

Corporate Social Networking Sites – Modes of Use and Appropriation through Co-Evolution

Alexander Richter
Cooperation Systems Center Munich
Bundeswehr University Munich, Germany
Email: alexander.richter@kooperationssysteme.de

Kai Riemer
Discipline of Business Information Systems
University of Sydney, Australia
Email: K.Riemer@econ.usyd.edu.au

Abstract

In this paper we investigate the phenomenon of online social networking within organisations. While Internet Social Networking (ISN) as a public phenomenon has drawn considerable interest from the academic community, little knowledge exists about the potentials and modes of use of social networking sites (SNS) that emerge within organisations. We draw on three cases of SNS implementation and use in large, knowledge-intensive organisations. A cross-case analysis reveals a set of three modes of use of corporate SNS, which we discuss in light of existing literature on SNS use in the public sphere. More importantly, we reason on the open and flexible nature of these technologies and discuss implications for organisational implementation. Striking differences in the frequency of use and perceived role of SNS across the cases lead us to reason about the importance and ways of embedding open technologies with existing ICT-enabled work practices in the organisation by way of co-evolution of systems and their use.

Keywords

Social Networking, Social Software, Corporate Social Networking, Social Relationships, IS Appropriation

INTRODUCTION

Over the past five years so-called social networking services or sites (SNS) like facebook.com or myspace.com have gained widespread popularity among Internet users for establishing and maintaining social relationships. Internet Social Networking (ISN) as a public phenomenon has drawn considerable attention from scholars. Usage patterns, behaviour and relationships of Internet users active in these open network platforms have already been investigated in some detail.

Meanwhile, corporations have also started to develop an interest in social network platforms (e.g. Dimicco et al. 2009). The potential usefulness of SNSs in a corporate environment becomes clear by reflecting on the ongoing changes to the ways in which organisations operate and value creation is organised. For example, increases in global distributed work, especially in large organisations, make it harder to locate people with specific competencies and renders the establishing and maintaining of social relationships with remotely located peers a time-consuming matter. Also, with their capabilities to connect people and create awareness for the distributed competencies and knowledge of people, SNSs seem potentially attractive for knowledge-intensive organisations. While corporations have already experimented with technologies for supporting knowledge workers in finding others for accessing embedded corporate knowledge, albeit simpler artefacts in the form of so-called 'yellow pages' (see e.g. Ackermann et al. 2003; Becks et al. 2004), our three case companies have reported the intent to support distributed knowledge work using SNSs.

Against this backdrop, the question arises to which extent it is possible to transfer SNS features (technical view) from the public Internet to the realm of corporate intranets in order to facilitate similar usage patterns (social view) by creating what we term corporate social networking sites. Hence, we argue that, much like numerous companies have shown interest in other applications from the field of social software - like wikis and weblogs - for supporting collaboration and knowledge management of employees (cf. e.g. Buhse and Stammer 2008;; Cook 2008), corporate SNS hold promises for supporting social networking among employees of large organisations. Another reason, why organisations are eager to explore possibilities for using such social software technologies lies in the fact that for many young employees (also known as 'digital natives' cf. eg. Prensky 2001) a productive working life seems hard to imagine without contemporary technologies such as blogs, wikis and social networking sites (Schooley 2005). Already, several large-scale studies (e.g. Bughin and Manyika 2007;

Young et al. 2008) underline that especially large enterprises have acknowledged this need and thus are very interested in supporting their employees with platforms that facilitate social networking. However, while first corporate SNS make inroads to large and medium-sized companies, the phenomenon is a very new one, which is still understudied and not well understood. We argue that, if companies want to deploy SNSs in a corporate context it is inevitably necessary to develop a better understanding for their potential role, use, and benefits.

To this end, in this paper we draw on data from three cases of corporate SNS use in large technology-focused, knowledge-intensive organisations, namely IBM, Accenture and SAP. We carried out semi-structured interviews with users and managers of the respective corporate SNSs in all three companies. Based on an analysis of the resulting qualitative data we were able to gain insights into typical modes of use of SNS in a corporate context and also issues of implementations and appropriation. As such, the aim of our paper is two-fold: Firstly, we explore modes of use of SNSs in a corporate context, which show possible ways of using SNSs for improving distributed coordination and collaboration in projects and knowledge work. Secondly, and even more importantly, we explore implications of the openness and flexibility of SNSs with regards to systems introduction and diffusion. Correspondingly, we identify different ways of introducing such systems to the corporate context.

The paper proceeds as follows: In the next section we briefly explain the phenomenon of social networking by characterising social networking in the public sphere and in the corporate context. Next, we give an overview of our study, i.e. the research approach and the three cases. We then identify and describe three modes of corporate use of SNSs that emerged from our data across the cases and discuss differences with usage patterns of public SNSs. Drawing on differences in the frequency of use and diffusion between the cases, we then reason on the role of different ways of introducing the systems and discuss implications of the nature of SNSs as open, flexible platform technologies. We conclude with a summary and an outlook on future research.

INTERNET SOCIAL NETWORKING

Much like SNSs have become popular among Internet users, the topic also draws increasing interest from the academic community, especially from scholars in Information Systems. Most existing studies however concentrate on social networking on the public Internet, i.e. on social networking in open platforms such as myspace.com for personal, leisure-time use or LinkedIn or XING for professional networking. We will briefly summarise findings of existing research in this area before we set out to investigate the phenomenon within the organisational boundaries of organisations.

Internet Social Networking in the public sphere

Internet Social Networking (ISN) can be understood as the phenomenon of social networking on the Internet; it subsumes all activities by Internet users with regard to extending or maintaining their social network. As such it needs to be distinguished as a phenomenon from its manifestations in various social networking sites (SNS) (Richter et al. 2009). According to Boyd and Ellison (2007) SNSs are “web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system”. Koch et al. (2007) define SNSs as “application systems that provide their users with functions to represent one's own person (usually in a form of a profile) and enable furthermore to keep in touch with other users (and thus the administration of one's contacts)”.

A considerable body of research exists, which focuses on publicly available SNSs; for an overview see (Boyd and Ellison 2007). Studies have focused on different sites (e.g. Schaefer 2008), have focused on different aspects of social networking within the platforms (e.g. Ellison et al. 2007) and shaped our understanding of the specifics of SNSs (e.g. Donath and Boyd 2004; Kreps 2008), such as impression management (profiling) (e.g. Lampe et al. 2007), privacy issues (e.g. Gross and Acquisti 2005) or the proliferation of special interest networks (e.g. Ploderer et al. 2008). Moreover, a range of different ways of using SNSs or motivations for use can be identified across the various existing studies. Such use categories represent mainly the private use of public SNSs (i.e. for personal matters) and thus mainly focus on private (or so-called leisure-time) SNSs rather than professional SNSs (Richter et al. 2009). In a comprehensive empirical study of public SNSs, Richter and Koch (2008) identified six different SNS functions or use categories:

- 1) People use SNSs for self-representation, i.e. for *identity management*, by which users describe themselves in sometimes elaborate detail in that they create personal profiles or upload photos.
- 2) People use SNSs to create and maintain their personal networks of contacts or friends as part of what is termed *contact management*.
- 3) People make use of the possibility to search the network according to different criteria (e.g. name, interests, company) and to pro-actively receive recommendations of interesting contacts by the SNS (*people search*).

- 4) SNS users gain *context awareness*, i.e. awareness of shared contacts, shared interests or former affiliations, which helps to establish a sense of belonging and togetherness.
- 5) SNSs provide users with possibilities to communicate, i.e. for direct (e.g. messages) or indirect (e.g. through photos or postings in bulletin boards) *exchange* of information.
- 6) Users become aware of the activities and situational presence of others in the personal network through messages left on personal message boards or through communication (*network awareness*).

According to the authors, this framework of six use categories describes the common manifestations of social networking across different public SNSs. The findings are backed by other research studies in the domain, which have also found similar modes of use across these six categories, albeit with sometimes different emphasis or importance of certain use categories, e.g. in various use contexts. For example, studies have pointed to the importance of self-presentation by way of using both profiles (e.g. Kreps 2008; Lampe et al. 2007) or the lists of friends (e.g. Donath and Boyd 2004). In this context, Larsen (2007) in an ethnographic study found that such identity management behaviour in SNSs composes of "self-construction" i.e. the self-directed entry of profile data by the user and "co-construction" i.e. a second person adding information about the user (e.g. on his wall). Well in line with the latter aspect, Boyd and Heer (2006) in an analysis of the use of the SNS friendster.com further found that the transition between communication and self-representation is fluent. Contact lists or bulletin boards not only serve as ways for (information) exchange but also support identity management. At the same time profiles not only support identity management, but also help to communicate.

Moreover, Lampe, Ellison and Steinfield (2006) asked more than 1400 freshmen students for their intentions to use Facebook. The major finding was that people are more interested in learning more about a person they already know than to get to know new contacts, which the authors term social browsing. This is also confirmed by several other studies, such as one in the Netherlands with users of the SNS Hyves, in which the main reason to use the SNS was the maintenance of existing networks of friendships (Utz 2008) or in a study of student SNS usage behaviour in German-speaking countries (vom Brocke et al. 2009). Others have referred to this as maintenance of weak tie networks (e.g. Paul and Brier 2001; Schaefer 2008). Consequently, SNS users show considerably more interest in contact management and in learning about the people they already know (context awareness) (Paul and Brier 2001), than in using SNSs to establish new contacts.

The picture is slightly different in business-related, professional use of public SNSs. Here, for example, searching for other people seems to be more important, as SNSs are perceived by some as a gateway to new jobs or business contacts (King 2006). Henceforth, identity management is carried out very carefully (Schaefer 2008). This is manifested in the profile description as well as in the individual choice of contacts (Thew 2008). The use of leisure-time SNSs in contrast can be characterised as being much more playful and communication-based (Sledgianowski and Kulviwat 2008).

In sum, private use of SNSs is primarily driven by the desire of users to remain in contact, which means to stay informed about and communicate with others in their social network. Thus, users want to present themselves to others, to communicate with them. In contrast, in professional use people seem to more actively search for new contacts and to go about managing their identity in a different way.

Use of SNSs in the corporate context

While an abundance of research has emerged on the use of public SNSs, both for private and professional use, to our knowledge only very little research exists so far that investigates the usage of SNSs in a corporate context, i.e. within the boundaries of (large) organisations. Exceptions are the following two studies.

Skeels and Grudin (2009) studied the enterprise use of SNSs among Microsoft employees, albeit focusing again on public SNSs, namely facebook.com and linkedin.com. They examined attitudes and behaviour and found extensive social and work uses, with complex patterns that differ by software system and networker age. While the authors anticipate a rapid uptake of social networking technology by organisations, the findings of such studies cannot immediately be transferred to the corporate domain as public SNSs differ significantly from internal SNSs, in that for example all information and communication of employees in such platforms are being held outside the company's firewall and sphere of influence. As this is likely to impact on people's use of the platform, companies take to setting up their own SNSs for supporting the establishment and maintenance of relationships within the company's boundaries, as is reflected in our cases (see below).

Dimicco et al. (2008; 2009) have carried out what so far seems to be the only case study on corporate social networking. In doing so, the authors research social networking in the context of IBM and focus on a SNS called "Beehive". This SNS was designed to support relationship building among people within IBM, albeit with a rather private/personal focus (Dimicco et al. 2009). The authors identified three motives for using Beehive: users wanted to (a) connect on a personal level with their co-workers, (b) advance their career with the company, or

(c) do some campaigning for their projects. While the study provides some insights into corporate use of SNSs its particular focus was not on facilitating better coordination and collaboration in the context of knowledge-intensive projects, but on encouraging people to build relationships in a less work-focused environment. Thus, with our work, we want to make a first contributing to gaining a better understanding of how professionals inside of a company use SNSs to support work-related matters and also provide first insights into how SNS can be implemented and deployed within the corporate intranet.

STUDY OVERVIEW

Research approach

Due to the apparent lack of established knowledge in our field of interest our study is based on an exploratory case study design for facilitating a better understanding of the phenomena under study (Yin 2003; Eisenhardt and Graebner 2007). Generally, the case study method is characterised by a situation that is not (completely) controlled by the researcher, and in which the borders between the phenomenon of interest and its context are unclear. A cross-case analysis, as we applied, brings with it the advantage of identifying complex patterns of possible influence factors not only within specific cases, but also by comparing and contrasting differences across cases (Yin 2003).

As we wanted to study corporate social networking, in selecting our cases, we searched for large, multinational, knowledge-intensive organisations. Since our object of study is rather novel, the pool from which to select the cases was quite limited, as not many organisations have gained experiences in the field. Notwithstanding, we were able to find three organisations that were able and willing to share with us their SNS case examples: a technology company (IBM Corp.), a consultancy firm (Accenture Ltd.) and an enterprise software company (SAP AG) agreed to participate in our study. As Table 1 shows, we conducted 28 semi-structured interviews, which were between 30 minutes and 3 hours in length. Data collection took place between February and August 2008.

Table 1: Collection of data

Data	IBM Corp.	Accenture Ltd.	SAP AG
In-depth semi-structured interviews (with people responsible for SNS introduction and user monitoring)	2	2	2
In-depth semi-structured interviews (with users at different organisational levels)	8	8	6
Internal documents	X	X	-
External documents	X	X	X
Observations	X	X	X

We began every case study by conducting two interviews with employees responsible for the introduction of the SNS and for user monitoring, who provided background information on goals, implementation process, feature range etc. We then continued with six to eight interviews with users of the corporate SNS. In addition, we had access to internal documents, which we supplemented with externally available information, such as blog entries, articles from journals and newspapers, and others. All in all, the availability of different data sources, i.e. interviews, internal and external documents, and direct observations, allowed us to triangulate our findings within (and across) the three case studies (Yin 2003). All data was analysed using qualitative data and content analysis models such as coding and cross-tabling. An important basis for data coding and for identifying modes of use in the cases was the framework by Richter and Koch (2008), as described above.

Case descriptions

IBM is a globally operating technology corporation, which generated approximately 98.8 billion U.S. dollar turnover in 2007 with 386,000 employees in 170 countries. With an annual research and development budget of six billion U.S. dollars and several globally distributed development laboratories IBM has been the leading company in terms of patent applications for the last 15 years. As a consequence of growing requirements to the internal knowledge management IBM began in the mid-nineties to implement a phonebook-like application on the intranet, which was expanded continuously in subsequent years. In 1998, when the application resembled what can be described as an IBM-internal yellow pages application (a list of people and their contact details), it was named "Blue Pages" (BP). Because of the increasing integration with other internal services, among them the employee database, the application ensured timeliness and reliability of people-related data. An incremental development process of the application was pursued and for interested users prototypical expansion modules were made available in the years after. Thus, as early as 2006, and inspired by several Web 2.0 applications, the first interested users were able to use the functionality, which ultimately turned the Blue Pages into a social network-

ing service, among them the possibility of adding other users to one's personal network. Hence, while the existing service today is still called Bluepages, it has outgrown its static yellow pages character to resemble an SNS.

Accenture Ltd. is one of the largest management consulting companies for technology and outsourcing services with over 186,000 employees in 49 countries and annual revenues of 24 billion U.S. dollars in 2007. Especially for consultancy firms such as Accenture, the quality of services offered to customers correlates directly with the abilities and knowledge of the individual consultants. Thus, both individual skills as well as the motivation and ability to transfer knowledge from one project to another are essential, especially for younger employees who were hired in large numbers because of the strong growth in recent years. Therefore, the field of knowledge management is a priority in the continuing development of the firm. To this end, in September 2007 the company officially rolled out their own internal SNS, which they called the People Pages, with the aim to make the site "the one stop shop for people information" (internal document).

SAP AG is the world's leading provider of enterprise software and the fourth largest software vendor worldwide with 51,000 employees in 50 countries and annual revenues of 10 billion U.S. dollars in 2007. SAP sees itself as a knowledge-intensive enterprise, for which the ideas of its employees are crucial for survival in the ever-evolving software marketplace. Due to the increasing use of private SNS in the U.S. and based on an internal study, the design and innovation team of SAP labs Palo Alto, USA was assigned with the design of an SNS prototype. The idea was that the SNS should contain some private elements of facebook as well as typical business elements of LinkedIn in order to cater for both types of exchanges for all SAP employees. After six-months the design and development phase was completed in December 2006, and a beta version of the service, named Harmony, was made available to around 200 employees for testing purposes. Another six months later the platform was made available for all employees worldwide for productive use.

It is worth mentioning that the SNS platforms in the three cases are all relatively similar in terms of feature set and scope, as they all recreate the typical range of features of their public counterparts. As such, all three cases provide features necessary to facilitate use across all six categories of the Richter and Koch (2008) framework.

MODES OF USE

In the first step of our qualitative data analysis we aimed at eliciting typical modes of use of SNSs across the three cases. Hence, in this step we looked for commonalities by applying the Richter and Koch (2008) framework. From the data, the following three complementing modes of SNS use emerged (describing different user motives and the corresponding SNS uses): 1) identifying experts, 2) building personal context and 3) fostering existing relationships. We briefly describe the three usage modes using quotations from the interviews, before we discuss differences in corporate SNS use compared to the typical use categories of public SNSs.

Identifying experts and knowledge bearers

When asked to name reasons for using the SNSs, the most frequent answer across the three cases was to look for and find people who are able to help with a specific problem or to be staffed to a project. Hence, interviewees often referred to situations where they required orientation in a certain field of knowledge. In doing so, people needed to identify a specific role in another team or to estimate the experiences of a person formerly unknown. As one IBM user put it: "If BP did not exist, then I would have some problems, then I would have to run the hallways here to find out who is potentially in a team or the backup of someone or who is the manager." SNS users felt more comfortable knowing that they could simply use the SNS to navigate through unknown environments. Some expressed that they "experiment less and instead search who has already done something alike and ask them." While in SNSs typically several opportunities exist to identify experts, e.g. by pro-actively receiving recommendations of interesting contacts, users especially appreciated the possibility to simply search the network according to different criteria (such as expertise or team name). In fact, for some users the SNS had become "the main reference for everything I intern search for (whether the contact data or skill data)" (IBM user). Most notably, SNS users perceived a difference between yellow pages (or expert databases) and the corporate SNS: "What the human resource system says about you isn't who you really are. It says only 'I work in this team, I work in this group' [...]. Harmony describes a lot about who you really are and the people you work with." (SAP user) We conclude that this form of SNS usage facilitates the work-driven search for experts and knowledge bearers in order to help get on with their work (*people search*).

Building personal context

One of the notable potentials of SNSs use is to create a common context with other people, e.g. information about common contacts or interests. This context can contribute to create common trust among the users, which has been described as an essential ingredient for successful collaboration (cf. e.g. Kramer 1999). Respondents sometime mentioned a feeling "like I understand who the person is" (Accenture). For this reason they often ac-

cessed the personal pages in order to learn more about a person whom they did not know, before or after contacting a colleague the first time via mail or chat. As an Accenture user put it: “[...] you can quickly get a perspective of who you’re working with/speaking with; also, as it contains information like hobbies/interests, it’s often easy to strike up a conversation to build more of a bond.” Hence, people expressed that the personal information in the people profiles provided them with background knowledge of a person and thus can be seen as a lubricant for achieving a form of professional intimacy over a distance, which goes beyond what typically emerges from email or phone conversations: „It’s saving me quite some running... But it also satisfies my curiosity. [...] If I phoned somebody, I want to see afterwards with whom I’ve actually spoken“ (IBM user). Moreover, some employees also appreciated the possibility to create a deeper understanding of a person, after having read some blog posts or messages linked to from the profile page: „People Pages show me which documents got published, which discussions one has partaken in [...]“ (Accenture user). We conclude that SNS use can help providing the personal context needed as a complement to communication for facilitating the emergence of social bonds among people in the distributed work context (*context awareness*).

Fostering existing relationships

A particular characteristic of SNSs, which we already stressed in our literature review, is the opportunity to keep in contact with one’s existing personal network. In our cases people highlighted that, „Above all, I’m using Harmony to keep in contact internationally, because those are not accessible via XING and Facebook is used only by very young colleagues“ (SAP user). Hence, given the size of the organisations, the corporate SNSs are seen by most interviewees as a convenient and stringent way of maintaining the social network with colleagues (*contact management*).

However, when it comes to maintaining and staying in contact with one’s network, we expected the users to show more elaborate use of features that provide network awareness (see above), such as information about new developments, the activities or status messages of what one is doing. But it turned out that people were rather conscious of the potential impact of too much awareness and information about oneself: “For me that is modern voyeurism [...] It’s rather unpleasant if I enter something and everybody notices immediately what new thing I have.” (IBM user) Also, as this SAP user puts it, people were acutely aware that information in the SNS is not only available to one’s peers, but also to others in the organisational hierarchy: “I’m respecting what Harmony knows about me. If Harmony knows it, my boss, my colleagues and human resources know it [...]“ Well in line with these findings, people on the other hand seemed not to expect and look for such information on the SNS: “It doesn’t impact me to know what other people are up to. For instance, on Facebook, I don’t care to know the status of someone who is ‘picking their nose’ or ‘on a plane’. Perhaps if someone is on vacation, I would be interested to know their status.” (Accenture user)

Discussion

As shown above, we were able to identify three modes of use across all three cases. While these three categories, which describe the ways of using SNSs in the cases, correspond with three of the six use categories identified by Richter and Koch (2008), the other three categories are much less prevalent or not at all important to the users in our cases. For example, whereas the possibility to identify experts and to build a common context were widely acknowledged by the users, the potential of achieving network awareness was not realized to a significant extent. Communication via the SNS did not play any role at all and the self-representation on the platform only serves the purpose of enabling people search (e.g. being found) but is not an end in itself as is often the case in private SNSs, e.g. among teenagers.

Consequently, the usage in the three cases differs decisively from findings of studies of public sites where the key intention of SNS usage is to keep in contact with friends or colleagues and where functions to enable more immediate exchanges were used most frequently (ie. identity management and communication; see above). The reason for the lack of communication via corporate SNSs is likely to be found in the fact that people within organisations have other established means of communication. As SNSs become part of a larger ecosystem of communication and collaboration tools, people can draw on other tools for getting in contact, such as (mobile) phones, email or instant messaging. Especially in the IBM case people pointed out that when they wanted to get in contact with someone they found via the SNS they could check immediately their availability status using Sametime (the IBM instant messenger), which is tightly integrated with the SNS, and then get in contact.

In summary, the main differences to the ways people use public SNSs is that in the corporate context users put more importance in people search (establishing new relationships) and context awareness (get to know someone better), while being less interested in exchange and maintaining network awareness. Moreover the wish to present themselves seems to be less distinctive than with private SNSs. In the following, we will deepen our observations by an analysis of differences in diffusions and frequency of use across the cases.

DIFFUSION AND APPROPRIATION

In the second step of our data analysis we looked at differences between cases. As a result, most notably, a major difference was found in the frequency of use and degree of diffusion between the cases. While the Bluepages enjoy widespread use across the entire IBM organisation and are an integral part of people's work practices, the two other platforms are used much less frequently and have only been (partly) adopted by a quarter or one third of the total corporate population of SAP and Accenture. We discuss likely reasons for this difference and reason on the particular nature of SNS as open and flexible technologies.

Differences in diffusion and use frequency between the cases

As was already briefly mentioned in the case descriptions, while being quite similar in their scope and range of features, the three SNS differ significantly in terms of their development history. While the Bluepages emerged from a previous system and has been developed in a step-wise approach over the past years, the People Pages and Harmony have both been developed as new platforms and introduced since 2007. In essence, this difference turned out to be the major reason for the apparent differences in use frequency and diffusion. Whereas the Bluepages today are fully established in the company, the other two SNSs have not achieved their "break-through" with regards to diffusion. As our interviews show, the Bluepages are an integral part of the work practices of the IBM employees. Many users mentioned that they were using the SNS constantly and that they wouldn't know how to work without it. One user said: "The Bluepages create a different way of working, especially if you are not familiar in the domain." This statement clearly illustrates the attitude of many employees towards the Bluepages. Moreover, users appreciated that the SNS is easily available online and offline: „Actually, I have the whole of IBM more or less in my access, no matter where I am. That is of course a great convenience.“

In contrast, the People Pages and Harmony are used much less frequently. One user stated: „I work comparatively little with the People Pages, since I'm staffed for long-term projects. For new project proposals, I use them.“ This answer shows that the user didn't see any potential for using the People Pages when having a certain problem, e.g. where an experienced colleague might be able to help. Much in the same way, many users of Harmony did not report any day-to-day use of the people search as a possibility to identify colleagues on a daily basis: "It's not the business tool the people work with, but they experiment with it." Hence, while people search is being used for staffing new projects, the use as such is much less frequent.

As mentioned above the incremental development of the BluePages has been constantly pursued and prototypical expansion modules with new features were continuously made available on the IBM intranet. Interested users can thus experiment with incremental developments of the technology; as one of the IBM early adopters noted: "The BPs evolve and they are getting more and more interesting. Some people come and ask me: 'I heard there is something... can you show it to me, I am interested.'" This incremental, user-oriented development program has been described and termed by IBM as the so-called Technology Adoption Program (TAP). "TAP is an implementation of a new community driven IBM model for introducing and managing access to new technologies, within the IBM enterprise." (Alkalay et al. 2007) In this process, the user feedback flows directly back into the development of the Bluepages. Hence, the system has been growing with the feedback from users over time.

Consequently, we attribute the differences in diffusion and adoption to the ways in which the systems were developed and introduced in the organisation: emergence from within existing work practices on the one hand (IBM) and deployment as new platforms in the other two cases (Accenture and SAP).

Emergence in practice vs. technology deployment

In the IBM case, the SNS has grown out of an existing system in a step-by-step process over the years. As the original, much more simple system already achieved widespread adoption among IBM people, having become part of shared work practices, the developers were able to grow the SNS within the context of the existing work practices. Thus, ways of using the new social networking functionalities and work practices had time and a shared context to evolve at the same time. By making incremental, evolutionary changes to the technology, people were able to embed the new features in the existing ICT-enabled work practices in situ, i.e. in the immediate work context, without having to make sense of or experiment with a technology that is new and foreign to them.

In the case of technology deployment, much to the contrary, people are confronted with a new piece of technology that is made available outside of any immediate use or work context. Hence, people need to appropriate the technology in order for it to become part of their work practices. In the case of SNSs, there is hardly any individual use, so diffusion has to rely on a significant number of people using the platform, as people experience network externalities. Moreover, when a new technology is being deployed in an environment, where people are already confronted with a multitude of systems, then this is likely to be problematic, as new systems that offer

new ways of interacting need to find a place among the existing ones, with people having to see the differences or new role of the new system: “We have already so many systems for collaboration: Collaboration Rooms, SNSs on the Internet, corporate MSN [instant messaging]. Harmony misses unique characteristics.” (SAP user)

Consequently, we conclude that in the IBM case the technology and its use were able to grow side-by-side from within the context of shared work practices (co-evolution). On the other hand, the SNSs in the other two cases were rolled-out to the user base in order to be populated from scratch. And as SNSs are open and rather flexible technologies, these systems do not lend themselves to immediate forms of usage determined or prescribed by their features. Rather, they need to be appropriated through experimentation and sense making by the users, a process that takes time and is also open-ended in the sense that its outcome is open, i.e. the emergence of particular ways of usage can only to a certain extent be foreseen. Our observations lead us to briefly reason on the open nature of SNS platforms.

Open technologies require appropriation and experimentation

An essential characteristic of communication and collaboration technologies is what can best be expressed in German language as *Nutzungsoffenheit*, a type of openness whereby the artefact does not lend itself to or even determines a particular form of usage and whereby its potential and likely effects in practice cannot be deduced from an analysis of its features (Riemer et al., 2007). As such, *Nutzungsoffenheit* has a different quality as versatility, with the latter describing that users can “modify and appropriate different parts of the [technology] in ways unforeseen by the technology designers.” (Pipek and Wulf, 2009, 6). In the case of SNSs, *Nutzungsoffenheit* means that the true nature and potential of such open technologies does only manifest when people make sense of and incorporate them in their day-to-day work routines. In fact, the actual benefit of SNSs for a particular organisation only unfolds through experimentation and appropriation by their users, when the platforms become part of group or organisational practices.

Moreover, the above-discussed flexibility and openness (*Nutzungsoffenheit*) makes it hard to predict the diffusion, impact and patterns of use of such technologies when being deployed to an organisational context. In order to begin to understand their possible implications on different levels, we need to understand how people use open technologies and in which ways they are being embedded in the everyday work practices in distributed work contexts. The mere study of technology features (espoused technology) reveals little of potential impact or social and organisational forms of appropriation. Against this backdrop, further research carried out in situ and drawing on rich data (e.g. in case studies), is needed in order to get to understand better this type of system. With our research we hope to have made a first cautious step to better understand the modes of use of SNSs and ultimately their organisational potential.

Implications for practice: facilitation of co-evolution processes

Our study also yields insights for practice with regards to the implementation and rollout of such systems. As open systems need experimenting, sense making and appropriation by their users when being deployed, the IBM case illustrates how organisations can achieve wide-spread adoption of such technologies, when they find ways of piggy-backing new systems (or their features) with established systems, thereby initiating a process of co-evolution of technology and ways of usage. By doing so, the confrontation with the ‘new and foreign object’, i.e. the new piece of technology, can be circumvented and users can appropriate the technology more naturally as their ICT-enabled work practices evolve with the step-wise changes of the technology.

CONCLUSION

In this paper we presented three cases of large, knowledge-intensive organisations, which introduced corporate social networking sites. Our aim was to better understand potential and possible ways of using SNSs within the corporate intranet. In doing so, we found a set of three modes of use of corporate SNS (identifying experts, building personal context and fostering existing relationships) which we compared to existing research on SNS use in the public sphere. Moreover we found differences in the frequency of use and perceived role of SNS in the three companies. Whereas one SNS emerged from within existing work practices (IBM), in the other two cases (Accenture and SAP) the SNS were deployed as new platforms. Consequently, we reflected on the importance and ways of embedding open technologies with existing ICT-enabled work practices in the organisation by way of co-evolution of existing systems and their use. Instead of confronting people with a ‘new and foreign object’, growing new technology from within already adopted ones is seen as a way for people to incorporate the technology more naturally when work practices evolve side-by-side to the changing technology.

It needs to be noted that with IBM, SAP and Accenture being very early adopters of SNSs our study can only deliver first insights into corporate social networking. Thus, much more research is needed to extend our under-

standing of emerging practices of corporate social networking and the ways in which these open technologies make their way into the work practices of corporate users.

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