

# Knowledge Sharing on Enterprise Social Media: Practices to Cope With Institutional Complexity

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*This study examines the use of enterprise social media (ESM) for organizational knowledge sharing and shows that professionals face ambiguities because their knowledge sharing behavior is informed by an institutional complexity that consists of 2 dissimilar institutional logics: logics of the profession, and logics of the corporation. Our qualitative case study of an ESM at an IT consultancy organization shows that professionals find ways to manage the ambiguities they experience by engaging the affordances of ESM in such a way as to develop coping practices: connection management, reputation management, and information management. By complementing the affordance perspective with an institutional logics perspective, we are able to advance scholarly understanding on how ESM can facilitate but also frustrate knowledge sharing.*

**Keywords:** Enterprise Social Media, Institutional Logics, Institutional Complexity, Knowledge Sharing, Affordances, Case Study Research.

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## Introduction

Social media platforms are increasingly implemented by organizations as knowledge management systems to increase knowledge sharing for organizational productivity (Ellison, Gibbs, & Weber, 2015). As scholarly research is growing, contributions to a special issue on ESM in workplaces (e.g. Gibbs, Rozaidi, & Eisenberg, 2013; Leonardi, Huysman, & Steinfield, 2013; Majchrzak, Faraj, Kane, & Azad, 2013) indicate that ESM can certainly facilitate, but also might frustrate knowledge sharing. For instance, on the

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one hand the openness of ESM allows professionals to join knowledge conversations, but on the other it triggers them to be selective in what they share (Gibbs et al., 2013), to become biased by contributions from popular users (Majchrzak et al., 2013), and to strategically adjust their self-representation in order to be seen as an expert (Leonardi & Treem, 2012).

Studies predominantly adopt an affordance perspective to explain why some affordances of ESM can be used both to facilitate but also to frustrate knowledge sharing (Ellison et al., 2015). Because affordances arise from the mutuality of actor intentions and technological capabilities that provide the potential for a particular action (Faraj & Azad, 2012), different actors may see different action possibilities (Gibson, 1986). While this perspective is helpful in understanding how both social and material properties influence technology use and vice versa, the affordance perspective does not take into account the wider context that also shapes users' behavior (e.g. Seidel & Berente, 2013). This relation between the social and material is situated and emergent in practice (Faraj & Azad, 2012). An affordance perspective alone will thus not help us to understand why in certain institutional fields, affordances of a tool yield different ranges of behavior. The larger institutional context in which actors are embedded also shapes individuals' behavior (Thornton & Ocasio, 2008). By including this in the analysis of ESM in practice, we extend the affordances perspective with an institutional logics perspective (Thornton, Ocasio, & Lounsbury, 2012).

Institutional logics reveal certain "rules of a particular game," such as socially agreed-upon goals, values, and prescriptions (Seidel & Berente, 2013; Thornton & Ocasio, 2008). Actors have a multitude of institutional logics to draw from (Thornton et al., 2012), each providing "guidelines on how to interpret and function in social situations" (Greenwood, Raynard, Kodeih, Micelotta, & Lounsbury, 2011, p. 318). Institutional complexity emerges whenever users are confronted with multiple logics simultaneously (Greenwood et al., 2011). While organizational life often includes institutional complexity, we argue that in the case of knowledge sharing by means of an ESM, this complexity is accentuated due to the openness of ESM. As users' knowledge sharing practices become transparent, users are informed by both the logics of the *profession* and the *corporation* simultaneously. These two logics together create institutional complexity; that is, users experience an ambiguity as to which one of the logics to adhere. While the corporate logics inform professionals to use the ESM for coordination and collaboration with coworkers in order to improve organizational productivity and efficiency, the profession logics inform professionals to use the ESM to learn from peers and develop their expertise within their field. In response to the complexity, "action is taken to somehow cope with or resolve tensions or ambiguities" (Thornton et al., 2012, p. 142).

Whereas previous scholarly research indicates that users show strategic behavior in response to the openness of ESM (e.g. Gibbs et al., 2013), their focus lies on the interaction between users, managers, and the technology present in the context of the use of ESM. Our contribution extends such studies by including an institutional logics perspective, arguing that a wider institutional context cannot be omitted in analyzing ESM in practice. Given that this institutional context in situations of knowledge sharing on ESM is at minimum ambiguous, coping with this ambiguity will influence how the affordances of ESM are engaged. Our research question hence states: *How does institutional complexity influence the use of ESM for knowledge sharing purposes?*

The next section will expand on ESM and its affordances for knowledge sharing. Institutional logics and institutional complexity will then be discussed by explaining the importance of the logics of the profession and the logics of the corporation. Here we argue that the affordances for knowledge sharing are engaged strategically. Our methodology will elaborate on our qualitative case study, after which our findings will indicate how users responded to the institutional complexity. We will place our findings in the context of existing research and will end by discussing limitations and implications for future research.

## Theoretical Background

ESM are “web-based platforms that allow workers to (1) communicate messages with specific coworkers or broadcast messages to everyone in the organization; (2) explicitly indicate or implicitly reveal particular coworkers as communication partners; (3) post, edit, and sort text and files linked to themselves or others; and (4) view the messages, connections, text, and files communicated, posted, edited and sorted by anyone else in the organization at any time of their choosing.” (Leonardi et al., 2013, p. 2). While various technologies are referred to as representing ESM (e.g. discussion forums, instant messaging), we focus on ESM that combine the features and affordances of many such other technologies. While other knowledge management systems also include the first three aspects of this definition, the fourth aspect is unique to ESM (Leonardi et al., 2013) and embodies its openness. ESM can be perceived as a knowledge management system that makes knowledge sharing and communication transparent for others (Leonardi et al., 2013).

To understand how ESM support knowledge sharing, scholars have identified several affordances. While the affordance literature has various interpretations such as perceived affordances (Norman, 1999) and technological affordances (Gaver, 1991), a relational perspective on affordances (Faraj & Azad, 2012) is most commonly used in the literature on information systems (IS) and computer-mediated communication (CMC). It emphasizes the entanglement of the intentions and goals of an actor interacting with an IT artifact (Leonardi, 2011), and sees this mutual relationship as situated and emergent in practice (Faraj & Azad, 2012). We wanted to use affordances as a priori concepts in our qualitative case study but many affordances identified in literature are overlapping and lack a clear conceptualization to assist with understanding their distinct meaning. Hence, we reviewed papers that adopt such an affordance perspective on ESM and knowledge sharing and, following the descriptions in the various papers, combined overlapping affordances into five affordances (see Table 1).

(1) *Associating*, labeled in accordance with Treem & Leonardi (2012), is the possibility to establish connections with users, and between users and content (boyd & Ellison, 2008). This is also related to network-informed associating (Majchrzak et al., 2013), which entails that new connections can be made more easily to people who are not personally known, since users can see which people are connected to each other as well as how these people are connected to specific content. (2) *Notified attention* affords users to be notified when updates on new comments, posts, and the like are available and demand users’ attention. Majchrzak et al. (2013) explain how the affordance of ‘triggered attending’ allows users to spend time checking the platform only when there are new comments or posts. Gibbs et al. (2013) describe similar characteristics of social media as they show how people only scan conversations for relevant updates rather than reading through them, as a way to disengage from the time-consuming continuous stream of conversation. (3) *Selectivity* allows users to select or subscribe to a specific group, person, or other source of information that users perceive as relevant (Gibbs et al., 2013). Selecting the right people to follow also automatically serves as automatic selection of relevant content because interesting people tend to post interesting things. (4) *Visibility* entails that users’ network positions, profiles, discussions, contributions, and public messages to others are visible to virtually everybody. Treem & Leonardi (2012) and Leonardi et al. (2013), for example, argue that visibility of all content is one of the most characteristic affordances of social media. This affordance also facilitates users to connect with other people and networks since these are mostly publicly visible on ESM (Majchrzak et al., 2013). (5) *Persistence* means that contributions in general remain accessible until deletion, allowing users to recombine earlier work into new contributions (Treem & Leonardi, 2012). Faraj, Jarvenpaa, & Majchrzak (2011) label a similar affordance as reviewability, while (Majchrzak et al., 2013) mention how metavoicing affords users the ability to see and build upon previous contributions.

**Table 1** Affordances for knowledge sharing and associated studies

<i>Affordance</i>	<i>Definition</i>	<i>Associated affordances and studies</i>	<i>Support</i>
<b>Associating</b>	Possibility to establish connections with other users of the platform	<ul style="list-style-type: none"> <li>• Associating (Treem &amp; Leonardi, 2012)</li> <li>• Network-informed-associating (Majchrzak et al., 2013)</li> <li>• Social Capitalization (Fulk &amp; Yuan, 2013)</li> </ul>	<ul style="list-style-type: none"> <li>• Conceptual</li> <li>• Conceptual</li> <li>• Conceptual</li> </ul>
<b>Notified attention</b>	Possibility to receive notifications when a seemingly relevant event occurs (e.g. a new comment on a discussion).	<ul style="list-style-type: none"> <li>• Triggered attending (Majchrzak et al., 2013)</li> <li>• Signal availability (Gibbs et al., 2013)</li> <li>• Display updates (Gibbs et al., 2013)</li> </ul>	<ul style="list-style-type: none"> <li>• Conceptual</li> <li>• Empirical</li> <li>• Empirical</li> </ul>
<b>Selectivity</b>	Possibility to subscribe to a specific person, group, or other source of information.	<ul style="list-style-type: none"> <li>• Selectivity (Gibbs et al., 2013)</li> </ul>	<ul style="list-style-type: none"> <li>• Empirical</li> </ul>
<b>Visibility</b>	Possibility to view discussion contributions, public messages to others, network connections and position, and profile information.	<ul style="list-style-type: none"> <li>• Visibility (Treem &amp; Leonardi, 2012)</li> <li>• Echo chambers (Leonardi et al., 2013)</li> </ul>	<ul style="list-style-type: none"> <li>• Conceptual</li> <li>• Conceptual</li> </ul>
<b>Persistence</b>	Possibility to view past contributions (e.g. comments, messages).	<ul style="list-style-type: none"> <li>• Reviewability (Faraj et al., 2011)</li> <li>• Persistence (Treem &amp; Leonardi, 2012)</li> <li>• Metavoicing (Majchrzak et al., 2013)</li> </ul>	<ul style="list-style-type: none"> <li>• Conceptual</li> <li>• Conceptual</li> <li>• Conceptual</li> </ul>

While the affordances help us to understand the potential role of technology for knowledge sharing, studies on affordances do not take into account the wider institutional context that influences users' interaction with a technology. In line with the growing body of research on institutional theory and IS (Ang & Cummings, 1997; Berente & Yoo, 2011; Currie & Guah, 2007; Mola & Carugati, 2011; Seidel & Berente, 2013), we take the position that particular uses of a technology are influenced by

institutional forces applicable across various contexts. In order to fully understand users' knowledge sharing practices on ESM, it is essential to include an institutional logics perspective as it allows us to explain how affordances are engaged in practice.

### **Institutional Logics**

Theories on institutional logics stem from the broader tradition of institutional theory and attempts to understand how broader organizational, cultural, and societal institutions influence behavior by "incorporating psychological understanding of human behavior and linking it to sociological perspectives" (Thornton et al., 2012, p. 78). Friedland & Alford (1991) introduced the notion of institutional logics to link these higher-level social institutions to individual practices (Berente & Yoo, 2011). In general, literature on institutional logics describes seven ideal types of institutions: family, community, religion, state, market, profession, and corporation. Thornton et al. (2012) define institutional logics "as the socially constructed, historical patterns of cultural symbols and material practices, including assumptions, values, and beliefs, by which individuals and organizations provide meaning to their daily activity, organize time and space, and reproduce their lives and experiences" (p. 2).

The popularity of the concept of institutional logics has resulted in an increase in conceptual, empirical, and review articles, in particular in the field of management and organization and lately also within the field of IS (Berente & Yoo, 2011; Greenwood et al., 2011; Seidel & Berente, 2013). The concept has not (yet) been widely introduced among scholars in the field of CMC, perhaps because the field is using an alternative yet related concept, namely the concept of technological frames (Orlikowski & Gash, 1994). Although the concept has proven to be highly valuable in understanding the use of technologies based on people's perceptions, the concept does not help in understanding macroinstitutional influences that guide the use of technologies. In comparison to the technological frames literature, institutional logics refer to broader societal-level structures that influence human behavior, rather than more to individual or collectively held cognitions. The latter are more prone to change and debate and are usually specific and unique (Borah, 2011), rather than generic and durable like institutional logics. Further, studies by, for example, Kandathil & Newell (2011) see technological frames as being affected by the institutional logics people draw on. We are interested in the wider institutional context influencing people's use of ESM. We thereby account for influences that go beyond particular social practices and technologies, and extend our findings beyond the context of a particular technology.

### **Institutional Complexity: Corporation and Profession**

In line with other studies training an institutional lens on technology adoption and use (e.g. Barley, 1986; Berente & Yoo, 2011), we argue that users of new technologies are influenced by multiple dissimilar logics. When multiple dissimilar logics simultaneously inform an actor, this is referred to as institutional complexity (Greenwood et al., 2011). Complexity does not necessarily entail that logics are contradictory, but "complexity is amplified by the divergence between prescribed goals and means" of the logics involved (Greenwood et al., 2011, p. 334). This will present actors with ambiguity on which logics to adhere to, and actors need to respond to this ambiguity in order to at least temporarily manage it.

In particular, two logics that are continuously present in professional service firms are expected to be at play (Groleau, Demers, Lalancette, & Barros, 2012): the logics of the profession and the logics of the corporation. The *logics of the corporation* emphasizes the importance of hierarchy, efficiency of work processes, and top-down determination of what needs to be done, where, how, and with whom (e.g. Berente & Yoo, 2011; Thornton et al., 2012) and is dominant in organizational life. The logics of the corporation become a source of influence via the establishment of formal organizations governed by boards of directors, and shape organizational participants' perceptions and

behavior through institutionalizing processes during the users' organizational careers (Thornton et al., 2012). Informed by the logics of the corporation, employees have an organizational role (such as junior programmer), are focused on meeting targets, and are concerned with their position in the hierarchy.

At the same time, employees' behavior is informed by the *logics of the profession*, which speaks more to the expertise, norms and rules of the individuals within a certain profession (Berente & Yoo, 2011; Thornton et al., 2012). The logics of the profession generally apply to actors that have become specialized in a topic that requires some sort of training, experience, and credentials (Thornton et al., 2012), such as scientists (Berente & Yoo, 2011) publishers (Thornton & Ocasio, 2008), and bankers (Marquis & Lounsbury, 2007).

These logics form institutional complexity when professionals feel a desire to draw on both logics simultaneously. For example, drawing on logics of the corporation, programmers should focus merely on their work and on meeting client requirements. From the logics of the profession, however, programmers are also inclined to engage in discussions with peers and to exchange experiences in order to learn and to develop their expertise. Professionals can generally separate these activities: they use tools appropriate for their work (e.g. e-mail with coworkers) and focus on learning or improving their expertise using other means (e.g. online discussion forums). On ESM, however, this becomes problematic. Because the openness of ESM affords visibility of all content, such as via social analytics and repository systems, professionals are confronted with adhering to both logics. For example, influenced by the logics of the profession, the affordance of visibility allows professionals to see what their peers are engaged in and to join in their discussions for personal knowledge development (Gibbs et al., 2013; Leonardi et al., 2013). Simultaneously, however, informed by the logics of the corporation, professionals want to protect their status in the organization. The affordance of visibility now emphasizes that any contribution will also be visible to management. This is likely to encourage users to be cautious about joining discussions with peers, fearing that management perceives this as wasting time or that asking questions of peers could be viewed as a lack of expertise. As users face an audience consisting of managers and bosses alongside peers from their profession the contexts of how their contributions might be perceived, collapse (boyd & Ellison, 2008). In response, users might refrain from joining those discussions, instead joining only organization-related groups and discussions, in order to demonstrate their corporate involvement to management.

Hence, professionals “*experience a multiplexity of different pressures from a plurality of institutional logics*” (Greenwood et al., 2011, p. 357) that presents them with an ambiguity as to which logics to adhere to and what behavior to exhibit on the ESM. Confronted with this ambiguity they respond by adjusting or “*loose coupling*” (Berente & Yoo, 2011, p. 376) their practices. To do so, “*action is taken to somehow cope with or resolve tensions or ambiguities*” and users choose to “*stick with old logic, embrace the new one, or figure out some way to hybridize*” (Thornton et al., 2012, p. 142). For example, professionals could attempt to manage the ambiguity by minimizing the time they spend learning and sharing experiences with peers.

In sum, because ESM combine the openness of various communication tools on one platform, ESM use accentuates institutional complexity and presents professionals with an ambiguity on how to engage the affordances of ESM for knowledge sharing.

## Methodology

We conducted a case study at an international IT Consultancy organization (hereafter: ItCon), with employees active in over 50 countries. The organization is a hierarchical organization offering a wide



variety of high-tech IT-related products and services to clients from various industries ranging from health care to the financial sector. Most employees are highly educated professionals in specific parts of the IT industry, such as SAP consultants, Java programmers, and cloud computing specialists. People usually work in globally distributed teams, which explains the high level of daily CMC. The organization implemented a firm-wide ESM to improve efficiency, and aims to increase knowledge sharing for organizational productivity. This makes the organization a particularly suitable case for illuminating how multiple logics simultaneously inform employees' behavior on ESM.

The ESM under study corresponds to Leonardi et al.'s (2013) definition (see above), as it allows users to send, receive, store, and view messages, documents, profiles, and connections. It is comparable to popular social networking sites such as Facebook in terms of design and basic features (e.g. managing profiles, creating and joining groups, home feed), but also incorporates features from different online technologies such as online document collaboration (e.g. Google Docs), @-mentions and the ability to receive updates only from specific groups and users (as on Twitter). The ESM has a central place (i.e. a homepage) where users are able to see all messages that are publicly broadcast (e.g. service announcements), posts from groups (e.g. updates from departments), and private messages (similar to e-mail). The posts are displayed on the basis of the latest activity, meaning that 'likes' and comments will move posts to the top of the homepage.

### Data Collection and Analysis

We conducted interviews, observations, and collected organizational documents related to the ESM. The collection of multiple sources of data enhanced our interpretive rigor and ability to substantiate inferences. We collected data at two moments in time. During the first data collection phase (spring 2012) we conducted 20 interviews. The aim of these interviews was exploratory in nature and served to help us understand the organizational context and the use of various technologies for knowledge sharing practices in general. After iterating between the data and theory, institutional logics emerged as a fruitful theme for understanding the use of ESM. Subsequently, in the spring of 2013 we conducted another 20 interviews to zoom in on the institutional complexity associated with knowledge sharing via ESM. In both phases of data collection, we selected interviewees with diverse backgrounds and with different activity levels, in order to increase the validity and reliability of this study. Of the 40 interviewees, 10 were female, and we interviewed 18 managers, 14 IT specialists, 7 consultants, and 1 assistant. The average age was 40.5, ranging between the ages 24 to 56. We started with those who we expected to offer valuable information and continued iterating between the data (interviews, observations, and documentation) and our theory to decide which data to collect next (Eisenhardt, 1989). The interviews were semistructured in order to steer the interview in potentially relevant directions while allowing interviewees the freedom to address other topics. We asked questions such as "What do you use the ESM for?" "To what extent do you read and use previous comments?" and "What are things you do not post?" On average the interviewees had 6 months of experience with the platform. We recorded, transcribed (verbatim), and anonymized all interview data. Interviews lasted approximately 60 minutes each. Most interviewees were from The Netherlands, but we also interviewed professionals from India, Belgium, France, and the UK. When the interviewees were geographically dispersed, VOIP software was used to conduct the interviews.

In the second round of data collection, we conducted observations of interactions on the ESM in order to obtain richer illustrations of the institutional complexity and the ways in which the users utilized the platform. The observations also served as input for the interviews. For example, we asked an engineer for an interview after noticing that he reposted messages in different groups. Documentation (such as presentations) was collected because such messages can carry and thus help to reveal institutional logics

(Lammers, 2011). For example, documentation on procedures and official training programs emphasized the formal and corporate nature of the ESM.

Following Eisenhardt's (1989) discussion of inductive case study research, we started data analysis with the affordances from Table 1 as sensitizing concepts but, through open coding, remained open to the emergence of other concepts (e.g. logics and practices). It was during this process that we noticed three coping practices. We stopped data collection when we reached saturation, as no new topics emerged regarding the logics, the complexity, or the coping practices. We then discussed how the concepts could be grouped together (e.g. sources of identity and authority were grouped as one characteristic of the logics) and sought to determine how these concepts related to one another (e.g. how the affordance of "association" related to the practice of "connection management"). This data analysis procedure resembles what Corbin & Strauss (1990) refer to as axial and selective coding, and in line with (Eisenhardt, 1989), we iterated between theory (e.g. on institutional logics) and data during data analysis. Table 2 provides several sample codes and quotes.

## Findings

Professionals are often temporarily transferred to other organizations, are regularly sent abroad, and collaborate with other IT professionals elsewhere, using various CMC tools to facilitate geographically dispersed work. An IT professional's profession in general consists of three practices. First of all, employees need to *hunt for projects* via their own network or other means in order to land a new project. Second, when professionals manage to get assigned to a new project, their practice consists of *IT consulting* during which they will, dependent on their specialization, conduct several services. A third practice involves *pursuing project-targets*. Since all projects entail a form of a planning or budget, the professionals are required to reach targets. Employees need to register the hours they worked for each client on a daily basis, and must enter this data into ItCon's system each week. The number of hours they can bill to clients must be above a certain threshold (e.g. 80% of their hours). If employees' billable hours drop below this threshold too often, they are reprimanded. In addition to their corporate role as ItCon employees, IT professionals aspire to fulfill the role of an expert in their professional field. One of the IT specialists explains that this culture of knowledge sharing is somewhat ingrained in their profession:

"[sharing knowledge] is typical for our profession, I think techies [do this] even more than others. [...] you'll always Google it [problems] yourself first, and when you're looking on specialized websites, you also share that information with people from all over the world."

This illustrates that besides working on billable hours, professionals were eager to keep up-to-date and share their expertise with other across organizational boundaries.

## Institutional Logics

Table 3 gives an overview of how both logics inform users' knowledge sharing behavior. The logics and categories, as conceptualized by Thornton et al.'s (2012) framework, are 'ideal typical' and we merged categories that were overlapping in our data in order to allow a clearer distinction between categories.

The root metaphor of a corporation is the hierarchy, whereas professions are more concerned with the relational network of professionals (e.g. groups of programmers). When informed by corporate logics, professionals identify themselves with their bureaucratic role such as junior versus senior consultant. On that basis they receive legitimacy and subsequently have a certain authority over other, lower-level consultants. Informed by profession logics professionals identify themselves as for example Java programmers, gain legitimacy dependent on their level of expertise, and see their association within the Java community as a source of authority. While informed by corporate logics actors' employment at



**Table 2** Samples codes, definitions, and exemplary quotes

Topic	Concept	Sub-concepts	Description	Exemplary quote
<b>Institutional logics</b>	Logics of profession	<i>Profession as relational network</i>	Professionals perceive their profession as a network of people with similar practices and are inclined to connect with those peers.	<i>"I think it is much easier or it will be more easier with the ESM because then you see what are people interested in ... what kind of information and automatically [it] suggests people which are in the same kind of interest you do." System engineer</i>
	Logics of corporation	<i>Hierarchy</i>	The root metaphor emphasizes the importance of the corporate hierarchy. People higher-up the hierarchy are perceived more important.	<i>"it [responding quickly to emails] is an expectation. I had situations where I didn't responded to an email and it's been escalated to my manager in the past." Program manager</i>
	Institutional complexity		When individuals are informed by multiple dissimilar logics simultaneously.	<i>"You can't keep daily tracking whether there are interesting spaces. Why not? My boss pays me to work, not to find groups on [the ESM]." Consultant</i>
<b>Coping practices</b>	Information management		Manage flow of information by optimizing relevancy and reducing noise from unwanted information.	<i>"I never read the [home feed]. So, if there's a notification, I know immediately there's a good chance [that it's] important because it's somebody or some [group], where relevant information might come up." Consultant</i>

**Table 2** Continued

Topic	Concept	Sub-concepts	Description	Exemplary quote
	Reputation management		Manage what content the user is associated with by protecting against negative content and boosting their reputation by associating with favorable content.	<i>“You should consider social branding and personal branding and things like that. So I usually don’t respond in a negative way because that will haunt you. ( . . . ) Even if you’re right or wrong, it doesn’t matter if you respond in a negative way. That will ride up with companies and that way you will reduce your own possibilities, your career”. Project manager</i>
	Connection management		Network with relevant people by connecting with important people both from the organization and users’ professions.	<i>“One [group] I have to [follow]. Because it’s the main [ESM] support office, which is based in the department I’m in. So I’ll have my butt kicked if I don’t follow that.” Management assistant</i>

ItCon dictates formal norms of behavior, the profession logics inform the norm that sharing knowledge among IT professionals (also across organizational boundaries) is a standard practice. Lastly, while corporate logics emphasize the competitive culture at ItCon as an informal way to control behavior, making sure managers are aware of your actions, the profession logics emphasize the group culture of connecting with peers for personal knowledge development as a control mechanism for the behavior of the professional. Our analysis revealed that users experienced ambiguities because both logics informed different types of knowledge sharing behavior on the ESM.

### Implementation Of The ESM

The introduction of the platform was part of the organization’s vision: “ItCon has introduced a firm-wide policy to increase efficiency and effective collaboration across organizational and international boundaries. New practices with more effective technologies for enhanced communication and collaboration within teams” [formal policy document]. Informed by corporate logics, management communicated

**Table 3** ESM use informed by logics of the corporation versus logics of the profession

Institutional category:	Logics of the corporation	Exemplary quote	Logics of the profession	Exemplary quote
<b>Root metaphor</b>	Hierarchy	<i>"In my eye it's also my duty to be the first adopter of this kind of new technology and not [to wait] until everybody is over. So we also have to be kind of a promoter for this. That's first. Secondly, there is no way back. I mean there are quite clear instructions that we should use [the ESM]. [Infrastructure service manager]"</i>	Profession as relational network	<i>"It is much easier [ ... ] with the [ESM] because there you see what are people interested in, what kind of information, and [the ESM] automatically suggests people [who have] the same kind of interest" [system engineer]</i>
<b>Sources of legitimacy, identity &amp; authority</b>	Bureaucratic roles	<i>"I think we are one of the first to manage it like this, with [the ESM]. ( ... ) In my role as an account manager, I think I need to be able to convey that to my customers." [Account manager]</i>	Association and reputation in practice	<i>"I'm working at an IT firm, and an IT firm should be innovative, I have to use my own experience, practice what you preach, I have to be able to speak from my heart about [the ESM]" [Account manager]</i>
<b>Basis of norms &amp; attention</b>	Firm employment	<i>"[ ... ] my boss pays me to work, not to find [ESM] groups." [Open source consultant]</i>	Association with peers & investment in group	<i>"I use the groups to [ ... ] get in contact with people who do the same work or who have the same common goal." [Account manager]</i>

**Table 3** Continued

Institutional category:	Logics of the corporation	Exemplary quote	Logics of the profession	Exemplary quote
<b>Informal control mechanisms</b>	Organizational culture	<i>"You have to make sure that you're visible. So that you're not only doing good things, but also that the right people know that. Right, if you want to qualify for a promotion for example, or for a salary increase."</i> [Executive business consultant]	Visibility of actions and group culture of sharing practice related knowledge	<i>"If I just told the answer someone else was telling as well. [Then] you are not seen as knowledgeable anymore, or as an expert, because the people will see that: 'oh he just reacts, he doesn't even read [previous comments]'."</i> [Business consultant]

expectations about increased productivity and efficiency since the ESM facilitated communication, coordination, and collaboration with geographically dispersed coworkers. This was actively communicated via newsletters and formal ESM trainings, but also when users logged on to the platform. The first page provided formal guidelines, tips, and instructions, e.g. how to work on a collaborative document. ItCon also introduced the formal role of 'champions' who had to assure that project teams would collaborate via the ESM (e.g. by initiating collaborative documents). These champions tried to increase usage through, for example, e-mail auto-replies indicating they could only be reached via the ESM. The champions actively involved people and for many professionals it became part of their daily work. While previously professionals used different tools to communicate (e.g. email) and collaborate (e.g. Google Docs), the ESM now offered a central location for documentation (e.g. presentation templates), and enabled getting in contact with coworkers and engaging in collaboration.

### Emerging Institutional Complexity

Professionals were quick to realize the corporate character of the ESM and, for example, reported: "[The ESM] is purely business for me, so I only post about things I'm working on, or the project I'm engaged with for example." [BI developer]. When users posted non-business-related content (e.g. barbeque plans), they were openly critiqued. Some users started group discussions to emphasize the ESM should only be used for work. A discussion with the topic "[ESM] abuse" explained that a user questions "how does it [the ESM] improve efficiency if people are posting [non-work related things] and then 10+ users are responding to it?" Hence, most users refrained from "social" behavior. This corporate character also entailed that users were not authorized to start profession-related groups without formal approval: "It's not like on Facebook that you can start your own group or page whatever you like. We have a process for that." [Operations support manager].

In the second phase of the study, there were over 30.000 users and over 700 active groups. Project teams worked in groups where files were stored (e.g. minutes, project schedules and-specifications) and users worked together in collaborative documents. Nearly all interviewees checked the ESM daily for

notifications, and posted content (e.g. questions, answers, and updates) multiple times per week. Besides using the platform for work-related projects, professionals started to use the ESM to stay up-to-date on practice-related topics and to keep in contact with (geographically dispersed) peers from a similar profession (e.g. programmers) to develop their expertise, thereby adhering to the logics of the profession. One of the system engineers recognized the ESM allows him to connect more easily with peers from his profession: “I think it is much easier or it [to connect with peers] will be easier with the ESM because then you see what are people interested in [ ... ] and automatically suggests people which are in the same kind of interest you do.”

Simultaneously, users had to be efficient and use the ESM only for task-related projects and activities. A consultant explained that he wanted to search for practice-related groups but refrained from doing so as he felt this was inappropriate behavior.

“You have to stumble upon them [interesting groups] to know [about those groups]” ( ... ) “You can’t keep daily tracking whether there are interesting [groups]. Interviewer: Why not? Consultant: My boss pays me to work not to find groups on [the ESM].”

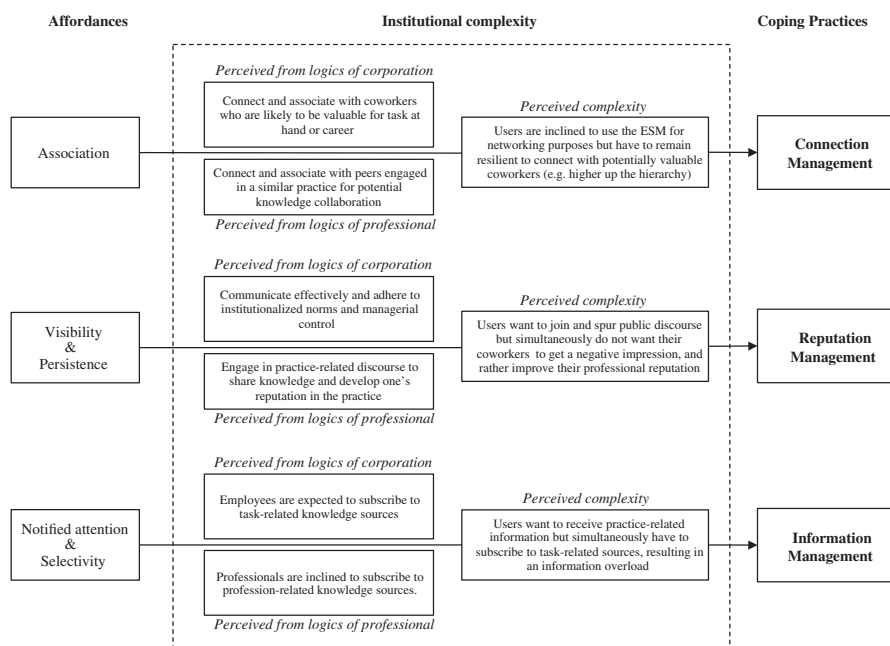
The ambiguity that stems from the institutional complexity is that even though searching, finding, and joining groups can help professionals to learn and develop their expertise, this behavior was deemed inappropriate since it consisted of nonbillable activities. Engaging in such activities was in conflict with the organizational norm that the ESM should increase efficiency and productivity, as communicated by management.

### Dealing with institutional complexity

Figure 1 shows how users acted upon the affordances of ESM in order to cope with the institutional complexity. We identified three coping practices that present ways in which the affordances are manifested in response to the ambiguity associated with institutional complexity: (1) connection management, (2) reputation management, and (3) information management.

#### *Connection Management*

Enacting the affordance of associating, users faced the ambiguity of who to connect to. The logics of the corporation emphasize the organizational hierarchy and hence trigger users to connect with people higher up in the organization or with people and groups with which they are expected to keep up-to-date (e.g. by subscribing to their updates) due to their formal role in the organization (e.g. higher-level managers). It was common practice among professionals to assure that the right people knew what they were doing, as establishing such visibility was of strategic importance for their career. Consultants felt pressure from the organization (e.g. their management) to follow several people and groups: “I’ll have my butt kicked if I don’t follow that [departmental group]” [Management assistant]. In particular, because the established connections are displayed on users’ profiles, users followed important individuals within the organization who were of strategic interest to them (in particular people higher up in the hierarchy). Furthermore, the focus on efficiency and work processes that is characteristic of the logics of the corporation guided users to connect with others based on a much more focused goal, e.g. to search for people who could help them do their task better or more efficiently. As the BI developer explained: “When I’ve got a potential project at [company X], then I’ll check whether other people have done projects at [company X]”. Besides searching through posts, contributions, and comments, the search function also allowed users to connect to specific experts needed for a job, as one of the directors explains: “[When I



**Figure 1** Coping practices to manage the ambiguity from the institutional complexity

need a specialist on SAP], I say let's do a search on names on who has put SAP as a tag [on their profile], and then see if I can contact those guys."

On the other hand, informed by the logics of the profession users wanted to connect with their peers based on shared interests (e.g. other SAP-experts) who formed their relational network. Professionals are often temporarily transferred to various organizations and used the ESM to connect and share knowledge with their geographically dispersed peers. The 'associating' affordance created the opportunity to find peers from their profession via groups, others' networks, or the search function. A solution architect illustrated how this helped to establish relationships: "I might not know them [other architects] but I might have social relationships with somebody I don't know but with somebody you have the same interest in."

In response to this ambiguity, users developed the coping practice of *connection management*: Following both logics, professionals strategically connected with people who were influential under the corporate logics (i.e. managers) and the logics of the profession (i.e. experts). The search function of the platform allowed users to sift through the large amount of information and seek those people who had certain skills, experiences, or other characteristics. Connections could be established by subscribing to updates from groups or people, and the ESM also allowed users to become a part of personal networks (similar to connections on social networking sites). The ambiguity users experienced as they were informed by the corporate and the profession logics was thus managed by adhering to both logics simultaneously.

### *Reputation Management*

Enacting the affordances of visibility and persistence, users faced the ambiguity whether to engage in certain discussions. The logics of the profession informed users to associate with and invest in their



group of peers on the ESM, and hence were inclined to engage in practice-related discussions (e.g. about new developments) to develop their expertise. As a project manager explained: “I’m involved in mobile developments so I use groups like [mobile-group] or like user experience [ ... ] and post things that you’ve been experiencing, for instance frameworks that have been released.” Such discussions could get heated as supporters and opponents defended their stances. While this helped to establish their reputation among peers, simultaneously however, informed by the corporate logics, users chose to weigh their words as everything would be stored and visible to management, as an IT specialist mentioned: “... other managers are reading along.” Hence, informed by the logics of the corporation, users were hesitant to contribute to discussions and were careful not to respond too quickly in order to avoid an online track record. A technical expert illustrates this by indicating to be cautious not to comment anything that might not be appreciated by others: “You don’t know who’s following it. You could hurt people’s feelings, you could upset people, or you could, like I said, you could harm the company for perhaps, for certain expressions, things you post.” This indicates that users were afraid of giving responses that could harm the reputation of the organization or their own corporate reputation.

Hence, professionals engaged in *reputation management*: Balancing both logics, users were careful about what content to associate with by protecting against negative content (e.g. refraining from critical contributions) and boosting their reputations within the organization and among their peers by associating with favorable content (e.g. flaunting new projects).

By joining groups that would show on their profiles users let management know they were using the ESM, thereby adhering to managerial expectations that they integrated the use of ESM in their daily practices (e.g. for collaboration). The corporate logics informed users to boost their reputation, as this would be most beneficial for their corporate careers and made others aware of their progress: “You have to make sure that you’re visible. So that you’re not only doing good things, but also that the right people know that. Right, if you want to qualify for a promotion for example, or for a salary increase.” [Consultant]. Following this, users posted when they or colleagues scored new clients: “John managed to score an assignment at a new client, via his own network. All praise to John!” [Manager – observation]

Aware of the existing hierarchy, replies to questions on the ESM regularly contained statements such as “but that’s my own humble, private opinion :-)” and users communicated in a strategic way, because as a BI developer illustrated: “It could potentially remain on that site forever, if you don’t delete it yourself.” This behavior was consistent among all interviewees and did not change even when users were higher in the hierarchy. Consequently, users held back from using the ESM to respond more critically to for example ideas. “Someone asked for someone who was able to build an app and who had the time and then someone posted you have to ask this and this manager because he has THE app [group]. And that just isn’t true, but I got afraid when I would react, I couldn’t do it without offending someone.” [Open source consultant] A network engineer illustrated this: “I mean, obviously that’s what I mean about maintaining professionalism [ ... ]. You really shouldn’t say things about senior management, at all negative. If you value your career.” Instead, in order to avoid the ESM, users call or e-mail the person to share their comments: “I’ll call the one, the person that I see I want to respond to. I just try to get hold of them, or e-mail.” [Project manager]

Users thus tried to balance between the two logics by taking part in discussions (informed by the profession logics), but simultaneously safeguarded their reputations by making sure that their contributions did not harm their position in the organization (informed by the corporate logics).

### *Information management*

Enacting the affordances of selectivity and notified attention, users faced the ambiguity of what information sources to spend time on. Informed by the logics of the corporation, users wanted to adhere

to the organizational norms and looked for people and content that would help them to accomplish their work more effectively and efficiently. Getting updates from collaborators on projects was important for users. Simultaneously, the ESM gave users access to a wealth of practice- and profession-related information, which was not necessarily related to their daily work but helped them develop their expertise and a community with their peers. Consequently, employees faced an information overload and ambiguity regarding what information to spend time on, as users wanted to be kept up-to-date on both profession- and organization-related information at the same time. “[In the groups you’re subscribed to at the start] you get flooded with information, so I ignore that most of the times. (...) Otherwise it would just cost me too much time to filter something out that I might find interesting.” [BI developer].

Informed by the corporate logics, users were aware of their role as employee, “my boss pays me to work,” and realized they had to prioritize what information to spend time on. As a result, they engaged in *information management*: users mostly followed the corporate logics by prioritizing work-related information, reducing involvement with profession-related groups (e.g. by ignoring updates), and using filters to focus on work-related information: “So, because you get easily overloaded with lots of stuff, I’ve changed my mind there as well. [...] So I only focus on what I want to read.” [Director]. Users were mainly interested in information stemming from corporate sources, as a BI developer explained: “On Facebook it doesn’t matter if you occasionally miss a message, when someone posts a picture of their dinner, I don’t care. But if my project leader says anything, then I find that interesting.”

Users installed filters that would filter out posts with certain keywords (e.g. SAP-related) to keep the amount of information manageable while still receiving practice-related information (following the logics of the profession) *and* working efficiently (following the logics of the corporation). “Well I created a [filter]; I don’t know how it’s called, in one of those [sections] in the opening section, which lists all the things tagged with SharePoint.” [Sharepoint architect]. A business manager explained this further: “So if you have 20 groups, and you want to be up-to-date on one certain topic [...] you need to follow each [group], and that’s undoable (...) If there are any questions within my area of expertise, [...] I have a [filter] only for showing questions for certain set of [groups].”

Some updates pertained to the projects someone was working on, sometimes requiring action, while other updates related to knowledge shared more broadly about a practice of interest. So even when relevance was optimized according to these two main interests, users still felt “you can spend your whole day reading stuff”. In response, most interviewees ignored the many posts in their ‘home feed’: “I almost always just let it scroll by” [IT specialist] and instead focused on their filters. Hence, users regularly missed out on updates: “But the pity is, because of the many notifications, you don’t see the notifications that are important.” [Consultant]. While the two prevailing logics both influenced the selection of information, in situations of information overload, the users gave priority to behavior following corporate logics.

## Discussion

Instead of addressing the question of which potentials for knowledge sharing are enabled or constrained by ESM, we build on existing research by empirically analyzing how the – often conceptually defined – affordances are manifested in practice when the wider institutional forces that shape technology use are taken into account. In particular, our analysis indicates that professionals became informed by two logics at the same time: The organizational policy and introduction evoked the logics of the corporation while the professionals’ aspiration to develop their expertise evoked the logics of the profession. ESM’s transparency means that users are confronted with an ambiguity as to which logics to adhere to when aiming to share knowledge on ESM: Will they share their expertise with

peer-professionals and act according to the institutional norms and values related to their profession, or will they act as corporate citizens and only engage in work-related knowledge sharing to collaborate in favor of organizational productivity? In response, to at least temporarily manage the ambiguities, professionals developed the coping practices *connection management*, *reputation management*, and *information management*. These practices present the continuous trade-off between the two logics since the extent to which actors adhere to either the corporate or the profession logics depended on the specific context and audience.

It is the openness of ESM that induces people to develop strategic responses (e.g. Gibbs et al., 2013; Leonardi et al., 2013; Leonardi & Treem, 2012). Our contribution is twofold. First, our findings add to the ESM literature by showing that users, being informed by two institutional logics, experienced multiple ways of using ESM, which, at times, might frustrate knowledge sharing. Engaging in connection management increases users' connectivity in the organization, but as users tend to connect with influential users, learning opportunities might be limited (Majchrzak et al., 2013). By engaging in reputation management, users refrain from critical contributions vital to fruitful knowledge collaboration (Majchrzak et al., 2013; Leonardi et al., 2013; Ellison et al., 2015). When users engage in information management, updates and discussions on profession-related topics are often ignored, while such discussions are essential for knowledge development (Majchrzak et al., 2013; Faraj et al., 2011).

Our second contribution extends previous studies that adopted an institutional logics perspective to examine how users deal with a new technology have shown that users develop certain practices that help them cope with tensions and ambiguity. The coping practices we identified are akin to the loose coupling of practices (Berente & Yoo, 2011) as actors adhere either to corporate or profession logics dependent on the context. Others have discussed the idea that professionals exhibit such practices in order to circumvent managerial expectations on how to use technologies (Azad & King, 2008). In particular, the coping practices we identified resonate with previous conceptual (Leonardi et al., 2013; Treem & Leonardi, 2012) and empirical (Dimicco et al., 2008; Gibbs et al., 2013) work that describes that users show strategic responses to managerial surveillance, information overload, and transparency.

We incorporate institutional logics to understand not only how professionals use ESM for knowledge sharing but also *why* they do so. Communication technologies have often been studied from a technological frames perspective (e.g. Orlikowski & Gash, 1994) that provides handles to understand users' perceptions of technologies. However, technological frames do not incorporate the wider-level influences on technology use, independent of the technology. A frames perspective would have resulted in a number of different frames held by the employees of ItCon. For example, social media enthusiasts (akin to the technologists described by Orlikowski & Gash (1994)) would have had different frames about the ESM from nonenthusiasts, leading to different usages of *this particular* ESM. However, because the coping practices we identified are developed in response to *institutional-level* influences, we argue that our findings can be extended to ESM use in other contexts as well. Users employ the coping practices to manage the ambiguity as they are simultaneously informed by multiple logics. It seems fruitful to supplement a frames perspective with an institutional logics lens to help us understand the macroinfluences on microheld cognitions and their translation to practices (e.g. Kandathil & Newell, 2011).

Our findings emphasize that the ambiguity between the two logics has not yet been resolved, but that users must continuously exhibit these coping practices in order to manage the ambiguity. We suggest future research to unravel the extent to which professionals fully adhere to either the corporate logics (e.g. only using the ESM for work-related activities) or the profession logics (e.g. abandoning the ESM or only using it for profession-related knowledge sharing). Since organizational communication and collaboration increasingly takes place online, knowledge sharing via CMC becomes transparent and is stored, and hence becomes available to larger audiences. Coping practices such as reputation management are therefore likely to be exhibited in other online CMC settings too, in which the complexity of logics is not

necessarily that of the profession and the corporation. The institutional logics literature suggests people's behavior is guided by the structures, rules and norms of the logics they draw from. Hence it makes sense that while the technologies supporting knowledge sharing processes might change, the ultimate social influences do not: After all, people are still working according to the logics in which, for instance, efficiency and accountability are important. Implementing a new technology does not necessarily change this. The coping practices exhibited by users are therefore likely to be found in other organizations too, as employees are often influenced by the logics of both the corporation and the profession. While we identified the ambiguities and coping practices among all interviewees, future research could also delve deeper into how different types of users might exhibit different coping strategies. Our findings suggest employees use coping practices to manage their knowledge, indicating that knowledge sharing cannot be engineered and managed top-down (van den Hooff & Huysman, 2009). As the ambiguity associated with institutional complexity cannot be actively removed, practitioners and scholars should not become overly optimistic about the expected changes in knowledge processes and collaboration when using ESM.

Our research aligns with the call to move beyond the user-centric focus when studying technologies in practice and to conceptualize the user as a social actor embedded in various social and institutional contexts (Lamb & Kling, 2003). By being among the first to include an institutional logics perspective in analyzing how ESM are used in practice, our empirical study provides a promising avenue for scholars to incorporate the institutional context in which technologies are used. In our case, institutional complexity emerged predominantly from the logics of the profession and that of the corporation. In other settings other logics are likely to come at play, e.g. in smaller (entrepreneurial) firms, logics of the community or market might induce different results. We found it striking that logics of "the social," akin to the logics of community described by Thornton et al. (2012) did not play a role. Guided by logics of "the social," knowledge sharing would revolve around social relations among people who have an emotional connection and shared identities. We encourage research within different types of organizations to further unravel the complexities and affordances that result from these different constellations of logics. While our analysis reveals the extent to which logics inform users' behavior, scholars should also consider whether changes in technologies have repercussions for institutional logics. We suggest future studies adopt a longitudinal approach to determine whether users permanently resolve the ambiguity, for example by completely disengaging from ESM in order to ignore the ambiguity altogether. Research also suggests that institutional complexity might be resolved with, for example, a hybridization of logics (Thornton et al., 2012), the emergence of new organizational forms (Westenholz, 2009) or a shift in dominant logics.

In conclusion, we strongly encourage scholars to continue to study ESM in practice as a growing number of organizations are introducing these technologies to increase knowledge sharing among professional knowledge workers. By being among the first to utilize an institutional logics perspective to identify how professionals cope with the ambiguity they experience when using ESM, our contributions offer guidance to increase our understanding of the extent to which ESM can facilitate or frustrate knowledge sharing.

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