different needs and expectations, employees constantly need to adapt their presentations. An employee summarises employees' need to adapt guidelines by stating:

A typical customer meeting doesn't exist because it depends on the customer. When I prepare the presentations for customer meetings, I take the guidelines from management and adapt them. So I prepare different presentations for each customer.

Over the past years, the adaptation of the guidelines by employees has developed even further, which some employees express by saying "I shorten them [the presentations] to the most necessary things". SPS' employees identify given guidelines as too general to have value to prepare for customer meetings appropriately. Yet, when employees talk about the guidelines, they all mention that they use the guidelines before preparing a presentation. Employees use the guidelines as a starting point and subsequently transform them in such a way that the guidelines are appropriate to fulfil customers' expectations. These statements reflect both the high dependence of SPS on its customers and the fact that it is ineffective to use the guidelines the way they are intended by management.

SPS' management is unaware of employees' needs for customisation since management wants employees to exactly follow the guidelines. SPS' management tells employees to redo the work if management detects that employees diverge from given guidelines. Yet, SPS' employees see a need for divergence, which leads to employees avoiding management contact. The fact that management has not recognised employees' need of customisation becomes further obvious through management's idea of introducing a new system, an online toolbox. Within the online toolbox different templates are saved and stored



in different boxes. Employees are expected to use these templates for preparing their customer presentations faster, more efficiently and make them more similar. However, the introduction of the online toolbox leads to less possibilities for employees to customise presentations.

### **Extraction of Information from Meetings**

According to the management, all departments are expected to meet on a weekly basis to share problems and ideas that came up during the week and to find common solutions. Furthermore, management introduced monthly company meetings including all employees in order to assure that all employees are always updated. In these meetings, management shares strategic aims of the near future and expects from employees to share information about what recently happened. Management picks different employees who have to present their current work tasks.

According to the employees, only little information is shared during company meetings. Employees stress that they share superficial information at meetings, because it takes too much time to explain certain aspects to all participating employees. One employee explains:

In meetings we only share general information. It doesn't make sense to talk about specific customers or other specific issues there since the others are not involved. But with my closest colleagues, I talk a lot. We exchange stories about specific customers and how it is best to handle them. Some customers are pretty, let's say, special.

Here it becomes evident that employees always share information with the same fellow workers and exchange stories about their experiences with customers. Hence, employees often make use of storytelling when talking to their fellow workers (see also Orr, 1996). It is impossible to communicate with outsiders in the same way since they do not know the stories used by a community (see also Orr, 1996). This explains that reduced information sharing takes place during formal meetings.

However, after these company meetings, employees often go to certain fellow workers to discuss the information given during the meetings which they perceive as interesting. This becomes further evident regarding employees' narratives about department meetings. Employees emphasise that they often take information from department meetings, which they share with employees from other departments later on. One employee describes:

The information shared during our meetings is interesting, but I can't really make sense out of it. After our meetings, I need to talk to the developers about how to create a new application in the software, because the other consultants don't know those things.

This indicates that department meetings might not include community members and therefore employees share less information with each other during those meetings (cf. Wenger, 2010; Hislop, 2013). Instead, employees share vital information with community members after meetings and discuss and develop given information further and in this way make sense of the information (cf. Orr, 1996; Weick & Roberts, 1993).

## **Avoidance of IT Systems**

Next to the above described guidelines and meetings, the CEO mentions a further way of how knowledge should be formally shared within the company. SPS' management introduced two different IT systems to formalise knowledge sharing within the organisation. First, a support forum called "SPS Support" was installed both for internal and external use. Customers can ask questions, report problems or other issues within "SPS Support", which subsequently get answered by employees and saved with a respective issue number. The fact that already asked questions get saved in the system enables other customers and employees with the same question to access those and find answers. For internal use, employees are supposed to create a topic or suggest new features for the software within "SPS Support". Management expects from all employees to regularly follow up on the new incoming issues. If employees follow up on issues can be checked by management. Moreover, "SPS Support" is supposed to simplify the collaboration between the technical support, the development and the consultancy department enabling the knowledge of these employees to be shared and accessible for everyone in the company.

Second, "Upsales", an online customer relations management system, got introduced which particularly the sales people of SPS are required to use. In this IT system, actual and potential customers are listed securing that customer-specific knowledge is shared within the company. Employees are expected to write down in cues what information was shared with customers and what agreements were made. In that way, both those employees who had customer contact but also other employees can easily be informed about the current customer status.

According to employees' descriptions, a lot of strain is put on the different employees, who are almost all in customer contact to handle customer issues as quickly as possible. Due to the strict rules connected with the online service SPS provides, employees find themselves short of time. One employee reflects on this by addressing technical issues:

With any kind of problem that customers have, they call me or make an online issue in "SPS Support". Then I have 8 hours to respond to them. I think it is no problem to fix it over the phone.

Since employees face time constraints to handle customer issues as quickly as possible, employees handle those in what they perceive as the quickest way, namely informally. For instance, directly over the phone when a customer calls or by talking to fellow workers when the issue is more complicated and further advice needed. So employees rarely report in the support forum what they talked about with customers or fellow workers. Hence, management's initial idea of the support forum, to improve formal knowledge sharing, is not exploited. Instead, verbal and informal communication takes place, as one employee explains:

Once a customer has a problem, the consultants tell me and I fix it pretty quickly, because most issues need to be handled immediately. Since it is urgent, I actually go to my colleagues and talk directly with them.

Even if employees do not use the support forum themselves, they say that it is an important tool since customers can raise questions and issues with the help of it. Employees use the support forum to structure incoming customer issues. Yet, when it comes to answering those issues, employees rather contact fellow workers personally to discuss possible solutions.

The fact that employees do not exploit management's idea of formal knowledge sharing via IT systems becomes further evident in employees' stories about the customer relations management system. The system is not accepted by sales employees, as two employees affected evidence: "I never fill out what I talked about with the customers, that's a waste of time". Those employees mention in the interviews the need for customer-specific information and deeper relations with the customers to serve customers appropriately. If sales employees need advice how to proceed with a specific customer, they go to their fellow workers and discuss the situation.

Employees neither use the support forum nor the customer relations management system the way it is prescribed by management. This indicates that employees do not prioritise the use of provided IT systems. Most employees point out that the great amount of travel time spent on visits to customer in all the countries SPS is operating in, keep them from doing formalities. Employees rather look for quicker and less formal ways to get in contact with the fellow workers they need to speak to. Moreover, SPS' employees claim that the information shared within the IT systems is too short and explicit in comparison to the extensive information employees need to share with each other. Since the provided systems are not seen as sufficient for employees' needs, they do not devote their time to these systems. If employees considered it meaningful, they would take the time to use these systems. Further, the fact that SPS' management is able to check if employees follow up in the support forum makes employees avoid the system because of "fearing to be controlled".

To sum up the above statements, SPS' management uses formal tools in order to structure and manage knowledge sharing (cf. Alvesson & Kärreman, 2001). In that way, management treats expertise and knowledge as it is individually held by employees. Manager's formal practices of knowledge sharing are their attempt at making the individual expertise located inside their employees explicit; hence converting tacit into explicit knowledge (cf. Nonaka, 1991; Nonaka, 1994; Nonaka & Takeuchi, 1995; Hedlund, 1994). Management only perceives that knowledge sharing takes place within the organisation if it is done in a formal way, namely if something explicit results which management can prove. Hence, management relies on technology for establishing formal knowledge sharing among employees (cf. Davenport et al., 1998; Argote & Ingram, 2000; Minbaeva et al., 2003). However, management is not aware of the fact that their formalisation of knowledge sharing is just a logical tool that helps to structure and share knowledge, but not in accordance with how the world is actually built (cf. Luhmann, 1995; Czarniawska, 2001).

As seen from the above, employees' stories reveal that there is a gap between the intended and the actual use of formal tools. Employees work their way around guidelines, meetings and IT systems. This indicates that managerial tools are insufficient for employees in the way the tools are intended to be used by management. Guidelines are insufficient due to their static and preset content, which is not in line with employees' being exposed to changing contexts when facing work issues. Hence, employees adapt and transform the information given in corporate guidelines. Meetings are insufficient since members of a community of

practice are not present at the same meeting. Since management strives to formalise knowledge sharing, it organises meetings according to job descriptions and not in accordance with communities of practice. Participating employees extract ideas from meetings and develop these ideas further within their communities of practice. In this way, employees make sense of the information shared during formal meetings by incorporating it into common stories with community members (cf. Orr, 2006; Weick & Roberts, 1993). IT systems are perceived by employees as insufficient since it is not possible to share tacit knowledge in them. Employees work around given IT systems and share information during informal discussions and storytelling (cf. Orr, 1996; Wenger, 2010). Moreover, management's ability to control employees' work within the IT systems raises an issue of power, the "Foucauldian Panopticon", where everyone is placed under surveillance (Foucault, 1995). This is in marked contrast to the way communities of practice work within SPS and leads to the fact that employees avoid the IT systems. In communities of practice, this type of surveillance is indirectly situated within the development of the community (Wenger, 2010; Lave & Wenger, 1991). Hence, there is no direct surveillance in communities of practice performed by individual members since membership is determined by identity (cf. Wenger, 1998).

Altogether, management's attempts at formalising knowledge sharing differs markedly from employees' practice of informal knowledge sharing.

### **Discussion: Management's Possibilities of Influencing Knowledge Sharing**

Our findings have shown that management's and employees' practices of knowledge sharing diverge. Many scholars argue that informal knowledge sharing is the way of everyday organising within companies (Yanow, 2006; Lave & Wenger, 1991; Orr, 2006; Ward, 2000; Bechky, 2003; Dixon, 2002). Hence, if management wants to influence knowledge sharing at all, it must realise and accept that knowledge sharing takes place informally.

Informal knowledge sharing is a major knowledge sharing tool used within communities of practice (Wenger et al., 2002; Orr, 2006; Lave & Wenger, 1991). Scholars argue that communities of practice develop naturally (McDermott, 1999; Lave & Wenger, 1991; Wenger, 2010) and an organisation can only support and nurture communities of practice, and not command and control them (Ward, 2000). However, our case shows that management locates knowledge sharing in a different, more formal place and not within communities of practice. Consequently, management prescribes a formal infrastructure to control and command knowledge sharing within organisations. This is in marked contrast to communities of practice who develop a shared practice in order to share knowledge (Wenger et al., 2002; Wenger, 2010). Shared practices are often informal like routines, best practices and stories (Wenger et al., 2002).

Moreover, some scholars stress that an organisation should support the identification of potential communities for creating and sharing knowledge (Wenger & Snyder, 2000; McKenzie & van Winkelen, 2004), since this enables community members to effectively apply their competencies (Wenger & Snyder, 2000). As our case shows, when management refers to work groups, as a kind of community, it has meetings and education courses in mind. For these, participation is scheduled to formal job descriptions and does not consider employees' individual interests and competence. Contrastingly, employees prioritise sharing knowledge

with people they assess as competent (Wenger, 2010) and with whom they share interest in a specific branch of knowledge (Wenger et al., 2002; Anfara & Angelle, 2008). Hence, employees share less information during these formally prescribed meetings and education courses at which their favoured fellow workers do not participate. The question arises how communities of practice could be managed and identified if communities of practice actually develop by people sharing the same interest and recognising each other as competent (cf. Wenger, 2010; Wenger & Snyder, 2000; McKenzie & van Winkelen, 2004). Those identification activities within communities are based on employees' tacit knowledge, which employees usually do not share with management and which might be hard to make explicit. The conversion of tacit into explicit knowledge can be achieved with metaphors, according to Nonaka (1994). Metaphors are defined as a word that includes two contradictions (Nonaka, 1994). These contradictions, which result from converting employees' tacit knowledge into explicit knowledge might make it more difficult for management to identify potential communities.

Further, to develop communities of practice is challenging since not only management needs to see the heightened value of this but also the employees in order to be motivated to participate (McKenzie & van Winkelen, 2004). Applying this in practice, our case indicates that management prefers formal tools in order to improve knowledge sharing. But employees neglect these tools since they do not see much value in them. Considering the argument of McKenzie and van Winkelen (2004) of finding something both management and employees see a heightened value in, it can be assumed that if both employees and management are not allowed to suggest such tools themselves, they would probably not see value in them. We assess that the probability of finding tools which all organisational members, management and employees, see a heightened value in is considerably low. Altogether, we conclude that management's attempts at formalising knowledge sharing and employees' informal practice of knowledge sharing are paradoxical.

Paradoxes develop when contradictions meet interdependencies (Czarniawska, 2001). We argue that the contradiction stems from managers' need to control knowledge sharing in such a way that they can trace it and afterwards translate knowledge sharing expenses into financial terms. We see the interdependence in the managers' and employees' need of knowledge sharing taking place. However, the way management wants knowledge sharing to take place diverges greatly from the way employees share knowledge. Hence, we claim that the paradox arises through management's and employees' diverging practices of knowledge sharing. This is in line with Luhmann (1995) and Czarniawska (2001) who maintain that logic only helps to structure knowledge sharing but is not in accordance with reality. Alvesson and Kärreman (2001) argue that knowledge and management are an odd couple, hence an oxymoron.

In order to explain the divergence, we introduce the concept *informality meets formality*, meaning that management's attempts at formalising the informal knowledge sharing of employees leads to employees informalising the formal way of knowledge sharing proposed by management. In other words, employees *de-formalise* the formal knowledge sharing tools provided by management. Some scholars investigated the consequences of the diverging knowledge sharing practices (Nonaka & Takeuchi, 1995; Orr, 2006; Duguid, 2008). Orr (2006) and Duguid (2008) argue that management has no direct influence on how employees share

knowledge. Nonaka and Takeuchi (1995) contend that managerial tools have a limited influence on knowledge sharing among employees. We aim to explain this further, showing that the formal managerial tools play a central role when employees share knowledge since they do use those tools but in a different way than intended by management.

### **The De-Formalisation of Knowledge Sharing**

Our case demonstrates that knowledge sharing is highly personal since personal contact is needed in order to get a detailed and shared understanding of each other's opinion when discussing work issues (Orr, 2006; Ward, 2000; Bechky, 2003). Yet, this employees' informal approach is in vivid contrast to management's idea that knowledge sharing should be done formally via guidelines, manuals, education courses, meetings, IT systems, and alike.

Corporate guidelines, manuals and databases, which we refer to as corporate instructions, prescribe how employees should work according to managers. Yet, as our case shows, employees do not follow corporate instructions (see also Suchman, 1987). This springs from employees' need to improvise, customise and transform in order to fulfil their tasks adequately, since employees are constantly confronted with different contexts (Suchman, 1987; Patriotta, 2003; Brown & Duguid, 1991). Since intuition and interpretation are essential here (Suchman, 1987), this indicates that the context shapes the creation and sharing of knowledge (Patriotta, 2003; Brown & Duguid, 1991). In those changing contexts, managerial tools are insufficient for employees since they consider corporate instructions too general and static. In order to fulfil work tasks adequately, employees need individual adjustments, which employees develop together with their fellow workers by sharing mutual know-how and stories during informal discussions (see also Orr, 1996). Thereby, employees use corporate instructions but in an adapted way. As our case shows, employees perceive presented corporate instructions as 'raw material', which employees need to transform to make that corporate instructions useful. In that way, we suggest that employees try to understand corporate instructions and then decide that it cannot be used the way it is, since it is insufficient. The intentions of management and the actual use by employees of corporate instructions diverge (cf. Suchman, 1987). This divergence occurs because management intends the corporate instructions to make knowledge sharing faster and easier for employees. Employees, on the other hand, need adaptations because they are confronted with complex and non-static work issues which cannot be solved with static information and instructions given in guidelines and other corporate instruction tools. However, as our case shows, employees need to have the corporate instructions at their disposal so that employees have a starting point and can transform information the way employees need it. The transformation of corporate instructions takes place through employees mutually adapting it with their fellow workers.

A further managerial tool for knowledge sharing are meetings, education courses and trainings; we refer to those as corporate consultations. Employees' formal job descriptions determine the participation in those consultations. Yet, our case shows that employees share less information in those consultations (see also Orr, 1996). Employees share knowledge with fellow workers whom they see as competent and with whom they share an interest (Wenger, 2010; Wenger et al., 2002). Thus, employees share knowledge with fellow workers with whom they are in communities of practice (Wenger et al., 2002; Lave & Wenger, 1991). There, knowledge is mostly shared informally, for instance by storytelling (Orr, 2006; Orr, 1996).

However, those fixed and prescribed consultations by management determine participation and the way of communication, which is in marked contrast to communities of practice and the way communities share knowledge. We will demonstrate this contrast with two different scenarios both showing that a suboptimal situation is reached by corporate consultations.

First, corporate consultations do not necessarily include members who perceive each other as competent. When members of a community of practice do not participate in the same consultations, knowledge sharing is reduced, since individuals only share knowledge when they see an increased value in it (cf. McKenzie & van Winkelen, 2004). Employees recognise an added value when they talk to fellow workers they perceive as competent and share an interest in a domain of knowledge with (Wenger, 2010; Wenger et al., 2002). Second, when the majority of participants of corporate consultations are from the same community of practice, those participants most likely use storytelling for communication (see also Orr, 1996). Participants who do not belong to the community will not benefit from those consultations, due to the boundaries like storytelling, for example (Wenger, 2010; Hislop, 2013). Further, the knowledge of the outsiders might not be accepted by community members since outsiders may be excluded (Hislop, 2013; Wenger, 2010). Hence, both outsiders and community members face a less than perfect situation for knowledge sharing during those corporate consultations compared to a situation where the employees could choose their partners themselves. However, information is still shared during consultations which is necessary for employees to extract and use later on, discussing it and developing it further with fellow workers they perceive as competent (cf. Wenger, 2010). Employees do not see those consultations as unnecessary. Instead, employees need them to get inspired by the information shared at these consultations.

Moreover, corporate intranets, support forums and information management systems, which we refer to as corporate IT systems, are a further managerial tool for formalising knowledge sharing within companies. Yet, as we have seen, employees share knowledge mostly informally and verbally with fellow workers (Orr, 1996; Ward, 2000; Bechky, 2003; Dixon, 2002; Lave & Wenger, 1991). Corporate IT systems determine the kind and amount of knowledge that can be shared within those systems. Some scholars argue that the kind of knowledge which can be shared via IT systems is explicit knowledge (McKenzie & van Winkelen, 2004; Brown & Duguid, 1998; Ward, 2000).

As our case shows, corporate IT systems are not appropriate for employees to share their knowledge adequately, since tacit knowledge cannot be shared within those systems. Thus, employees neglect IT systems and work around those systems, seeking out fellow workers in communities of practice in which knowledge is shared informally (cf. Ward, 2000; Orr, 1996). Yet, we claim that provided IT systems are still acknowledged by employees. On the one hand, employees consciously assess those systems as insufficient and time-consuming and thus search for more effective ways to share knowledge with their fellow workers. On the other hand, employees communicate with people outside their community via IT systems where explicit knowledge is in focus.

Altogether, the above descriptions of management's and employees' diverging practices of knowledge sharing indicate that both practices are central for knowledge sharing to take place within organisations. We argue that knowledge sharing takes place within

organisations by employees de-formalising managerial tools. Thereby, employees use three practices to de-formalise the formal: *transformation*, *extraction* and *avoidance* (Figure 1).

Corporate instructions, captured in guidelines, databases and similar material, are de-formalised by employees *transforming* the given corporate instructions into work material through mutually developed adjustments. While doing this, employees keep given corporate instructions as foundation of their 'end product'.

Information, shared during corporate consultations like meetings and education courses, which is perceived by individual participants as interesting, gets *extracted* by participants to share it with fellow workers in a different context. Thereby, extracted information gets further developed through getting together with community members to discuss shared interests and ideas. Hence, corporate consultations are de-formalised by employees.

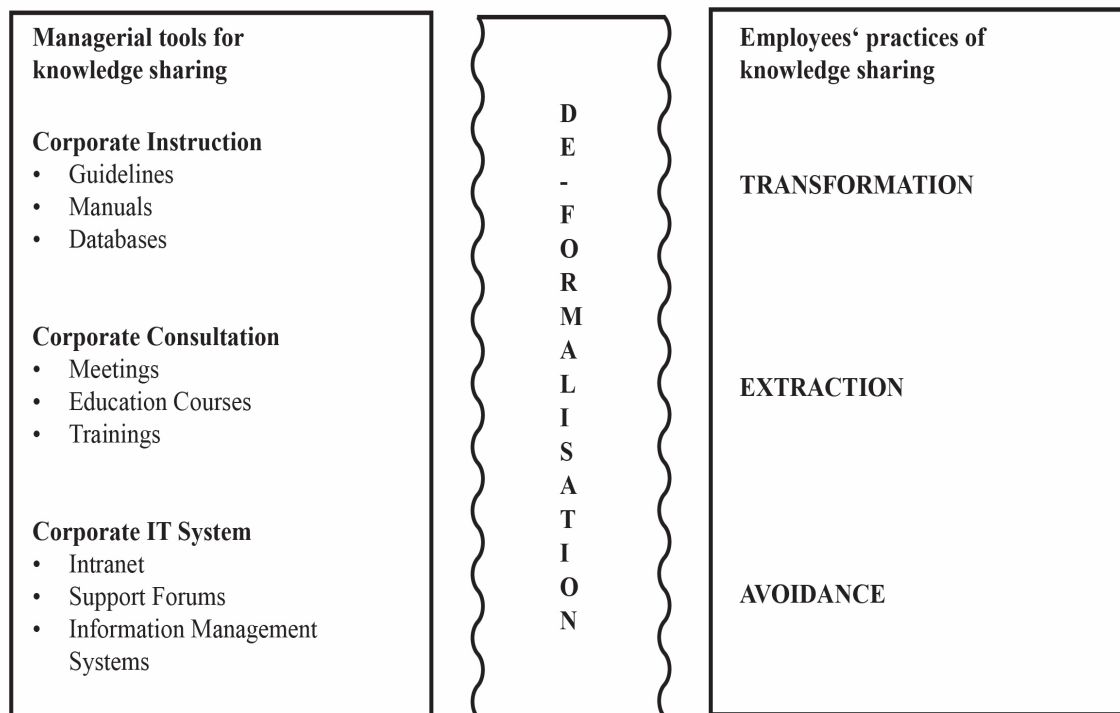
Corporate IT systems, like support forums and information management systems, are *avoided* by employees since employees work around these IT systems. This leads to employees sharing knowledge informally while finding together new ways of solving work tasks; hence, the de-formalisation of corporate IT systems.

For all three de-formalisation practices it needs to be noticed that these practices are applied by a group of people, most likely in a community of practice, who perceive informal knowledge sharing as more meaningful than working with just given formal managerial tools.

In comparison with corporate instruction and consultation tools, corporate IT systems are the only tool which would not have a direct impact on informal knowledge sharing if it did not exist within an organisation. If management removed instruction or consultation tools, employees could neither transform nor extract information from these as described above. On the contrary, if IT systems were removed, employees would still do the same within their communities of practice.

Especially the practices of transformation and extraction might remind the reader of the translation theory. However, it is not our purpose to study how networks and power aspects within networks are constructed. We aim to investigate how the knowledge sharing process and issues around that process unfold within organisations. Applying communities of practice as theoretical tool to investigate knowledge sharing made it possible for us to reveal the de-formalisation process and to provide insight into the consequences of managers' and employees' diverging practices of knowledge sharing.





**Figure 1:** The De-Formalisation Process

**Management Can Influence Knowledge Sharing But Not the Way Knowledge Is Shared**

Taking up the above discussion, Wenger and Snyder (2000) argue that it is challenging for an organisation to develop and sustain communities of practice as well as to integrate them with the rest of the organisation. This argument implies that management has no possibility of actively influencing knowledge sharing within communities of practice. Yet, we argue that there is no actual need for management to actively influence the knowledge sharing process since both employees and management have the same need, namely, that knowledge is shared. Management's instructions of formal knowledge sharing and employees' actual way of informal knowledge sharing form a paradox which is fruitful at the same time (cf. Czarniawska, 2001). We argue that the paradox is fruitful since the diverging practices lead to knowledge sharing actually taking place within organisations. Managerial tools inspire employees to work around and adapt those and in that way encourage employees to share knowledge. Informal knowledge sharing is not noticed by management and is a rather subconscious but at the same time fruitful practice taking place automatically within organisations (cf. Orr, 2006; Ward, 2000; Lave & Wenger, 1991). As a result, management, by the use of formal tools, gives the impetus to knowledge sharing within the organisation but it cannot influence the way knowledge is shared.

We suggest that management only has passive influence on knowledge sharing. Only if management acts passively, it does not interrupt the natural development of communities of practice. By passive we mean that organisations provide formal knowledge sharing tools but do not intervene in how employees share knowledge. Consequently, employees keep on working around and adapting those tools when sharing knowledge, but in a different way than

management intends knowledge sharing to take place. Hence, managerial tools enable employees to share knowledge in a better, more effective way than without tools. Therefore, we state that it is best if management is passive to the divergence of knowledge sharing practices. If management were active, it might strive to actively back communities. This could be counteracting the natural development of communities, in the spirit of ‘the opposite of good is good intentions’.

Yet, management should appreciate knowledge sharing between employees taking place the way it does, namely informally. Following Czarniawska’s (2001) explanation of organising paradoxes, we agree that management needs “to re-present organizational practices in a way that will demystify them while revealing their everyday dramatism” in order to support knowledge sharing within organisations. However, management needs to be aware that its way of re-presenting organisational practices, in terms of knowledge sharing, is not in accordance with how the world is built (Luhmann, 1995; Czarniawska, 2001).

## **Conclusion and Implications**

At first glance, knowledge sharing within an organisation seems to be a simple task if you follow management’s instructions. In order to manage knowledge sharing, management uses formal tools to structure it (Alvesson & Kärreman, 2001). However, it turns out that knowledge sharing is more complex than initiated by management (Orr, 2006; Duguid, 2008; Yanow, 2006; Lave & Wenger, 1991). Management’s attempts at formalising knowledge sharing are not in accordance with how the world is actually built (Luhmann, 1995; Czarniawska, 2001). In organisations, knowledge sharing occurs through continuous informal discussions and storytelling within communities of practice (Orr, 2006; Wenger et al., 2002; Wenger, 2010).

Communities of practice evolve subconsciously and naturally within organisations (Lave & Wenger, 1991; McDermott, 1999; Wenger, 2010). We argue, in line with Czarniawska (2001), that management’s and employees’ diverging practices of knowledge sharing are paradoxical. In achieving our first research aim, investigating how the knowledge sharing process unfolds in organisations, we contend that employees de-formalise formal managerial tools to share knowledge informally. Hence, we claim that the de-formalisation of formal tools by employees plays a central role in knowledge sharing. We call de-formalisation a process, since employees adapt management’s formal practices in order to share knowledge informally.

We found that employees’ de-formalisation practices occur in three ways, namely *transformation*, *extraction* and *avoidance*. First, employees use corporate instructions as a starting point and subsequently transform them to accomplish their on-going changing work tasks. Second, employees extract information gained during corporate consultations to share and develop it within their communities. Third, employees avoid knowledge sharing within corporate IT systems and work around those to share knowledge informally and more effectively.

Our second research aim, based on the first, was to get a deepened understanding of the consequences of employees’ and management’s diverging practices of knowledge sharing, which constitute a paradox (cf. Czarniawska, 2001). As we have seen, knowledge sharing takes

place by employees de-formalising formal managerial tools. Paradoxically, management cannot actively influence the way knowledge is shared but can and should support knowledge sharing. This because both management and employees see the need for knowledge sharing within organisations.

This paper contributes to the situated learning literature in several ways. Although scholars have argued that managerial attempts at formalising knowledge sharing diverge from employees' practices (Orr, 2006; Duguid, 2008; Yanow, 2006), research in an organisational context is limited (Nicolini et al., 2003; Argote et al., 2000; Rowley, 1999). Moreover, little attention has been paid to the question what consequences this divergence of knowledge sharing practices has (Orr, 2006; Duguid, 2008). Our study responds to the call for both more organisational examples and a study of the consequences. We have investigated how employees share knowledge with each other provided with certain formal managerial tools. We argue that employees de-formalise formal tools to share knowledge informally. With the de-formalisation practices by employees, this study proposes a new model in regard to the practice of informal knowledge sharing and to the consequences that the diverging practices of employees and management have. Hence, this study contributes a new model of informal knowledge sharing compared to previous research performed within the field of situated learning.

Several managerial implications can be drawn from this study. We argue that management can influence the fact that knowledge sharing takes place in organisations. However, it cannot influence the way knowledge is shared among employees. Thus, this study implies that management needs to realise and accept that knowledge sharing mainly takes place informally, while the possibilities of influencing this process are limited. Organisations can only support and nurture communities, not command and control them (Ward, 2000; McDermott, 1999).

We further argue that management can passively support knowledge sharing within organisations. By passive we mean that organisations should offer group rooms and structure employees' tasks in such a way that employees have enough space and time to get together with community members to share knowledge. This could have a positive effect on knowledge sharing, since this does not interrupt the natural development and knowledge sharing of communities of practice. Overall, we believe that management should continue providing corporate instructions, corporate consultations and corporate IT systems for employees. This leads to a favourable situation for both employees and management. First, employees can effectively share knowledge with each other by adapting and working around those tools. Second, management can express knowledge sharing expenses in financial terms and fulfil the need of structuring knowledge sharing. In order to follow our implications appropriately, management should not see this study as an incentive to remove or over-extend formal knowledge sharing tools. Finally, we advise managers to find a balance concerning the introduction of formal tools for knowledge sharing - not too much and not too little.

This study has a few limitations. Firstly, interviewing was chosen as the main data collection method whereby observations were included only to a limited extent. It might have been interesting to study the process of knowledge sharing by observations mainly. Secondly, this study was undertaken in a specific organisation operating in a specific field, the IT industry. Since our discussion is based on findings mainly gained from studies within the

technical sector, the de-formalisation practices we found might be a specific occurrence for this sector. Thirdly, this study considers only knowledge sharing within communities of practice and neglects the knowledge sharing practice between different communities. Fourthly, the de-formalisation process evident in this study is based on one specific theoretical concept, namely communities of practice as part of the situated learning literature.

In order to gain deeper insights and to be able to assess the three de-formalisation practices in a more general matter, we suggest that more research should be conducted into the meaning of informal and formal knowledge sharing practices within organisations. Further research should include organisations of differing sizes, as well as organisations operating within the IT sector and other industries. Additionally, our case shows that employees need the formal managerial tools in order to de-formalise them and share knowledge with each other. In case other researchers can prove the practical significance of the de-formalisation process, the question remains what happens if management does not provide any formal tools or if management provides too many formal tools. Thus, it is of interest to study the de-formalisation process further given both the previous scenarios.

Furthermore, it is of interest to investigate if there are further de-formalisation practices. These suggestions for future research could contribute to the situated learning literature in terms of a deepened understanding of the formal - informal knowledge sharing practices within organisations. In a possible further examination of the de-formalisation practices, we suggest a translation theory perspective. We hope for gaining further evidence of the significance of the proposed de-formalisation process in its network, which consists of different actants like managers, employees, concepts and tools, when examining this process from a translation theory perspective.

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