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Oh, SNEP! The Dynamics of Social Network Emergence - the case of Capgemini Yammer

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BIS WP2012-01
Oh, SNEP!
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Abstract
With more and more organisations accepting social media into the workplace as an integral part of professional practice and group communication, understanding what exactly happens when enterprise social networks suddenly emerge in the workplace, brought in on initiative of employees in a self organising manner, is increasingly important. In this paper we present an analysis of enterprise based-short message communications shared across the Yammer enterprise social network at the international service consultancy Capgemini. We concentrate on conversations during the first nine months of uptake with a focus on self-referential communication where users convers about Yammer itself. A time-trend analysis of conversation types leads to the identification of what we term the SNEP model, the Social Network Emergence Process that captures the phases in which the social network emerged over time. The study for the first time allows to unpack in detail the often-discussed emergence aspect of enterprise social media, in terms of sense-making, user experimenting, norming behaviour, and network diffusion. The identified SNEP model is useful for managers who want to understand what happens when social media initiatives suddenly erupt into existence in their organisations.

Keywords: enterprise social networks, microblogging, systems emergence, diffusion, Yammer, Capgemini
Introduction

When things suddenly happen, we want to know how they came about. In this paper we study the phenomenon of social network emergence (SNE) where a community of users adopts a social media platform that is freely available on the Internet and incorporates it into their work practices. It has been stressed in the social media literature that emergence is characterised by user engagement and grass roots initiative in the absence of any official technology implementation project (McAfee 2009). By the time corporate management or the IT function become aware of the initiative, the social network might already have hundreds or thousands of members. The question arises regarding what exactly happens during such social network emergence, e.g. how users come to incorporate the social media service into their emerging work practices.

Studying such processes offers new insights for the study of IT adoption and diffusion that has long been a core aim of the Information Systems field (Keen, 1980). Typically, IT adoption is conceived of as a decision whereby an individual or organisation adopts a given IT artefact (e.g. Davis, 1989; Venkatesh et al., 2003). However, this position is challenged by a large body of work which views technology as socially (co)constructed (Leonardi and Barley, 2010), thereby stressing a process of sense making and appropriation, in which technology and practice co-evolve (Richter and Riemer, 2009). Quite obviously, the latter notion applies in particular in the context of social media.

While the bottom-up nature of technology diffusion of social media in organisations has been recognised in the literature before, research has yet to investigate what exactly happens during this process. Against this backdrop, we investigate the following research question: What happens during the emergence and evolution of social media in organisations, i.e. how do people come to make sense of and integrate social media into the workplace?

We undertake a case study investigating the emergence of the enterprise social networking and microblogging service Yammer at the global consultancy business Capgemini¹. Due to the particular nature of social media technologies the conversations thematising Yammer adoption, use, and diffusion are captured on the Yammer platform itself and provide a unique research opportunity for analysing the ‘adoption-related’ user conversations that took place during the first few months of Yammer use at Capgemini. Consequently, we are able to carry out an analysis of what was actually said, rather than having to rely on post-hoc accounts.

We find a set of conversation types that exposes the kinds of communication and sense making users engage in as they make Yammer part of their work practices. Moreover, an analysis of the distribution of emerging conversations over time allows us to identify the phases in which Yammer evolution at Capgemini took place. With this paper we hope to contribute to a better understanding of how social media, as open technologies, become part of work practices by way of exposing what we term social network evolution (SNE): 1) the types of conversations evolving around adoption and diffusion, and 2) distinct phases that characterise the SNE process. Given that studying how new technologies become part of work practices is a core phenomenon at the heart of the IS discipline (Riemer and Johnston, 2011), our findings are important as a first step to developing a more refined, theoretical understanding of IT (co)evolution in general.

¹ Please note that in a predecessor study we have already exposed the kinds of practices that eventually evolved in Capgemini Yammer, e.g. the product of the evolution process (Riemer et al. 2011). In this study, we focus on what happened during the first few months of the evolution process itself. For the earlier study see: http://ses.library.usyd.edu.au/handle/2123/7226.

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Research Background

**Nature of social media in corporate contexts**

In recent years, Web 2.0 applications have found their way into corporate practice, and we have seen a continuously increasing demand for corporate social software to support knowledge transfer and collaboration (e.g. Bughin and Manyika, 2007; McAfee, 2009). Meanwhile, there is a huge amount of research on the potential benefits of social software in the corporate realm, which shows that social software facilitates user participation in creating web content (via wikis and weblogs; e.g. Holtzblatt et al., 2010; Ip and Wagner, 2008) and allows for new ways of connecting, interacting and communicating with other people (via social networking services and microblogging: e.g. DiMicco et al., 2008; Zhang et al., 2010).

An often-stressed characteristic of social media is that organisational adoption often occurs in a “bottom-up” manner, driven and supported by employees, while the management might not be aware that use of social media emerges in the organisation (McAfee, 2009). At the same time, it has been pointed out that communication platforms such as social media are open, flexible platforms that exhibit “a form of openness, whereby the technology and its set of features do not precipitate its forms of usage”, rather “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” (Riemer et al., 2009, 186).

In this study we focus on Enterprise Social Networking as a particular phenomenon in the social media space, where the focus lies on short message communication, often referred to as microblogging. On the back of the success of Twitter, microblogging has gained traction and attention from both the popular media and academia alike. Microblogging allows users to send short messages (140 characters in the case of Twitter) into a message stream, from which users can create their own personalised information view by following the messages of a select number of users. Not surprisingly, Twitter and similar microblogging platforms have already drawn attention from scholars investigating usage patterns, behaviour and relationship building (e.g. Huberman et al., 2009; Java et al., 2007; Naaman et al., 2010). Following Twitter’s success, corporations are increasingly showing interest in microblogging for group communication and information sharing in their emerging social networks (e.g. Riemer and Richter, 2010; Riemer et al. 2010). This is evidenced in the emergence of more than thirty microblogging platforms for corporate use. Case studies describing different approaches for implementing microblogging technologies and reporting on initial findings and benefits have constituted early research in this field (e.g., Zhao et al., 2009; Riemer and Richter, 2010; Zhang et al., 2010).

**Research on Technology Adoption**

Studying the adoption and use of IT in organisations has always been a core topic of the IS discipline (Keen, 1980). In doing so, the traditional position in our field assumes that adoption is a decision, where either organisations plan carefully to introduce a new technology or, at the micro-level, individuals act intentionally to adopt a specific innovation with utilitarian outcomes in mind. Various studies imply that these determinations can be evaluated in terms of yes-no decision-making about a given artefact. Theoretical frameworks and methodologies such as the technology acceptance model (TAM) (Fishbein and Ajzen, 1975; Davis, 1989) and the unified theory of acceptance and technology (UTAUT) (Venkatesh et al., 2003) have been applied to explore a large range of variables and their attributes in this context. While some of the research acknowledges the effects of other users as significant (for example, Lynn Markus’ and others work on critical mass) (Markus 1987), there has been a tendency for research to take an overly rationalist and deterministic stance, which tends to de-contextualise individual adoption (Jeyaraj and Sabherwal, 2008).

There is on the other hand a large and growing body of research that emphasises social construction of technology in organisations (for an overview see Leonardi and Barley, 2010). It is a fundamental premise of this view that the meaning of (or reason for) adoption does not inhere in the technology (alone), but is
realised through people’s interactions with it. This stream of research is interested in how technologies come to be interpreted and understood in social contexts by their users (Lamb and Kling, 2003, Pallud and Elie-Dit-Cosaque, 2011). Our study contributes to this research stream.

We aim to show that rather than conceiving of adoption as a decision, it is necessary to appreciate both, the process nature of taking new technology into organisational contexts, and the open-ended nature of this process in terms of social sense-making about the new technology. We use the term co-evolution to denote the phenomenon whereby technology use and work practices emerge and change at the same time (Richter and Riemer 2009). Hence, we take a perspective that appreciates “users’ adaptation, learning, and reinvention behaviors around a system” (Benbasat and Barki, 2007, 215).

**Study overview**

Research on IT adoption has typically relied on user accounts, mostly through interviews and surveys, or on user observation. Researching social media brings with it a new opportunity: social media captures user conversations as they are stored as messages on the platform, and with it conversations about the technology itself. It is these self-referential conversations that we draw on in this paper to investigate the unfolding of the actual sense-making process by the user group that leads to social network emergence.

**The case**

Capgemini is a consultancy business with more than 100,000 employees in over 35 countries. In September 2008 a small group of consultants in the Dutch division started using Yammer. Yammer is an EMB platform that was itself launched in the same month. The service is organised using the concept of networks, with one network typically representing one company. Anyone can create a network for their company by registering with their email address on the platform. New users can join simply by registering with their corporate email address, which serves as their identifier. The web frontend of Yammer resembles the look of Twitter or Facebook with the posting stream being the focal element. Like Twitter, Yammer is based on the “follower”-principle, i.e. users can choose who they follow. Whenever new users join a company network they initially subscribe to the message streams of all users within the network. The platform also features other Twitter-like functions, such as bookmarking of posts, tagging, mentioning of and replying to other users, as well as direct messages.

The group of early adopters (see our interviews below) envisioned a platform to support knowledge sharing by connecting employees with each other, creating more transparency and making information easier to find. However, these were only assumptions and a phase of experimentation and learning commenced to see whether the platform could meet these needs in practice. Investigating this is the object of this study. For the small group of Dutch consultants it was “quite a different dynamic as Twitter and it was interesting to figure out what we could do with it” (Interview C001).

In the first months, the number of users grew rather slowly. In February 2009, only about 300 Capgemini Yammer accounts were counted in total. Shortly after that a critical mass point (Markus, 1987) seems to have been reached, as user numbers were growing rapidly from March 2009 onwards with new registrations of more than 500 per month (see figure 1). Within one year the number of accounts grew to nearly 6,000, half a year later it exceeded 10,000 accounts, towards the end of 2010 the network had more than 18,000 members, making it one of the largest networks on the Yammer platform.
Research method

Data collection and preparation

We obtained the complete Yammer data set from Capgemini in Microsoft Excel format. This data ranges from September 2008 until July 2010 and contains all 113,855 messages that were posted within Yammer over this period. Each message consists of metadata such as message ID, a reply ID, a thread ID, a user ID and the content of the message. To ensure confidentiality all personally identifying information (user names and client names) had been removed prior to handing over the data. In Yammer, a message is either a reply to another message that inherits the thread ID of this original message, or it is a new message commencing a thread with a new ID. Thus, thread IDs can be used to analyse related communications in the data.

For our project we were only interested in user communications concerned with Yammer itself, i.e. those posts that in one way or another are self-referential in their concern with Yammer. By using a set of keywords, prepared through a preliminary analysis of the first three months of communication, we were able to identify posts relevant to our enquiry. The key words identified were: yam, tweet, twitter, following, chatterous, feed, thread, direct message, group, communities, socialcast. While this list might not be complete, sample testing confirmed that it was sufficiently broad to capture all relevant posts. Filtering was non-case sensitive and focussed on messages that contain at least one of the keywords as a single word, a word stem or, part of another word in the initial message (capturing terms such as yam, Yam, yammer, Yammer, reya and so forth). This filtering was carried out at the thread level in order to preserve communication context and coherence and these threads were then ordered by time for coding and analysis.

The filtered data set contained 26,205 messages from September 2008 to July 2010. However, for our study we are interested only in the communications during the phase in which the platform was introduced to the organisation. We made the design choice to conduct coding up to the second month after the critical mass point was reached. Hence, within the scope of the study 5,411 messages were analysed. As the data filtering was broad and aimed not to miss any relevant posts, this set included many false positives. In the end, 1,722 messages turned out to be suitable for the analysis covering the time frame from September 2008 to May 2009. These messages were written by a total of 244 users with an average character length of 174.5, spread over 511 threads with an average length of 3.4 messages per thread.

Figure 1: New user registrations per month during the emergence period in 2008/2009
Participant Interviews

Between April and June 2011, we interviewed 14 Capgemini employees using the Yammer network in regions spanning the United Kingdom, Europe and India. Both face-to-face and online interviews were undertaken (depending on the participants location and availability). Our aim in conducting interviews was to establish as rich an understanding of the way enterprise social networks are being brought into organisational practice as we possible can. We used semi-structured questioning techniques to open up the conversation with participants and allow them to reflect on their own experience. All interviews were treated confidentially with anonymity established before analysis commenced. The interviews are an important aspect of this study. They allow us to support, verify and expand on the findings of our microblog data analysis with descriptive accounts from people actively engaged with the network. Our approach to interview analysis in this study has been to triangulate pertinent discussion from participants who were using Yammer during the same period of time set for the analysis of Yammer EMB communications at Capgemini (this is described below).

Data analysis and qualitative coding

The approach brought to the coding and analysis of EMB communications in this study has been that of qualitative data analysis. The main aim was to identify patterns in the conversations that evolve around the uptake of Yammer in the organisation. We wanted to learn about the kinds of conversations people engaged in when making sense of this new technology in the context of their own environment. In doing so, each message was coded according to the purpose it serves regarding sense-making and adoption. Much like in communication genre analysis, such codes are not imposed in a top down fashion but identified from the ground up through the qualitative analysis of the “…socially recognised communicative purpose” (Yates and Orlikowski, 1997, 50) of each single message, when interpreted against the background of the overall case. From this analysis, patterns in the form of conversation types emerge. As such, the approach taken to determining conversation types is constantly recursive and reflexive with an aim of being “…systematic and analytical but not too rigid” (Althiede, 1996, 16). The data was coded by one researcher with a second researcher acting as a discussant and analyst in a confirmatory role. We frequently reviewed our set of conversation types, any variations were discussed and conflicts were resolved by either adding a new type, splitting an existing type or merge two types into one. This process was iterated until all adoption-related posts were successfully coded and both researchers agreed on the outcome. As a result five top-level conversation types emerged, which together contain a total of 20 sub categories that represent the single codes used to categorize messages.

In this process, our interviews serve an important purpose; they are a method for triangulating and verifying our interpretation of the communications we have analysed. We approached the interviews from the same bottom up approach, by first asking the interviewees to speak about their own early experience in using Yammer, then joining our analysis of the interviews to the conversation types we have identified. Conversation types (outlined in the next section) were used to code the interviews within the broad theme of Yammer use and adoption. Coded qualitative content was then reviewed with a second coder to ensure inter-coder reliability.

Findings: Conversation types characterising sense-making about the new service

Our data analysis led to the identification of five conversation types or categories that usefully describe the variety of communication about Yammer, thus representing user communication regarding adoption and diffusion that take place during SNE (see figure 2). We will briefly describe each category, outline sub categories and provide a typical example, before we offer an analysis of their distribution over the course of the evolution time frame in order to lay bare the phases of the SNE process in Capgemini Yammer.
Adoption-related conversation types

![Figure 2: Percentage distribution of conversation types](image)

The largest category, representing 33% of all codes, we termed Opinion. Users offer their personal opinion as they scrutinise Yammer and describe ways of using the service and the emerging benefits they see. Further sub categories cover personal opinions regarding emerging norms, and security issues. A typical post regarding Yammer use asking for others’ opinions is as follows: “So... is Yammer working for you? Adding value? If so... then do tell.” (Message ID: 1951176)

The second largest category, named Functionality, covers posts that refer primarily to perceived single features and functionalities of Yammer. In doing so, users comment on Yammer functionalities in positive, negative or merely informing ways. Furthermore, users ask questions about certain functionalities, while other users respond to assist them. The last subcategory covers instances where a user expresses a proposal regarding a new functionality, as they might not be satisfied with that particular feature in Yammer currently. An example of a feature-related question is: “Another question: how can I let Yammer make a sound whenever someone does a post?” (Message ID: 392203)

The Diffusion category subsumes all messages that have to do with actively initiating, managing or supporting the diffusion process. Diffusion messages were mostly about promoting Yammer to get more users and more attention. A lot of users also posted information about the diffusion, such as current number of users, groups or the use of Yammer in their divisions. People also asked for help and assistance in the promotion of Yammer within the organisation: “How can we recruit more Capgemini people into Yammer to get this thing going? Could be a great tool if more people started using it!” (Message ID: 2144075)

As part of the Yammer-related discussions a significant number of posts engaged in Norming behaviour. Users engage in discussions about appropriate language and observe ‘non-compliant’ behaviour, discuss the appropriateness of what to post in Yammer (content) or how to use Yammer in more general terms: “Welcome all new Yamsters (or whatever we're supposed to call ourselves!) - here's hoping you get lots of value from Yammer - "twitter for people with a job to do." As we've had many new joiners recently, and it is Monday, it seems a good time to mention the one Golden Rule: While Yammer is 'private’ it is not managed by Capgemini. Therefore, please do not publish anything here that is strictly company confidential. That's why we have GIMS and email. :-)” (Message ID: 2902693)

In messages under the Comparison category users compare Yammer to other technologies they are already familiar with. Such a comparison can again be positive or negative or merely informative in nature. Users might also ask questions regarding comparisons of Yammer. A typical post with a negative under-
tone is the following: “So this is like a cross between Chatterous and Twitter with a couple of extra 'corporate' features - like the org chart. I think Laconica looks more interesting...” (Message ID: 70296)

<table>
<thead>
<tr>
<th>Opinion (33%)</th>
<th>Functionality (25%)</th>
<th>Diffusion (16%)</th>
<th>Norming (15%)</th>
<th>Comparison (11%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use (85%)</td>
<td>Assisting (34%)</td>
<td>Assisting (59%)</td>
<td>Use (69%)</td>
<td>Informing (42%)</td>
</tr>
<tr>
<td>Security (12%)</td>
<td>Asking (26%)</td>
<td>Informating (34%)</td>
<td>Language (24%)</td>
<td>Negative (30%)</td>
</tr>
<tr>
<td>Norms (3%)</td>
<td>Informating (20%)</td>
<td>Asking (7%)</td>
<td>Content (7%)</td>
<td>Positive (17%)</td>
</tr>
<tr>
<td></td>
<td>Negative (10%)</td>
<td></td>
<td></td>
<td>Asking (11%)</td>
</tr>
<tr>
<td></td>
<td>Positive (7%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Propose (3%)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Overview of sub categories and their percentage distribution

**Time-trend analysis of conversation type distribution**

In this section we analyse in more detail the changes in SNE-related communication over time. In doing so we will draw on 1) changes and trends in the distribution of the top level categories (as represented in figure 3), 2) a more detailed analysis of the distribution of sub categories over time, and 3) those interviews with users who were part of this early phase in the Yammer endeavour that provide depth to our insight. This analysis will ultimately lead to the identification of distinct SNE phases, the process of which we present in the discussion section.

From September 2008 to January 2009 both the total number of messages and SNE-related messages are quite low (figure 3). In March 2009 the number of SNE-related messages shows a sudden spike. This marks an important turning point in the emergence of the Capgemini Yammer network that we would expect to see reflected in our data as well. In the following analysis we will show that this is indeed the case, as we discuss the distribution of sub categories of each conversation type over time (figure 4).

![Figure 3: Conversation types distributed over time (absolute number of messages)](image)

**Comparisons** of Yammer with other already known services such as Twitter, Chatterous or Laconi.ca are present from the very beginning; the comparing of Yammer with pre-existing communication alternatives is also stressed in the interviews: “Within the UK we have a mailing list that was set up years ago for the technical community ...if you’ve got a question you’ll send an email out with RFI as a tag on it... Yammer provides a bit more structure and an internationalised alternative to that.” [Interview C005] Interestingly, within the comparison category, positive and negative comparisons dominate until February/March, when a significant change happens with comparisons becoming more neutral, informative and construc-

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tive in nature. At this time a clear change in tonality and sentiment happens; after the critical mass point is reached comparing serves illustrative purposes, not the promoting or devaluing of Yammer.

A change in tone is also evident in the functionality category as time progresses (see figure 4). In the lead up to the critical mass point, negative evaluations of Yammer functionality grow strongly in February and peak in March. Positive evaluations are low at first, but suddenly spike and overtake negative messages in March; after that both positive and negative evaluations drop off. At the same time it is evident that people become suddenly interested in Yammer in February and March, with many people asking questions. Moreover, people strongly support each other with assisting and informing posts. This supportive and informative communication is strongest around the critical mass point, but stays at a rather high level even after that. Posts proposing new Yammer features grow after the critical mass point, as people begin to see the potentials of the new technology for their work practices.

At the same time as the critical mass point is reached, personal opinions regarding Yammer use show a large spike. People weigh in to the discussion regarding ways to use Yammer productively in their daily work. Many lively discussion threads evolve on Yammer discussing ways in which Yammer is or might be used. Interestingly, while people question the productive use of Yammer in earlier months, a very common concern from March onwards is the sudden flood of messages in Yammer, in particular how to keep up, concerns as to how Yammer might distract people from work and then discussions of strategies for how to cope with the message flood.

Posts that concern the actual diffusion of Yammer are virtually non-existent until January 2009. This whole category emerges from the data at the point of critical mass. In February, people start informing others about what they have done in promoting Yammer in their groups and divisions, others ask for ideas and assistance in doing so as well. Then, as questions regarding diffusion recede, informing and assisting posts show a large spike in March. Assisting communication stays strong in subsequent months. Interviewee [C02] who joined Capgemini’s Yammer network at the end of this period in June 2009, provides a revealing insight into the motivations in play at this time: “I mean who joins a system in the first place when it’s totally voluntary? When it’s not an official tool? When there is no pressure to use it? It’s people who really want to use it and who really stand behind the use it. I think it’s natural that those people are interested to keep the conversation going, to foster participation.”

Finally, as Yammer is suddenly taken up across the organisation in March, people realise not only the potentials of Yammer, but also the risks of inappropriate use and content posted on the platform. People start engaging in norming behaviour; driven by early adopters, an initiative emerges to develop a code of conduct (COD). This COD is collaboratively developed in a specific Yammer group open to anyone and later posted in a wiki accessible to all employees. Subsequently, users who do not adhere to the COD are being advised by others in Yammer. One of our interviewees had participated in writing the code of conduct: “I think it’s also good that, if you do see some poor behaviour, that not only does the community tend to self-policing but it also does have something that it can refer people to and say, look, you’re breaking the rules, the rules are written down here. But, to be honest, it should be common sense and don’t do it.” [Interview C09] As the platform grows globally and colleagues from other countries join, a discussing regarding language use springs up in April during which the users agree to make English the lingua franca in Capgemini Yammer.
Figure 4: Detailed overview of sub category distribution over time.

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Discussion: The Social Network Emergence Process (SNEP)

Drawing on our analysis of the types of conversations that Capgemini employees engaged in when first using Yammer, we are able to identify four distinct phases in the uptake of Yammer at Capgemini. These phases show a distinct pattern in which Yammer evolved in Capgemini (see table 2 and figure 5). We argue that the pattern that emerges from the Capgemini data provides a valuable insight into the processes of social network emergence, which for the first time allows to uncover what exactly happens during such often-discussed bottom-up emergence of social media in organisations. This pattern is immediately useful for organisations aiming to understand social media evolution. We refer to this model as the SNEP model, which stands for Social Network Emergence Process, but refers equally to the four phases 1) Start-up, 2) Neglect, 3) Excitement and 4) Productivity.

<table>
<thead>
<tr>
<th>PHASE:</th>
<th>&gt;&gt; Start-up &gt;&gt;</th>
<th>&gt;&gt; Neglect &gt;&gt;</th>
<th>&gt;&gt; Excitement &gt;&gt;</th>
<th>&gt;&gt; Productivity &gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>What happens</td>
<td>A group of early adopters starts experimenting with the new service. The service is compared against existing experience and already known technologies.</td>
<td>The new artefact is discussed quite negatively. The conversation around the new service is on the verge of vanishing. Platform adoption is at risk of dying off.</td>
<td>Interest in use grows, positive examples from emerging work practices are shared, the community actively promotes diffusion. Social network grows strongly as critical mass point is reached.</td>
<td>Shared norms emerge and are observed. People assist new adopters; a baseline of support-related conversations remains, as productive use takes over.</td>
</tr>
<tr>
<td>Sentiment</td>
<td>Curious</td>
<td>Negative / Neglect</td>
<td>Excitement / Passion</td>
<td>Normalisation</td>
</tr>
<tr>
<td>Typical user question</td>
<td>What is that?</td>
<td>Is it useful?</td>
<td>How do we get others on board?</td>
<td>How do I cope?</td>
</tr>
</tbody>
</table>

Table 2. The SNEP model

The first phase we term Start-up. This phase marks the beginning of the journey, where a group of early adopters begin to experiment with the new service. A joint sense-making process begins, which compares the new service against prior experience with other, similar, technologies. Moreover, the new service is evaluated mostly in terms of its features. Interestingly, in the Capgemini case the undertone of the discussion is rather negative at the beginning as people assess the new service against what is already known. In line with our earlier argument about the openness of social media we reason that the potential benefits of the new service are not yet evident, but will emerge over time through experimenting, use and eventually the co-evolving communicative work practices.

The second phase we term Neglect. After the first phase of encounter and comparison, communication about the new service largely subsides. Also, the total number of posts on the platform decreases. This bears the risk that the initiative dies off, as the new technology vanishes from conversation and is at risk of being abandoned entirely. The general tone of conversation is still often negative, with people questioning the service’s usefulness. However, at the same time the first groups of people start taking the new technology on board, evidenced in the number of messages on the platform growing again slightly towards the end of this period. The sentiment during this period is well-captured in this post by one of the early adopters in reply to a post contemplating lack of interest in Yammer: “Twitter is booming, because it has been around for nearly 2 years…. and the snowball is now rolling. (...) Yammer is new - and is poorly promoted internally. It will fail if people can't be bothered using it, assuming it is failing.” [message id 1301057, Nov 2008]

The then-following third phase is crucial; we term it the Excitement phase. A sudden spike of SNE-related communication is evident as the service gains interest across the organisation. The communication is quite passionate with people uttering their opinions in emotional ways. Negative evaluations begin to give way as the focus shifts to discussing and sharing practical ways of communicating and the tone of communication becomes more positive. Many questions are being asked, while others offer assistance regarding use and benefits of the new service. At the same time, people begin sharing how they promote the technology in their groups. This leads to others asking for help in promoting diffusion and they re-BIS WP2012-01 Oh SNEP! - The Dynamics of Social Network Emergence - the case of Capgemini Yammer.
ceive assistance in turn. Finally, as people gain some familiarity with the service through experimentation in the context of their work practices they become aware not just of the benefits but also its risks. People thematise appropriate use and begin engaging in norming behaviour to observe emerging norms in others.

With reaching the critical mass, the SNE process gradually enters a new phase, which we term Productivity. The tone in conversations becomes distinctly neutral; both positive and negative assessments make way to more informative conversations. At the same time, the topics of questions change from “what can I do with it?” to “how can I cope with the sudden increase in information?” People share coping strategies for avoiding personal information overload. After reaching the critical mass the relative amount of SNE-related messages decreases markedly, making way for productive work-related communication. However, a baseline of self-referential communication remains covering norming, questions and assistance, helping new users to get started with the service. Finally, a new type also emerges, in that new features are proposed as people become familiar with the technology in the context of their work practices and new ideas for further improvement emerge.

Most interestingly, the SNE process at Capgemini was entirely self-organised: as people began to see the emerging benefits of Yammer in their own work practices, they started actively promoting these emerging ideas and benefits to grow the social network and thus also the benefits for themselves: “Things that are happening around the organisation help me do my own job better and so I could start to see the potential in a tool like this. Once we got a reasonable critical mass we could see that really developing well. In some ways, though, we also ended up creating the network of people ourselves. As we started to see benefit we started to encourage others and get them in there and get them involved. [C09]

Moreover, our data further shows that the point of critical mass, where user and messages numbers increase sharply, is preceded by what we might term a point of engagement. This moment in our case is that point where people begin to engage with each other (by asking, assisting, informing, norming) rather than evaluating the service (by comparing similar tools and assessing functionality).

Figure 5: The SNEP model (with user count, message count, and sentiment bubbles)

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On a final note, we want to give some word of caution. This model, while certainly plausible and quite possible transferrable to other context, was derived from only one case study. And it is worth pointing out that Capgemini was among the first adopters of Yammer, when Yammer itself was in its infancy and enterprise microblogging and social networking were still quite young as an idea. This most certainly explains why Yammer was dormant for almost six months before the critical mass was reached. As a consequence we identified a pronounced period of “neglect”. Today, with enterprise social networking and microblogging more prominent in the media and more widely known, evolution processes in organisations, while probably showing the same pattern in general, might be much more straight forward in some cases, with a much shorter or no phase of “neglect”. However, it needs to also be pointed out that the Capgemini case is quite typical and useful for precisely its early-stage nature, as it exposes the emergence process where novel social media ideas and platforms emerge in the marketplace, the nature and future of which is uncertain at first and true sense making needs to take place on behalf of the early adopters. Hence, as further novel social media services emerge in the marketplace we are likely to again see patterns as we observed in our case.

Conclusion: Implications and contribution

Our study contributes a process theory explaining social network emergence in organisations where the diffusion of the social media service originates from a grass-roots initiative. While this so-called emergence phenomenon has been described in the literature previously (McAfee, 2009), no detailed knowledge existed about what actually happens during such emergence processes.

The SNEP model is a useful tool for managers and social media champions alike; it helps understanding the dynamics at work, the points of risk, engagement and finally critical mass, all of which mark steps on the way to the success of the social media initiative. Here, it needs to be pointed out that the model describes the social network emergence process in a case where adoption was the result of self-organisation. As such the SNEP model is useful in that it shows that after a first phase, where the new service is encountered by a group of enthusiasts, the evolution process enters a stage where the initiative is at risk of failure, as the “newness” factor rubs off, while diffusion still has not been achieved. This is where the “hen or egg” problem kicks in, as potential adopters cannot see the value precisely because not enough people have adopted the service yet. This is the phase where promoters, champions and evangelists are important to keep the ball rolling until a tipping point is reached. This tipping point might not necessarily be the critical mass point, as measured by user registrations, but the point of engagement, where interest in the platform spikes and other users come on board and take initiative in promoting the new platform.

Moreover, our study has exposed the complex and multi-faceted nature of social sense-making at work when bringing a new communication service into organisational practice. This finding is significant in particular when taken against the backdrop of traditional IT adoption research that treats adoption as a matter of individual decision-making. We further contribute to a better and richer understanding of the bottom-up nature of social media proliferation, which has often been stressed, but not been investigated in detail before.

Finally, our research is bounded by certain design choices and the nature of the available data set. Firstly, we cannot capture communication about Yammer outside the platform itself. Hence, we do not have access to conversations by non-adopters, which might still contribute to the sense-making process, even though in an indirect way. Such communication might obviously contribute in particular in the first few months where adoption is generally low. Secondly, our study is based on a single case with the respective limitations for generalisation. Finally, this paper marks only a first step in theory development. While we have exposed the patterns emerging from our data, future work will have to engage with these findings in the context of prior literature, which was beyond the scope of this paper.
References


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