Social Software: Agents for Change or Platforms for Social Reproduction? A Case Study on Enterprise Microblogging

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Abstract

The application of social software in enterprises has been discussed in both practice and academia for a few years now. One discussion that recently gained momentum in public media and the blogosphere stresses that these technologies will change the way in which corporations organise communication and decision processes, thereby contributing to structural changes towards flatter organisational hierarchies. Against the backdrop of such claims, we present a case study of a software company that has adopted an Enterprise Microblogging platform to facilitate day-to-day teamwork. We have analysed communication behaviour with regards to organisational roles. Our results suggest that it is more likely for such platforms to be adopted in ways that socially reproduce existing organisational and work structures rather than acting as agents for change. We discuss our findings in light of the nature of open platforms and point out implications for practice.

Keywords

Social Software, Enterprise Microblogging, Team Organisation, Enterprise 2.0

INTRODUCTION

When Time Magazine awarded "you" (every user of the World Wide Web) the title "Person of the Year 2006" they pointed to what they perceived as a fundamental shift. New services based on web technologies that have been subsumed under the label "Web 2.0" mushroomed on the Internet facilitating changes to the ways in which people interact online. Most notably, these emerging social software platforms (ESSP) (McAfee 2009) facilitate user participation in the creation of web content (e.g. via Wikis and Weblogs) and allow for new ways of connecting, interacting and communicating with other people (e.g. via SNSs and Microblogging). Having gained significant coverage from the popular press and management-focused media, organisations have begun trialling the application and use of these technologies 'behind the firewall', i.e. for facilitating collaborative processes among their employees. But, while vendors and other more technology-focused actors in the marketplace point to the potentials these platforms yield, little is known about what impact these technologies might have for work structures within corporations.

Some have suggested that these technologies have the power to fundamentally change the way in which organisations operate (McAfee 2009). In particular, a growing number of commentators point to the ability to empower employees and decentralise decision-making. It is further argued that hierarchical structures, typical for traditional forms of organising, will eventually be modified into more networked management patterns or flatter hierarchies (e.g. Tapscott 2006; Hinchcliffe 2007; Cook 2008). In fact, a lively discussion has emerged among practitioners, opinion makers and other commentators on the Internet and in popular media, in which many ascribe to ESSPs the power to fundamentally change the way in which organisations are managed.

As with other social software Enterprise Microblogging (EMB) is said to change fundamentally the way in which corporations communicate and thus contribute to a change of the organisations itself. Against this backdrop the aim of our study is to investigate the validity of such claims. For doing so, we draw on a case of Enterprise Microblogging, in which a medium-sized company in the software development and consulting industry has applied microblogging to facilitate communication and coordination in projects and teams. We apply genre analysis to understand the ways in which people have appropriated the technology in their everyday work practices. Our results reveal striking differences in the ways in which users on different hierarchical levels in this

organisation use the platform to communicate with their peers. In fact, the microblogging behaviour turns out to be a direct reflection of the users' organisation roles. Consequently, we question speculations that the application and use of ESSPs will act as an agent of change to management roles and hierarchical structures in corporations. We discuss our results in light of the particular nature of such platforms as open technologies, as it seems more likely that such platforms are adopted in ways that reproduce existing social structures rather than acting (in and by themselves) as change agents to alter organisational structures.

Our paper proceeds as follows: We briefly introduce ESSPs (section 2) and summarise recent research on public and enterprise microblogging (section 3). Then (in section 4) we introduce the case company and its EMB platform. Section 5 provides an overview of our study, the case sampling, genre analysis and the data analysis. In section 6 we describe and classify the different genres we identified, in order to provide an overview of how the communication of group members via EMB differs according to their roles. In section 7 we discuss our results and point out implications and study limitations; we conclude with a brief summary in section 8.

EMERGING SOCIAL SOFTWARE PLATFORMS AS CHANGE AGENTS

In his 2006 article, Andrew McAfee points to the emergence of a new type of Internet-based software platforms, which he sees to have the potential to facilitate new forms of collaboration between people in and between companies (McAfee 2006). Termed emergent social software platforms (ESSP) (McAfee 2009), these platforms evolve around technologies such as Wikis, Weblogs, Social Networking Sites and Microblogging. Moreover, they are said to feature a number of key principles. Firstly, ESSPs aim to achieve simplicity. By providing only as much functionality as needed, these platforms aim to be very easy to use and thus to be inclusive of a wide range of user types (e.g. Richter and Riemer 2009). Secondly, ESSPs aim to encourage participation, as users on these platforms are not merely consumers, but producers who do not only consume content, but write, edit, rate and comment on content (e.g. O'Reilly 2006). Thirdly, ESSPs encourage interaction and communication among people, either indirectly through facilitating shared context and relationships among users, or directly as communication is at the heart of many ESSP (e.g. McAfee 2009). Consequently, the application of such technologies in organisations is seen to culminate in the concept described as 'Enterprise 2.0'. Enterprise 2.0 describes a vision of bringing about changes to traditional ways of top-down organisation by drawing on bottom-up, i.e. more inclusive and egalitarian approaches to work and organisation. In this context ESSPs are seen to require and/or enable such changes. Commentators in ongoing discussions on the Internet have argued that in order to reap the bottom-up, participation-based benefits of ESSPs organisational structures need to change.

Table 1: Synopsis of discussion in the blogosphere

Reference	Statement
T. Davenport cited in (Bennett 2008)	"With these new tools, unless the right culture, behaviours and organizational structures are in place, they're not going to be successful."
(Hinchcliffe 2007)	"Enterprise 2.0-style IT requires a shift to much more openness using a Web model, a shift in preferred end-user tools, and flat collaborative space in order for it to work and get reasonable returns."
(McAfee 2009)	"At its core, Enterprise 2.0 is about giving many more people within the organization a voice, letting them interact as equals…" (p. 207)
(Cook 2008)	"Social software is also disruptive – it changes the role of knowledge management from 'command and control' to 'facilitate and aggregate'. This requires a very different way of thinking and possibly different internal team structures."
(Tapscott 2006)	"As self-organization becomes accepted as a viable method of production, more processes within the organization will move from being hierarchically directed, proprietary and closed to self-organizing, shared and open."
(Harquail 2010)	"People assume that: 1) Networked work flow, the kind of workflow enhanced by social media within workplaces (e.g., wikis, google wave) will lead to flatter organizations. 2) Flatter organization are better, because flatter organizations reduce power differences between employees. They create more democracy, more autonomy and more decision-making power for employees."[1]
(Liu 2010)	"Middle management is the tangible overhead in many organizations that Enterprise 2.0 can eliminate!"
(Filev 2007)	"…new generation technologies, while penetrating into companies, will be able to empower employees and decentralize decisions, thus liberalizing management. This means hierarchical structures, employed in many organizations, will eventually be modified into flatter management patterns."

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[1] In this article the author actually provides a critical account of the topic, but summarises of the opinions held by many commentators.

Table 1 shows an overview of existing views on the issue with quotes from popular books and weblogs alike, which intends to provide a snapshot of this discussion. Proponents of the technologies see a strong link between the application of social media technologies (ESSPs) and a need for organisational change (Hinchcliffe 2007). Interestingly, a growing number of authors predict that ESSPs themselves will act as agents of change bringing about quite radical changes to organisational structures, such as flatter hierarchies, more inclusive management approaches and decentralised decision-making. Our study is set against the backdrop of this discussion, as we question such positivist, technology-determinist claims. It seems to us that some advocates of Enterprise 2.0 apply a rather simple way of reasoning by envisioning that what is perceived as social media usage patterns in the public space will ultimately also proliferate in the corporate space. Conclusions are then further drawn regarding the likely changes such bottom-up, participatory approaches will yield for organisational structures. However, we believe that a simplification lies in treating the technologies and emerging behaviour/practices as one and the same aspect, without considering the very different contexts of application. Agency in such thinking is attributed to the platforms, not the people adopting and using the technologies. With our case study we hope to shed some light on how such technologies might be adopted and used within organisational hierarchies.

Due to the novelty of the phenomena, the academic community has not had much chance to investigate actual cases of ESSP application in ways that explore actual user behaviour and thus reflect on emerging changes. We see our exploratory study as one of the first pieces in this emerging jigsaw. With our research we aim to make a contribution to deriving a clearer view of the likely impact of such platforms. By reporting on the findings from a case study of Enterprise Microblogging, we will show how people on different levels of the organisational hierarchy have appropriated the platform, i.e. how they communicate. This will allow us to discuss how individual communication behaviour on this ESSP is actually a direct reflection of one's organisational role, i.e. how the organisational hierarchy is reproduced in microblogging communication behaviour on this ESSP.

MICROBLOGGING IN THE CORPORATE CONTEXT

Enterprise Microblogging as a phenomenon is quite new. It emerged with the advent of Twitter, which has shaped its perception in the general public. The principle of microblogging is simple: Users on the platform have their own public microblog where they post short update messages. One can 'follow' others by adding them to one's personal network. The messages of all those users one follows will then appear in chronological order on one's start page. Not surprisingly, Twitter and similar microblogging platforms have already drawn some attention from scholars. Usage patterns, behaviour and relationships of Internet users in these open network platforms have been investigated in some detail. Most of this work focuses on the description of Twitter phenomena (e.g. Huberman et al. 2009; Java et al. 2007, Naaman et al. 2010) or on microblogging as a learning tool (e.g. Skiba 2008; Ullrich et al. 2008). Some research has been published on the development of microblogging from a design point of view (Günther et al. 2009; Passant et al. 2008) and on microblogging as a mobile application (e.g. Barkhuus et al. 2008; Gaonkar et al. 2008). Several works in other disciplines point out the manifold special interest applications of Twitter. There are studies on the use of Twitter for political campaigns (Cetina 2009; Henneburg et al 2009), social activism (Galer-Unti 2009), in public libraries (Cahill 2009) or the health sector (Berger 2009).

Following these success stories, corporations have begun to explore the potential of microblogging for group communications and information sharing. Meanwhile, more than 30 microblogging platforms for corporate use have been introduced. In terms of research a few scholarly case studies exist, which describe different approaches to implementing enterprise microblogging technologies and report initial findings on success factors (Barnes et al. 2010; Zhang et al. 2010). However, to the best of our knowledge, no study so far has taken a closer look at the actual usage and communication practices that proliferate on such platforms, nor the implications this yields for organisational change. Our research is motivated by the controversial discussions summarised in the previous section and the fact that, as far as EMB is concerned, the research body is still very limited in general.

THE CASE: MICROBLOGGING IN A SOFTWARE COMPANY

Our case study investigates Communardo Software GmbH. The company is a software development and service provider, founded in 2001, located in Dresden (Germany) and home to 180 employees. The company has developed and is itself using an Enterprise Microblogging platform, named Communote. We were given access to the textual communication accrued on this platform by Communardo employees.

Communardo offers software solutions and consultancy in the context of knowledge management, team collaboration und project management and divided in three units accordingly. Employees typically work in knowledge-intensive projects, which last for 3-6 months and employ 4 to 10 employees. By nature, IT plays an important role in the company and new technologies are implemented at an early stage internally to gain experience for future client projects. Teamwork plays an important role, since projects are the daily business of most of the employees.

The use of modern communication media such as email, VOIP, instant messaging, wikis and blogs is, for the majority of employees, already part of their everyday lives.

About two years ago, triggered by the company's rapid growth, employees observed increasing difficulties in sharing information with their co-workers. More specifically, it was found that the dissemination of information about current projects, ideas or problems had become more and more difficult. In early 2008 an employee suggested using Twitter or a Twitter-like tool for the company's project teams. Until then broad email conversations or the use of wiki discussion pages were common and lead to a large number of unmanageable information silos. The initial decision was made against using a public microblogging service like Twitter. Reasons were a perceived functional deficit (e.g. no rights management, few possibilities for search and filtering) and strategic reasons (data protection, reliability).

After trialling, in one of its teams, the use of the blogging platform Wordpress for the purpose of microblogging (which was found to be too cumbersome), it was finally decided to go ahead with in-house development of a new platform. The resulting software artefact is a browser-based microblogging system with Web 2.0-typical technology and design. The name 'Communote' is derived from the company's name and the word 'note', signifying the intended use of posting notes for others in a constant stream of messages. At first glance, Communote looks similar to Twitter, as the key elements are the same: the posting stream is the main part of the user interface and a panel with filtering and navigation options is located on the right-hand side. A main difference is the drop-down list, which enables users to choose in which microblog (stream) to post. The first page shows the user's personalised message stream (a combination of all messages posted in those blogs of which the user is a member).

STUDY OVERVIEW

Our study is part of a bigger study on exploring EMB usage practices. The original goal of the main study was to explore in detail and in various dimensions the EMB usage practices across various cases. For the above-introduced case, we have already identified a set of communication genres, which represent the microblogging practices of one of the case company's teams. The detailed results of this analysis (e.g. the full sets of genres) have been published and presented elsewhere (see Riemer and Richter 2010). We will briefly introduce these genres below to provide context for the more specific findings relevant to this research. In this paper, by drawing on these genres we will show how different organisational roles communicate in EMB.

We begin by providing an overview of our research design, case sampling, data collection and data analysis approach, namely genre analysis. For gaining a general understanding of the company, e.g. its structure, projects and work practices, we conducted seven face-to-face interviews. These interviews lasted between 22 and 61 minutes. We interviewed one executive director, two team managers, one consultant, two software architects and the human resource manager. We will not directly draw on the interview data in this study, but they nevertheless served to provide a general understanding of the case and for guiding our sampling. Our main analysis was a qualitative analysis of the texts captured on the Communote platform. This text stream represents the utterances made by the Communardo employees in their day-to-day dealings with each other.

Sampling: Focus on one software development team

In order to arrive at a manageable data set, we had to restrict our field of study, i.e. the number of users and data points within the company. Based on what we learned during the interviews, we selected one team that had been using the EMB platform for the longest and reportedly showed significant adoption. The team is a software engineering team (creating java-based knowledge software solutions), which consists of one team leader, four software engineers, two consultants and five support workers. In addition, the CEOs and the system administrator are part of the team communications as well. Finally, from that team, we only analysed those blog streams, which already showed a significant amount of blog posts, i.e. at least 10 blog posts per stream, as these are the streams that capture the team's everyday EMB communication. In total, we included 10 blog streams containing 648 posts with a total of 36867 words. All texts were extracted from the platform, saved and uploaded to the qualitative data analysis software atlas.ti. We then performed what is called a genre analysis, a classification of communication events in different categories.

Method: Genre analysis for identification of communication practices

Genres are "socially recognized types of communicative actions [...] that are habitually enacted by members of a community to realize particular social purposes." (Yates et al. 1999, 84) Communication genres are situated and rooted in a social context; they emerge from social practices and in turn shape social activity by providing agreed upon templates that structure the group's communication (Kwasnik and Crowston 2005). Hence, genres capture meaning and reflect practices of the communities in which they exist (Yates et al. 1999). In doing so, a limited set of genres can describe the communication practices of a group; it acts as a form of repertoire on

which group members routinely draw when they communicate (Orlikowski and Yates 1994). As such, genres can serve as an analytical tool to understand communication practices of a social group, (Kwasnik and Crowston 2005).

In order to identify communication genres, we need to specify exactly how a genre can be recognised. What can be observed in a social context is the communication events people engage in during their daily routines, such as a written utterance in a microblogging stream. Conceptually, a genre describes a class of communicative events. Communication events in turn are instantiations of a genre (Swales 1990). What "turns a collection of communicative events into a genre is some shared set of communicative purposes" (Swales 1990, 46). Hence, purpose is the primary criterion by which to identify communication genres (Askehave and Swales 2001).

Data analysis: Genre identification

For identifying the genres every blog post found in our ten sample blog streams was examined and coded according to communication purpose (What does this communication trying to achieve?). In doing so, two researchers read and coded the texts one after the other, discussing and refining any possible deviations in interpretations along the way. This process is a circular process, typical for a qualitative data analysis process. We identified an initial set of genre candidates in a first round of pre-coding a sub set of blog streams. We then discussed and settled on a start set of genres as the basis for coding all blog streams. In this process, whenever a new genre candidate emerged, it was discussed, checked against existing genre candidates and when it was decided that it indeed represented a new class of communicative events, the already-coded blog streams were recoded, until all streams were coded and no new genre candidates emerged.

During coding, we assigned genre codes to each communicative event, with a total of 912 single genre appearances emerging across the ten blog streams. In doing so, one blog post can generally contain more than one communicative event. While most posts have one purpose and are thus regarded as an instance of one genre, some longer posts represent different communicative events and contain more than one, often several instances of different genres (e.g. to delegate, clarify something, and then give information about an event, all in one post).

Our genre analysis resulted in a total of 18 individual genres, which can be subsumed under 6 top-level genres (see table 2 and appendix 1). Furthermore, we cross-coded all blog entries by sender, which consequently allowed us to cross-table genre appearances by organisational role. In doing so, we are able to provide an account of the appropriation of EMB by people within the organisational hierarchy and discuss differences in EMB practices and communication behaviour according to organisational role. This allows us to reflect on the role of EMB for this team in light of the above-described discussion on social media-induced change. In the next section we provide a brief overview of the team's genre repertoire.

Table 2: Identified top-level communication genres[2]

Genre name	Share	Description
Provide update	43.8%	Users inform others about ongoing activities and events in the shared workspace. People post in order to update the whole group, when they have finished a task, when an event occurs, a decision was made, or when someone has spoken with an outside person (e.g. a client).
Coordinate others	20.9%	People post in order to delegate a task to others, record lists of items the team needs to attend to, or to provide social feedback.
Share information	15.9%	Users share information with others, such as relevant references (e.g. URLs), their expertise in solving a problem or ideas for new products.
Ask question	13.7%	People post because they need to know something, solve a problem, ask for task progress or ask someone to decide on an issue at hand. All these postings represent questions.
Record information	2.9%	Users occasionally post information to the platform in order to record information, i.e. login data, contact details or meeting minutes.
Discuss & Clarify	2.9%	People very rarely utter personal opinions ("I think…") or communicate to clarify some particular aspect that is unclear to someone.

Overview: The team's genre repertoire

Since genres are classified by purpose they represent distinct communicative types, which in their totality (as a genre repertoire) provide a rich picture of *why* our case study users engage in EMB in their team context and how the platform serves the day-to-day work needs of the team. A detailed discussion of these genres has been published in (Riemer and Richter 2010); appendix 1 lists all eighteen individual genres with examples. Table 2

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2 Percentages add up to 100%; they indicate the proportion of genres in relation to the total number of genre appearances, not relative to the number of posts.

provides an overview of the six top-level genres and the relative proportion of each genre within the repertoire. It illustrates that most of the communication on the platform belongs to one of four genres. The genre repertoire reflects that EMB in the case team serves the role of an awareness creation and task/team coordination medium. At the same time, the genre repertoire shows that EMB is not used to support other team practices such as discussions or more in-depth collaborations, as reflected in the absence of a significant number of posts in the Discuss & Clarify category. We know from the interviews that this communication happens outside this medium.

COMMUNICATION ACCORDING TO ORGANISATIONAL ROLE

Having learned that the EMB platform is used as a coordination and awareness creation medium in the everyday teamwork, we were curious to find out whether or not different organisational roles would show differences in terms of their communication behaviour. Hence, we analysed the distribution and number of genre appearances for the team members and cross-tabled them by organisational role. Our results turned out to provide a surprisingly clear picture: EMB communication in terms of the genre repertoire is a very good predictor of a team member's organisational role and responsibilities. Before we discuss the differences in typical (role-based) communication on the platform we provide an overview of organisational roles in Communardo.

Organisational roles

During the interviews Communardo's decision makers (CEOs and team leaders) stressed that the company is characterised by what they perceived as flat hierarchy, openness and inclusive decision-making. While there is certainly enough evidence for openness in communication, as is reflected in the vary fact of establishing a communication space such as Communote, the company nevertheless features an elaborate role differentiation and hierarchy. As such, it is possible to distinguish six roles, all of which were present in our KMS team:

- The *top management* consists of the two founders and directors of Communardo. They are responsible for typical executive tasks such as people management, leadership and top-level customer account and relationship management.

- The *middle management* is made up of team leaders, responsible for managing several project teams, each typically located in a field such as knowledge management. A further responsibility is coordinating a group of consultants and software engineers, but also to interact and liaise with project clients.

- *Consultants* are responsible for planning and conceptualising project-related tasks (e.g. software/product design and problem solving). They further support the software engineers in defining the requirements of a software solution and keep contact with customers on an operational level.

- *Senior software engineers,* much like consultants, are responsible for tasks across several projects; more specifically, they develop and adopt software solutions.

- *Junior software engineers* are mostly engaged in only one or two projects at a time. They support senior software engineers in their work and typically carry out well-specified tasks (e.g. programming a module).

- System *administrators* have support roles. They maintain and update hardware and software systems.

As part of our sample we analysed the EMB communication of two top managers, one team leader, two consultants, three software engineers (1 junior, 2 seniors) and the team's system administrator.

Differentiated EMB communication

Lower-level team members, who are mostly occupied with developing and maintaining the software solutions, use the tool to report on their task progress on an ongoing basis (see table 3). In doing so they apply a very focused genre spectrum. Middle-level team members report on their task progress, too. But they are also engaged in problem solving and content-related posts. More specifically, the team leader uses the tool to coordinate and update the team on external events such as client meetings.

On the top management level the medium is used to report on client acquisitions, for providing social feedback, but also to provide new ideas and input for the team, thus driving the company's direction. Management also asks for clarifications or task status updates, which are then provided by the consultants or software developers. In general, upper-level team members show much more differentiated communication behaviour, as is reflected in the wider distribution of genres they draw on in their daily communication.

It becomes clear that on the lower levels of the hierarchy people update others on the work they have completed, they raise problems they come across and answer questions, while on the upper levels, the actors provide ideas and inputs, update on events outside the team context and coordinate the team members. All in all, the EMB

communication is a direct reflection of the team members' roles and responsibilities, to the extent that after gen-re coding, we were able to predict correctly from a person's genre distribution their organisational role. In the next paragraphs we will elaborate more specifically on the various roles and their communication patterns. In doing so, we will briefly illustrate the four most common genres for every role.

Table 3: Top-level genre distribution by organisational role and interaction type[3]

Role	Provide Up-date	Coordinate Others	Share Infor-mation	Ask Question	Record Infor-mation	Discuss & Clar-ify
CEO	41%	33%	29%	23%	1%	6%
Team Leader	75%	43%	13%	26%	5%	2%
Consultant	62%	33%	18%	30%	7%	6%
Senior Dev.	86%	29%	21%	25%	6%	1%
Junior Dev.	92%	4%	8%	8%	0%	8%
Administrator	100%	9%	25%	0%	0%	0%

Table 4: Most common genre by organisational role (with examples)

Role	Most common Genre		2nd most common G		3rd most common G		4th most common G	
CEO	Update Event	25%	Post links	23%	Social feedback	18%	Ask HowTo	15%
	"Received order from Clever Media Systems #CMS for #Confluence development! First contact via #Cebit."		"@jss @cls do you already know the new #Confluence group at #XING? https://www.xing.com /net/confluence"		"Certification PST CE3 CA4 has arrived! Many thanks to @meo @pwo @mpj @tsi for the effort"		"What can I do with RAD-Studio that I can't do with Visual Studio?"	
Team Leader	Update Event	32%	Update Task	23%	Delegate	21%	Note ToDo	18%
	"Just had a phone call with Mr. Lasch. Subjects for next ug [user group] set-tled: 1.) Silverlight …"		"I've sent CR for #Migra-tion of encyclopedia to Mr. Wald."		"@stu Can you please give Jon access to the (KDF). Thanks!"		"We should prepare a sup-port offer for #xyz. There is demand from them right now."	
Consultant	Update Task	36%	Note ToDo	22%	Ask HowTo	15%	Update Event	14%
	"I started to document the proceeding for (…) in the wiki. /Wiki-URL"		"#Open task: Adapt link pointing at Wulula-Logo in newsletter."		"@klm: Do KMW also run with SharePoint Services 3?"		"Mrs. Halle has aked for a new offer for #ecco"	
Senior Developer	Update Task	50%	Note ToDo	24%	Update Event	17%	Provide HowTo	15%
	"I have configured a test on the #com252 and up-dated …."		"… still not finished: 1) Vanishing of #CDATA-sections in content-tags"		"Had Workshop with Mr. Stark. He was happy with platform. …"		"As long as the repository doesn't work, you can instead …"	
Junior Developer	Update Task	71%	Update Event	8%	Provide HowTo	8%	Clarification	8%
	"Updated [module x] to new version that fixes the following bugs: …"		"Have informed Mr. Jack about the problem."		"Theoretically you should save each file separately"		"No, the problem is not on the design level, it is rather …"	
Admin.	Update Task	74%	Provide HowTo	19%	Update Event	16%	Note ToDo	6%
	"Patch has been installed."		"For the performance test you should always use IP …"		"Attention. Downtime for ITF1 and ITF2 on 08.04.09 15:00 til 18:00."		I've updated a,c,d. B still missing, since I'm waiting for"	

With 25% of all posts *CEOs* inform others about events outside the immediate team context, such as phone calls, new project launches or contract acquisitions ('Update Event'). Moreover, the CEOs frequently provide input by posting ideas and links/URLs they deem interesting for the team. The CEOs are also the only role to frequently draw on the social feedback genre for congratulating and awarding team members for their efforts. Finally, they often ask questions, e.g. in cases when they talk to clients and need more detailed information to answer a client question. Interestingly, but not unexpectedly, the two top managers very seldom report on their own task accom-plishments (only in 8% of their posts).

While the *team leader* reports on events in a similar fashion than the CEOs, there is a big difference in updating on tasks, such as reporting on having sent information to a customer, which appears in 23% of all posts. In the context of team coordination, the platform is used for delegating tasks, i.e. when somebody is asked to do some-thing. Apart from directly delegating a task to a specific person there are also posts that contain tasks that need to be done by the team in general (To Dos). A genre that does not appear very often in the overall sample, but is used by middle management is questions regarding task-status updates (in 11 % of posts, for example: *"@cde @tuv Is there further information on server load yet, response time according to log?"*).

The most common genre for *consultants* is 'Update_Task'. In general, consultants (but also software engineers) post such messages when they have accomplished a task or want to give an update on task progress. Moreover,

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[3] Please note: Percentages indicate the proportion of posts, which featured a respective genre. As posts can contain more than one genre, they do not add up to 100%.

consultants frequently identify ToDos and ask how-to questions, when they need to know something to solve a problem. Since they also keep contact with customers, they use the platform to provide updates on events.

Senior software engineers use the platform mainly to report on task progress. During the development process they also post whenever they identify software bugs or open questions. They furthermore report on interactions with customers, which happen most frequently in the form of workshops or when jointly trying to specify problems with a software. Due to their long-standing experience they are also the ones to provide explanations ('HowTos') to their colleagues. Apart from these four most prominent examples, senior software engineers are the ones that alert others most often of (important) emerging issues like technical problems (14 % of all posts).

Since *junior software engineers* are mostly occupied with carrying out work on well-specified tasks it is not surprising that nearly three quarters of their posts contain reports concerning the status of their tasks. All other genres appear only very rarely, which reflects the fact that these people fulfil a very focused role for the team.

In line with its support role the *administrator* shows communication different to all other roles. Three quarters of posts contain reports about maintaining the various platforms, i.e. software and hardware updates. When users have problems with a newly installed version the administrator offers support by providing technical "HowTos". Moreover, he informs the staff of upcoming events like server downtimes or planned software updates. He also notes "ToDos" of infrastructure issues that have yet to be done. Apart from these four genres the admin's genre repertoire is the most limited among all roles, with half of the 18 single genres not being used at all.

DISCUSSION, IMPLICATIONS AND LIMITATIONS

Our findings show that our case team has appropriated the EMB platform in a way that is consistent with and very fitting for their day-to-day work. At the same time this means that organisational roles and hierarchical structures (with their role-typical behaviour) are reproduced on the platform. Besides, we did not find any evidence to suggest that the platform acted as a change agent affecting in any way the organisational structures found within the team, or beyond.

We attribute this to the fact that collaborative systems and especially ESSPs are open technologies, which do not precipitate use; i.e., the artefact does not lend itself to or even determines a particular form of usage (e.g. Riemer et al. 2007, Riemer and Taing 2009). Rather, such technologies are actively appropriated by their users in a particular context, thereby becoming part of collaborative work practices. Hence, the true nature and potential of such technologies does only manifest when people make sense of and incorporate them in their day-to-day work routines. In essence, the technology and its set of features do not precipitate its forms of usage. As such, collaborative systems differ from other types of technologies, such as ERP systems that come with built-in procedures for inducing particular ways of using the system.

At the same time this means that one should not expect such systems to induce the same behaviour and usage patterns in an enterprise context, as observed on the public Internet. Consequently, the particular nature of usage behaviours and the associated characteristics, which lead some commentators to expect ESSPs to induce fundamental changes in organisation structures, is more likely to be a product of the application context than the technology itself. Our findings, while only derived from a single case, provide a rich account of how social media can be put to use in a typical work environment, without having to call in question existing social and organisational structures. More research is needed of the same type to further explore usefulness and implications of this emerging class of collaborative systems.

Our results have implications for practice. Drawing on our experiences with the case study, our recommendation for decision makers exploring the application of social software in their organisation would be not to hesitate in the face of ongoing discussions on the Internet and the behaviours apparent on public platforms or frequently highlighted in the media. Our case suggests that applying social media is about pragmatic decisions for supporting teamwork or knowledge sharing; it does not have to be preceded by a fundamental, often dogmatic, discussion about organisational philosophies and the necessity to restructure the organisation.

The above results and deliberations need to be viewed in light of the study's limitations. Firstly, we only explored one case, albeit an interesting one as the team has already incorporated a novel form of social media into its daily practices. However, our research needs to be extended to a larger population of cases, e.g. to additional cases that have implemented similar platforms. While our research provides a rich account of EMB, it does not intend to generalise in a statistical sense. Quite to the contrary, due to the openness of such systems, we expect usage patterns in other cases to be rather different, which renders generalisation a counter-productive task. More data is needed to explore the richness and variety of social media and its impact on work practices. With regards to our case there are certain limitations to the conclusions we are able to draw, as our sample only included a small number of people. However, as the results seem plausible, we think our study can serve as a first building block in understanding better this emerging type of system in a corporate context. Finally, we are aware that

with our research design we cannot actually capture organisational change processes; we can only reflect on the outcome of the adoption process as is reflected in our data. In that respect however, our findings contribute to a better understanding of the role of such platforms as discussed above.

CONCLUSION

In this paper, we reported on a case study, which investigated the nature and potentials of social software in a team context and reflected on the impact of such platforms on organisational structures, as advocated by practitioners and opinion makers on the Internet and in popular media outlets. Quite contrary to common speculations, our results suggest that the application of social software in a corporate context does not inevitably lead to a structural change of the organisation itself. In our case the employees have appropriated the Enterprise Microblogging platform in a way that is consistent with and very fitting to their day-to-day work, thus socially reproducing existing role behaviour and hierarchies rather than altering organisational structures. We attribute this to the fact that such collaborative platforms are open technologies, which do not determine a particular form of usage. Our findings suggest that decision makers should not be concerned by fundamental discussions about organisational philosophies and the necessity to restructure the organisation when introducing social media. Rather, pragmatic decisions to implement and experiment with these new technologies will give teams the chance to further improve their coordination and knowledge work by incorporating the systems in their day-to-day practices in unique ways.

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APPENDIX 1
Overview over all (eighteen) identified genres:

Name	Explanation	Stylised Examples	%
Ask question			
Ask for decision	People refer something to others for decision.	"What should we do?" "Which alternative should we choose?"	3.94 %
Ask how-to question	People need to know something, solve a problem.	"Is product X capable of…?" "How should I do this?" "Will this work?"	7.23 %
Ask for task-status update	People ask for task progress.	"How far are we with…?" "#task: what's the status?"	2,.2 %
Coordinate others			
Delegate task	Somebody or a group are asked to do something	"Can you please…?"	5.70%
Note To-dos	Tasks that need still be done are listed/posted.	"We need to…" "#open_issues: (list)"	10.08%
Provide social feedback	Success is appreciated and props are given	"Thanks to (list of people), well done!"	5.15%
Discuss & Clarify			
Clarification	Information is provided to clarify something.	"This is…" "They can…"	2.19%
Discussion & Opinion	Personal or subjective opinions are uttered	"I think…" "In my view…"	0.66%
Provide updates			
Notify of upcoming events	Others are informed about upcoming events	"Next week, please note…"	3.29%
Notify of emerging problems	Others are alerted to an (important) issue.	"I discovered the following…" "We have a problem:…"	3.72%
Provide event updates	People are informed about peripheral events such as phone calls, new project launches	"Call from @xyz, she wants…" "Team X wins new contract…".	12.81%
Provide task-status update	Someone has accomplished a task or gives an update on has progress	"I just created…" "Finished! Available here:…" "#task1: done, #task2: 50%"	22.78%
Provide update on decision	To answer questions about what should be done or which alternative be chosen.	"We do it this way…" "I decided we should…"	1.20%
Record information			
Post team protocol	The results of a collective (intern) meeting are posted	"Status meeting: (meeting minutes)"	1.42%
Record data	To store data e.g. to access platforms or phone numbers	"Mr. Smith, phone no:…"	1.42%
Share information			
Post new product idea	Others are informed about personal ideas	"I had an idea for…" "How about we build…?"	0.44%
Post links & references	URLs that are found especially relevant for a team or a subject are posted	"This might be of interest…" "Please see: http://www"	7.89%
Provide solution (how-to)	Know-how is shared with others to help them with their problems.	"In order to…, pls do…" "You should avoid…"	7.56%