

## How and Why Organizations Use Social Media: Five Use Types and Their Relation to Absorptive Capacity

#### **Author:**

Schlagwein, D; Hu, M

#### **Publication details:**

Journal of Information Technology v. 32 Chapter No. 2 pp. 194 - 209 0268-3962 (ISSN); 1466-4437 (ISSN)

#### **Publication Date:**

2017

#### **Publisher DOI:**

https://doi.org/10.1057/jit.2016.7

#### License:

https://creativecommons.org/licenses/by-nc-nd/4.0/ Link to license to see what you are allowed to do with this resource.

Downloaded from http://hdl.handle.net/1959.4/unsworks\_43663 in https://unsworks.unsw.edu.au on 2024-04-26

# How and Why Organizations Use Social Media: Five Use Types and Their Relation to Absorptive Capacity

Daniel Schlagwein (corresponding)
UNSW Australia
schlagwein@unsw.edu.au

Monica Hu UNSW Australia

This is a post-print version of a paper forthcoming in Journal of Information Technology, http://www.palgrave-journals.com/jit/. Cite as: Schlagwein, D., Hu, M. (forthcoming). How and Why Organizations Use Social Media: Five Use Types and Their Relation to Absorptive Capacity. Journal of Information Technology.

Abstract: In this paper, we examine the relation between social media use and the absorptive capacity of organisations. Over the past ten years, many organisations have systematically adopted social media. Trade press and consulting companies often claim that the systematic use of social media increases the performance of organisations. However, such claims are typically neither empirically grounded nor theoretically examined. In this paper, based on key informant interviews at 20 organisations, we examine these claims empirically and theoretically. Firstly, we examine the ways in which social media are used by organisations. We identify five different social media use types that support different organisational purposes (broadcast, dialogue, collaboration, knowledge management and sociability). Secondly, we analyse how these five social media use types relate to organisations' absorptive capacity. We find that particular social media use types (e.g., dialogue) support organisations' absorptive capacity and, ultimately, their performance although others (e.g., sociability) do not.

**Keywords:** Information technology, social media, organisational theory, absorptive capacity, field research.

#### Introduction

Social media are Internet-based communication and collaboration channels that have been used widely since about 2005 (Boyd and Ellison 2007; Kaplan and Haenlein 2010; Parameswaran and Whinston 2007). From an information systems (IS) perspective, social media tools and their surrounding organisational and managerial structures constitute "social information systems" (Germonprez et al. 2011; Schlagwein et al. 2011) or "enterprise social systems" (if used in an enterprise; as defined in the call for papers for this special issue). While social media were initially used only for leisure activities, they have been increasingly embraced for organisational purposes (Andriole 2010; Kaplan and Haenlein 2010; Leonardi et al. 2013). The use of social media by organisations is a global phenomenon, with more than two-thirds of the Fortune Global 500 organisations having embraced the systematic use of social media within a five-year period (Barnes et al. 2012; Schlagwein and Prasarnphanich 2014).

Why do so many organisations use social media? How does the use of social media impact on organisational performance? Scholarly knowledge regarding such questions is rather fragmented. In fact, we are not aware of any academic paper that would propose an answer to such difficult but relevant questions about the overall impact of social media use on organisations. The total effect of social media use on organisations may be difficult to study for several reasons. Firstly, social media are certainly what could be considered "ontologically unstable" (Kallinikos et al. 2013). That is, social media undergo permanent mutations, are in "perpetual beta" and are "continuously deployed". Secondly, social media encompass a wide range of different tools and content. These tools differ in dimensions such as external vs. internal location (e.g., LinkedIn vs. Confluence) (Leonardi et al. 2013) or textual vs. immersive content (e.g., Twitter vs. Second Life) (Kaplan and Haenlein 2010). Thirdly, social media are very versatile in their use (Schlagwein et al. 2011). That is, even the same social media tool (e.g., Yammer<sup>1</sup>) at the same time can be used for very different organisational purposes. Such difficulties (among others) may explain why the totality of social media uses by organisations has not been linked to organisation-level theories of performance and competitive advantage. At the same time, the wide adoption of social media by organisations across countries and industries suggests that there are substantial advantages for organisations through using social media.

The purpose of this paper is to contribute to a better understanding of how and why organisations use social media. As we argue below, we find that absorptive capacity (Cohen and Levinthal 1989; Cohen and Levinthal 1990; Lane et al. 2006) provides a valuable theoretical lens through which to analyse the empirical phenomenon of social media use by organisations. Considering this theoretical lens, the research question answered by our paper is formulated as: "How does social media use relate to the absorptive capacity of organisations?"

To answer this question, we conducted qualitative field research involving key informant interviews in 20 organisations to explore the wide range of systematic uses of social media and their effects on absorptive capacity. Firstly, our field research identified five different social media use types in organisations: broadcast, dialogue, collaboration, knowledge management and sociability. Secondly, our research revealed how these five social media use types are related to the absorptive capacity of organisations. Our findings suggest that certain social media use types (e.g., dialogue) increase organisations' absorptive capacity and hence organisational performance, while other social media use types (e.g., sociability) are irrelevant to organisations' absorptive capacity. In other words, it is important how social media are used not just that social media are used.

The remainder of this paper is structured as follows. In section 2, we review the scholarly knowledge about social media use by organisations. In section 3, we discuss the theoretical claims of the absorptive capacity theory and how the theory informs the study of social media use by organisations. In section 4, we present our research method. In section 5, we report the findings of our study that reveal five social media use types. In section 6, we discuss the impacts of these five use types through the absorptive capacity lens. We infer a set of theoretical propositions (i.e., a theoretical model) on the relation between organizational social media use and absorptive capacity. We conclude the paper with a summary.

<sup>&</sup>lt;sup>1</sup> Yammer is an internal social media platform used by the majority of large organizations (Rao 2010).

#### Literature Review: Social Media Use by Organisations

Using a concept-centred approach (Webster and Watson 2002), we reviewed the literature on organisational social media.<sup>2</sup> Specifically, we analysed the current literature on social media use by organisations with a specific focus on identifying organisational impacts resulting from social media use.

#### **Conceptualisations and Categorisations of Social Media**

How can "social media use" be conceptualised and categorised? Most scholars would agree that conceptualising social media as a single technology or measuring its use as single construct (i.e., "system use") is over-simplifying the issue inappropriate for an understanding of social media (see also Burton-Jones and Straub 2006). The reason is that social media are a broad, dynamic and versatile and class of social platforms, services and technologies. As such, social media support quite different organisational (and individual) uses and purposes.

Some scholars have suggested categorising social media based on "technological features". One such classification (Kaplan and Haenlein 2010) considers the "richness" (Daft and Lengel 1986) of social media content. This is a possible option for classification. However, technologically different social media tools might achieve the same organisational purpose, or technologically similar social media tools might achieve very different organisational purposes (McAfee 2009). For example, the purpose of using social media for marketing the organisation might be the ability to support viral recommendations for new products. Whether such viral marketing is based on *Twitter* "re-tweets" (low media richness), *Facebook* "likes" (medium media richness) or *Second Life* interactions (high media richness) is rather irrelevant in regard to the use of viral marketing for the organisation. This is why we consider categorisations of social media based on technological features as being of limited value for the purpose of this paper.

The theoretical lens of "affordances" (Gibson 1979; Norman 2013) has also been suggested for understanding social media (Leonardi et al. 2013). Affordances are a relational concept that describes the relation between an environment (e.g., a technology) and an organism (e.g., a human). In our context, affordances are the qualities of social media that afford action potential to humans (Majchrzak and Markus 2013; Treem and Leonardi 2012). One concrete set of social media affordances that has been proposed consists of: visibility, persistence, editability and association (Treem and Leonardi 2012). However, such

-

<sup>&</sup>lt;sup>2</sup> For identifying literature on social media, we first used a common definition of what social media are (Boyd and Ellison 2007; Kane et al. 2014). We then used a three-step approach of searching and reviewing literature on the organizational impacts of social media use. In the first step, we manually screened three (A) and grade four (A\*) business journals as ranked by the Association of Business Schools journal ranking because of its comprehensive cover and its meta-ranking system (Harvey et al. 2010). The second step was to conduct keyword-based searches in the databases EBSCO Business Premier, Scopus, Web of Science and Google Scholar. We filtered relevant paper by screening the title, keywords and abstract of the papers (and eventually reading full texts). These first two steps provided us with a core set of papers. The third step was to conduct forward and backward searches (Webster and Watson 2002) from the core set of papers. This step was to include significant works, including books and conference papers, which were not captured in the initial searches. We also extended the set of keywords and iteratively extended our keyword-based searches (returning to step 2) and then again performed forward and backward searches. We do not provide a complete review of all social media literature here (we provide this elsewhere), instead we cite exemplary papers as necessary to build the argument of the paper (on literature review see further Boell and Cecez-Kecmanovic 2014; Paré et al. 2015).

classifications have been developed with individual human users in mind rather than organisations as users. Also, while useful for a definition of social media, classifications such as the above are unsuitable for recommendation to IS practitioners (i.e., it is difficult to provide them with actionable advice on how they should or should not use social media based on affordance classifications such as above because, for example, "editability" cannot typically be enacted separately from, for example, "visibility").<sup>3</sup>

Focusing on actual use in practice, some scholars have suggested that different social media "use types" (Andriole 2010; Turban et al. 2011) should be conceptualized. Such categorisations are based on the different business purposes of these use types (rather than on their technological features or generalized affordances). Scholars have suggested that the social media use types could include categories such as information dissemination, knowledge management, communication, collaboration, innovation, training, learning (Turban et al. 2011), rapid application development and customer relationship management (Andriole 2010). The benefits of such a categorisation is that use types are meaningful and actionable for IS practitioners (e.g., IS practitioners could be advised to use social media for "knowledge management" but not for "customer relationship management"; such advice is useful and meaningful for them).

Based on the above considerations, we embraced the use type perspective on social media in this study. However, as a first step, we developed a new categorisation of social media use types based on the analysis of field data. We performed this analysis (reported in section 4) because the use types categorisations cited above have not been based on field research and accepted concept development methods.

#### Organizational Uses of Social Media

Various different types of social media are used by organisations. For example, organisations use internal social media (i.e., social media hosted by, and accessible only to members of, an organization) for communicating and managing knowledge (Gray et al. 2011; Paroutis and Al Saleh 2009). In fact, social media have their conceptual roots in knowledge management and share core abilities (such as storing and retrieving information) with knowledge management tools (Levy 2009; Mueller et al. 2011). A typical case of the use of internal social media is that of using an Intranet wiki for knowledge management (Arazy and Gellatly 2012; Wagner 2004). However, there are many other uses of internal social media (Leonardi et al. 2013).

Organisations also use external social media (i.e., social media hosted outside, and used by non-members, of the organisation) to gauge marketplace reactions (Jansen et al. 2009), to engage their user communities (Lipsman et al. 2012) or to effectively manage customer relationships (Michaelidou et al. 2011). External social media are also used for marketing new products or services (Li and Du 2011; Rui et al. 2010; Trusov et al. 2009) or for selling products and services via social commerce (Stephen and Toubia 2010). In suitable projects and processes, external social media also provide a way to collaborate and co-create with customers and consumers (Haefliger et al. 2011; Wagner and Majchrzak 2007). A typical

\_

<sup>&</sup>lt;sup>3</sup> This argument is based on the assumption that the study of IS, a professional discipline (Lee 2010), should inform and help IS practitioners. Hence, findings need to be framed and analysed in ways that allow practitioners to act upon them. At the very least, this is the intention of this paper, expressed in the *Journal of Information Technology's* mission statement, and explicitly suggested in the call for papers for this special issue. That is, we take a pragmatist philosophical position (Bacon 2012; Goldkuhl 2008) in this paper.

example of the use of external social media is that of using *Facebook* for viral marketing (Schulze et al. 2014).

Overall, organisations use internal and external social media with the aim to improve collaboration and communication efficiency (Andriole 2010). Social media can increase an organisation's ability to source new ideas and to refine products and services based on external perceptions (Kiron et al. 2012). Hence, it has been suggested that social media use by organisations improves their innovativeness (Standing and Kiniti 2011).

The above brief summary shows very different ways in which organisations use social media and how such uses have been studied. A key gap in the literature on social media is, however, a lack of analysis that considers the total impact of all these social media uses on the organisation (Larson and Watson 2011; Michaelidou et al. 2011). In other words, studies connecting social media use to theories of firm/organizational performance are missing. While the total impacts of other types of IS on organisational performance have been analysed (e.g., Harkness et al. 1996; Mithas et al. 2011; Ranganathan and Brown 2006), an analysis on the total impact of social media is lacking.

In this paper, we use and extended absorptive capacity theory to theorise about the link between social media use and organisational performance.

#### **Theoretical Background: Absorptive Capacity**

This section summarises the claims of absorptive capacity theory and argues why absorptive capacity is a well-suited lens through which to understand social media uses in organisations.

#### **Claims of Absorptive Capacity Theory**

The literature on absorptive capacity holds that differences in organisational performance and competitive advantage can be explained by their different dynamic abilities to explore, assimilate and exploit new knowledge (e.g., Lane et al. 2006; Roberts et al. 2012; Zahra and George 2002). One core claim of the theory is that the ability of an organization to explore and exploit new knowledge depends on the availability of related knowledge and the broadness of employees' backgrounds (Cohen and Levinthal 1989; Cohen and Levinthal 1990).

Absorptive capacity has its roots in the resource-based view (Barney 1991; Wernerfelt 1984). As such, absorptive capacity theory provides an alternative to other theories that aim to explain differences in the performance of organisations (such as neoclassical "perfect competition" theory or transaction cost economics) (Conner 1991). In contrast to the resource-based view, absorptive capacity allows to better differentiate between exploration and exploitation (March 1991). Instead of focusing on the "resource possession at one point in time" perspective of the resource-based view, absorptive capacity considers the dynamic process in which resources are created, reconfigured and used, based on what the organisation learns (especially knowledge from and about the environment) over time. Absorptive capacity could hence be considered a specific resource that helps organisations to effectively create, manage and exploit *other* resources (Makadok 2001).

Absorptive capacity was originally conceived as a singular concept and focused on prior knowledge (Cohen and Levinthal 1989; Cohen and Levinthal 1990). Since then, there have been several reconceptualisations of the absorptive capacity (Lane et al. 2006; Todorova and Durisin 2007; Zahra and George 2002). These recent conceptualisations increasingly see absorptive capacity as a process and a dynamic capability of the organisation. That is,

absorptive capacity is conceptualised as the organisational ability to perform processes that create, build and deploy knowledge and that allow the organisation to use its other resources and capabilities over time (Lane et al. 2006; Zahra and George 2002).

We found Lane et al.'s (2006) process-focused reconceptualization of absorptive capacity to be particularly informative and relevant for our problem. Hence, we are building on their conceptualization of absorptive capacity as being constituted by three sub-processes: "(1) recognizing and understanding potentially valuable new knowledge outside the organization through exploratory learning, (2) assimilating valuable new knowledge through transformative learning and (3) using the assimilated knowledge to create new knowledge and commercial outputs through exploitative learning" (Lane et al. 2006, p. 856). As such, absorptive capacity is organizational learning as far as the learning concerns the organization's new and external knowledge (Sun and Anderson 2010). Figure 1 shows these three absorptive capacity core processes.

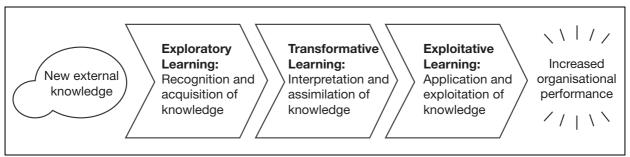


Figure 1: Absorptive Capacity (based on Lane et al. 2006; Zahra and George 2002)

On what does the absorptive capacity of any particular organization depend? Cohen and Levinthal (1989, 1990) in their original conceptualization held that absorptive capacity depends primarily on the organisation's prior knowledge. The authors argued that prior internal knowledge is critical to make sense of new external knowledge. Later studies, however, suggest additional, important antecedents of absorptive capacity, such as social relations, strategic focus and mental models (these antecedents help us to understand why even small firms with modest prior internal knowledge can be very "absorptive").

Internal and external social relations support the exploratory learning of absorptive capacity (Jansen et al. 2005; Roberts et al. 2012; Zahra and George 2002). For example, particular members of the organization may through their social networks provide a bridge to outside communities, acting as "gatekeepers" (Whelan et al. 2013). The strategic focus of the organisation will also impact upon how knowledge is (or is not) transformed and used (Lane et al. 2006). For example, the strategic focus of the organization may impacts on the selection of one possible development project over an alternative project (Schilling 2013). Finally, mental models in the organisation impact on how new knowledge is used (Lane et al. 2006). For example, the mental models of executives strongly impact on which new knowledge is searched for, transformed and acted upon (Nag and Gioia 2012). Information systems have also been suggested as important support for absorptive capacity (Lane et al. 2006); a claim that information systems researchers should examine (Roberts et al. 2012).

We used the theoretical lens of absorptive capacity as a sensitising device through which to analyse both the existing literature and the empirical data because the absorptive capacity lens allowed us to better understand the different internal and external uses of social media by organisations in their processes of exploring, transforming and exploiting knowledge.

#### An Absorptive Capacity-Based Reading of the Social Media Literature

Table 1 provides an overview of the relation of social media use and absorptive capacity according to existing studies. Categorizing studies on the organisational use of social media according the three core processes of absorptive capacity (defined in the first column), we find first indications that social media use increases an organisation's absorptive capacity. The process to compile this table was that we used absorptive capacity as a lens to read studies on the diverse benefits of social media use (examples cited), allowing us to place the many disconnected insights on such benefits in a coherent framework.

Absorptive Capacity Processes (Lane et al. 2006)	Organisational Uses of Social Media (Examples)	Sources (Examples)
Exploratory Learning: Searching, understanding, recognising and acquiring knowledge.	To patrol user-generated content and trends effectively	Berinato (2010); Larson and Watson (2011)
	To take up marketplace information more quickly	Jansen et al. (2009); Schweidel and Moe (2014)
	To communicate between businesses more effectively	Levy (2009); Michaelidou et al. (2011)
Transformative Learning: Interpreting, assimilating, maintaining and reactivating knowledge.	To store and search for knowledge more easily	Gray et al. (2011); Levy (2009)
	To enable crowdsourcing	Tang et al. (2012); Turban et al. (2011)
	To leverage collective intelligence	Chen et al. (2012); Standing and Kiniti (2011)
Exploitative Learning: Transmuting, applying, exploiting and maximising impact of knowledge.	To develop new business applications or business processes	Andriole (2010); Koschmider et al. (2010)
	To access the market more easily	Dhar and Ghose (2010); Standing and Kiniti (2011)
	To create viral word-of-mouth	Li and Du (2011); Rui et al. (2010)

Table 1: Absorptive Capacity Processes and Organisational Uses of Social Media

As indicated in the first row of Table 1, social media activity supports the organisation's ability for exploratory learning, that is, understanding, recognising and acquiring external knowledge. This is can be achieved, for example, through effective patrolling of external user-generated content (e.g., *Twitter* feedback) in social media (Berinato 2010; Larson and Watson 2011) and, hence, quicker uptake of real-time marketplace information (Jansen et al. 2009). In addition, social media also help inter-organisational connectedness and knowledge exchange (Michaelidou et al. 2011).

As indicated in the second row of Table 1, social media supports the organisation's ability for transformative learning, that is, assimilating, maintaining and reactivating knowledge. Internal social media (e.g., internal social bookmarking, wikis or microblogging) allow for easily searchable and openly flowing information within the organisation (Arazy and Gellatly 2012; Efimova and Grudin 2007; Gray et al. 2011). Social media allow for crowdsourcing processes (Majchrzak et al. 2009; Turban et al. 2011) and can help to leverage collective intelligence for the organisation (Chen et al. 2012; Standing and Kiniti 2011).

As indicated in the third row of Table 1, social media may support the organisation's ability for exploitative learning, that is, transmuting, applying and maximising the impact of acquired knowledge. For example, social media allow new business applications (Andriole 2010) or business processes (Koschmider et al. 2010) to be created more effectively. Social media also help organisations to connect with the marketplace faster for the commercialisation of new products (Dhar and Ghose 2010; Standing and Kiniti 2011) and help to exploit this connection by creating electronic word-of-mouth (Li and Du 2011; Rui et al. 2010; Trusov et al. 2009).

Overall, we found absorptive capacity to be a relevant and appropriate lens through which to create a better understanding of the 'how' and the 'why' of organisational social media use (see also Culnan et al. 2010). Hence, we used and extended the absorptive capacity lens in our empirical investigation of the systematic social media use by 20 organisations. The particular objectives of our empirical investigation were: (1) to identify the different social media use types in organisations; and (2) to theorise about the impact of these social media use types on organisational absorptive capacity (and hence organisational performance). A positive relation between absorptive capacity and organisational performance is firmly established in the absorptive capacity literature (e.g., Flatten et al. 2011; Helfat et al. 2007; Lane et al. 2006; Roberts et al. 2012; Zahra and George 2002). Hence, we take this proposition as a given and do not directly examine this proposition as part of our study.

#### **Research Method**

Given the highly dynamic social media context, we considered it necessary to be open to new and unexpected findings in the fieldwork and hence followed an exploratory and inductive research approach. While we used absorptive capacity as a sensitising device, we inferred our claims and propositions from, and grounded them in, the empirical data.

Consistent with the exploratory purpose of this study, we used a qualitative approach for data collection and analysis. The reason is that a qualitative approach allows the study to consider the broad context and multi-faceted nature of organisational social media use (Flyvbjerg 2001). Qualitative research also allows the use of a broad range of real-life data, including non-numeric, unstructured data, for analysis (Myers 1997; Silverman 2011).

Specifically, we analysed organisations across industries and sizes via key informant (expert) interviews (Silverman 2011). The interviews were conducted with one or more executive(s) or social media expert(s) in each organisation. In addition to this primary data, we considered secondary, natural data such as press releases, trade press reports and data on the respective social media use. For selection of the interviewees and organizations, we chose a sampling strategy focused on theoretically varied and information-rich instances (Patton 1990; Polkinghorne 2005). We collected data from "Western" organizations (mostly Australian or US-American organizations, see also limitations below) in 2012 and 2013. We interviewed experts at organisations with a) very different social media approaches

(between them, to achieve theoretical variety) and b) substantial experience with social media (in each, to achieve information richness). We used our professional contacts, snowballing/recommendations and "cold calls" (approaching organizations with relevant and interesting social media use without an existing direct or indirect connection to us) to make contact. We could also informally from prior interviews on social media as well as industry experience (which we believe helped us to ask effective questions). We used the criterion of theoretical saturation (i.e., no new insights were emerging from new instances) to determine the appropriate end point of our empirical data collection (Ezzy 2002; Strauss and Corbin 1998).

Considered as social media experts those that had at least three years of managerial experience with social media use and where identified by their respective organizations as experts in relation to the organization's social media use. In some cases, we considered it necessary to interview more than one expert per organisation due to the specific ways in which the organisation used social media. In the interviews, we used a mix of open-ended discussion (Myers and Newman 2007; Polkinghorne 2005) and repertory grid technique (Curtis et al. 2008; Tan and Hunter 2002).

The open-ended discussions resulted in semi-structured data. We performed on-going analysis of this data using thematic analysis by transcribing all interviews in full shortly after they were conducted. We then (open) coded the data using the software NVivo. We undertook the coding with the aim of identifying the facets, concepts and themes underlying the phenomenon (Braun and Clarke 2006; Ezzy 2002; Neuman 2010). In this way, facets and concepts were grounded in the data.

The repertory grid interview technique resulted in structured data. Repertory grids are based on a "forced" comparison of particular instances (i.e., social media use instances). That is, we asked participants how the social media use X was different from social media uses Y and Z (with X, Y and Z being actual social media use instances reported by the participant). The purpose of such comparisons was so participants would talk about differences that they might not mention in an open-ended discussion, for example because they might consider such differences "obvious" or "a given". The repertory grid technique was particularly useful in eliciting participants' constructions about what constitutes the differences between different social media uses (Curtis et al. 2008; Tan and Hunter 2002). We found that the combination of open-ended discussion and structured repertory grid technique were complementary in the types of insights that they provided and a useful combination of methods given our research objectives.

The thematic analysis and the repertory grids identified different social media use facets. We consolidated the use facets by re-formulating them consistently in the form: "to [organisational purpose]". After removing redundant facets, we identified 23 use facets with the thematic analysis and another 23 use facets with the repertory grids. We merged the two sets of facets to a total of 27 use facets. Using the later steps of thematic analysis (Ezzy 2002), we grouped the social media use facets (first-order codes) into five social media use types (second-order concepts). To illustrate our process, the interview quote "So, it [social media] is a free way of getting the brand 'out there' to existing customers and to new prospective customers" (participant 5, product manager) was ultimately coded as the use facet "to market brand or organisation in general". This use facet was, with other related use facets, grouped to the social media use type "broadcast". We iteratively revised and improved the concepts based on additional data form new participants and based on sending intermediary analyses back to prior participants for clarification and feedback (they found the classification to be rich and useful). We asked ourselves questions such as "do the facets and concepts adequately reflect the data?" and "do all new data match the

emerging facets and concepts?" The five social media use types emerging from this analysis are presented and discussed in section 5.

Finally, we examined the relationships between concepts. We re-analysed all data in relation to instances in which participants related the concepts of social media use to the concepts of absorptive capacity. That is, we looked for statements by participants that related a particular social media use type (e.g., dialogue) to a particular absorptive capacity process step (e.g. transformative learning). We used the same process of open coding and conceptual abstraction to develop these relations. For identified a six salient relations between social media use types and absorptive capacity, which are presented discussed in section 6.

Note that while this paper is necessarily presented in a linear structure, the process of developing the insights and propositions was iterative in nature, going back and forth between data collection, data analysis and emerging insights (well described in Gioia et al. 2013).

The next two sections present the empirical findings of this study and our analysis and theoretical interpretations of these findings.

#### **Five Social Media Use Types in Organisations**

This section discusses the five different social media use types of the organisations we identified through our data analysis.

Table 2 shows the final set of 27 (first-order) social media use facets and five (second-order) social media use types ("broadcast", "dialogue", "collaboration", "knowledge management" and "sociability").

Social Media Use Type	Social Media Use Facet	ТА	RG
<b>Broadcast:</b> The use of social media for the unidirectional broadcasting of information.	To provide own specific information	Х	Х
	To signal own expert knowledge	Х	Х
	To broadcast curated news	Х	Х
	To present curated information	Х	Х
	To market specific products or services	Х	Х
	To market brand or organisation in general	Х	Х
<b>Dialogue:</b> The use of social media for multidirectional dialogue and communication.	To engage different functional/professional areas	Х	Х
	To reach out to subject matter experts	Х	
	To facilitate serendipitous knowledge discovery	Х	

	To receive feedback on a product or brand	Х	Х
	To scan and discuss new ideas	Х	Х
social media to facilitate the creation of a particular solution, product or service.	To create a new solution, product or service	Х	Х
	To support a group of users		Х
	To support specific business functions		Х
	To support general business functions		Х
	To manage projects	Х	Х
	To collaborate with clients	Х	
Knowledge Management: The use of social media for	To maintain organisational knowledge		Х
the storage, maintenance and retrieval of knowledge.	To provide a central repository	Х	Х
	To formalise knowledge	Х	
	To keep an information audit trail	Х	
	To store business information		Х
	To provide a data search function	Х	
social media for generating fellowship, loyalty and social relations.	To encourage fellowship within the organisation	Х	
	To build social relationships	Х	
	To connect groups with similar private interests	Х	
	To facilitate non-business conversations		Х

Table 2: Organisational Social Media Use Types (as Identified in the Study)

The first column of Table 2 shows five social media use types and their definitions. The second column shows the social media use facets that we grouped within the broader use types. The third column indicates with a "tick" that the respective use facet was identified through thematic analysis (abbreviated to TA). The fourth column indicates with a "tick" means that the respective use facet was identified through the repertory grid technique (abbreviated to RG).

We further found (not shown in Table 2 for space reasons) that each of the five social media use type as taking place in an internal or external context. That is, participants typically clearly distinguished between internal social media use (as above, involving only

organisational members) and external social media use (involving non-members). For example, the broadcasting of selected industry news to organisational members via an internal *Yammer* system constitutes internal broadcast use. In contrast, the broadcasting of organisational messages via an external *Twitter* account to consumers or costumers constitutes external broadcast use.

#### Social Media Use Type: Broadcast

The "broadcast" use of social media is the use of social media for the unidirectional broadcasting of information. According to participants, organisations take advantage of the "immense broadcasting power" (called so by several participants) of social media. The broadcast use of social media is not primarily aimed at getting responses and engaging in a back-and-forth dialogue but to reach many users with a preconceived message.

**Internal broadcast** is used, for example, to broadcast company-wide messages from executive-level management and/or the public relations/communications team. In several organisations, executive-level managers run blogs with the purpose of making the management team more "accessible" and communicating the organisation's strategic vision to organisational members. Participant 5 (product manager), explained: "VPs [vice presidents] or high level managers [...] have blogs [because] that's a good way of communicating direction."

Another internal broadcast use of social media is for the wide distribution of time-sensitive information. In several organisations, internal micro-blogging services such as *Yammer* are used for information such as "*I'm working on this' or 'I'm working from home today*" (participant 3, communications manager). The broadcast use of social media relieves some of the pressure on organisational members' email inboxes. Participants felt that email by its nature is for "formal" broadcast information (e.g., new policies), while social media is for "informal" but time-critical broadcast information (e.g., who is working on what and where): "*Yammer, for us, is seen as a kind of 'what's happening'-type update*" (participant 2, digital strategy leader).

Another internal broadcast use of social media is the selection and curation of external knowledge that is then distributed internally. Some organisations have dedicated social media platforms for such purposes. "In [name of organisation's internal social media platform], you get a lot of people sharing market insights, or articles of interest about different topics" (participant 11, community manager). Furthermore, some organisations have dedicated social media teams that are "screening" external social media, trade press and news channels. These social media teams then use internal social media to distribute the external news items that they find relevant to the different departments of the organisation.

**External broadcast** is used, for example, to communicate strategic vision and major decisions of the organisation to stakeholders. In this case, the audience for the broadcast is not organisational members but customers and consumers. For example, several organisations use *Twitter* for "major announcements" (participant 6, R&D manager) and for "general communications and media releases" (participant 4, technology and innovations manager).

External broadcast via social media is also used to broadcast the availability of new releases and updates about the organisation's products: "[External social media] is really useful for that. For 'getting that out there', to promote new releases" (participant 5, product manager). Organisations use external broadcast via social media to advertise and promote

new products. "Advertising promos [for new products] and those sorts of things get all pasted up on the Facebook page so that people can see it" (participant 20, IT project manager).

Interestingly, several organisations use external broadcast via social media to demonstrate specialist knowledge and technological leadership in particular areas, regardless of any particular product. Participants found this useful to increase brand recognition and trust in the organisation; for example, one organisation "demonstrate[s] a lot of [their] technological capabilities with videos on Facebook" (participant 6, R&D manager). This demonstration of expertise via social media takes, for example, the form of organisation-specific product or service demonstrations. In other organisations, however, social media are used to demonstrate more general expertise by curating and commenting on general industry news ("what technology X means for our industry"). The purpose of this form of broadcast is to "raise the [expertise] profile [of the organisation] within the community" (participant 4, technology and innovations manager). Such uses of social media would typically be considered marketing and branding measures. However, these uses were not all handled by marketing departments, but often by research and development (R&D) or product development departments. "YouTube is where we demonstrate a lot of our technological capabilities [...] blogs are predominantly [for] brand reputation, to have an opportunity for customers and prospective customers to understand [and to] see people from [name of organisation]. We do get [R&D] staff to write for the blogs" (participant 6, R&D manager).

#### Social Media Use Type: Dialogue

The "dialogue" use of social media is the use of social media for facilitating dialogue between internal or external users. In this use type, social media are not for "getting a message out" but about getting feedback and engaging in open-ended communication.

Internal dialogue via social media is primarily used to remove traditional barriers to internal communication and allow for boundary spanning between different parts of the organisation. For example, social media were used by several organisations to connect people between different functional departments and/or different physical locations. "We see [internal social media] used to connect multiple departments. Teams that have not talked before, or found it hard to talk, are now on the platform and using it for that" (participant 19, account manager). According to participants, the use of social media for dialogue is particularly beneficial for organisations allowing them to bridge knowledge silos and to distribute ideas in a more efficient way than is possible with more traditional methods (e.g., emails or meetings). In another example, shared by participant 12 (consultant), the marketing department posts their insights on market needs on internal blogs. Organisational members from different product development departments read these blogs and initiate a dialogue ("hey, we certainly could do that") with the marketing department and others when they spot opportunities for the organisation.

Furthermore, according to the participants, through the "personal nature" of social media, communication between organisational members on different levels is often "democratised" (see also Kietzmann et al. 2011) – less hierarchical or siloed. There is a "self-levelling nature [of social media that] re-balances power level [and] re-establishes trust" (participant 6, R&D manager). In this way, social media are "shrinking the world. People [in the organisation] who didn't know me and I didn't know them have been able to find out that I've been working on something that can help them [and] enable [them] to tap experts from all over a division, again all over the world [...] and make it near instantaneous" (participant 14, IT executive).

Internal dialogue through social media enables organisations to not only solve defined issues (as above) but also to make unexpected, serendipitous discoveries. This happens through connection with internal experts previously unknown to the initiator of the dialogue such as in cases of "the classic Yammer question of 'does anyone know...?' – and there would always be a response" (participant 6, R&D Manager). The use of social media for dialogue supports the "serendipitous [discovery of what] they didn't know or [discovery of internal] experts in certain fields" (participant 11, community manager). Participant 3 (communications manager) referred to several examples in which a completely unexpected solutions or insights came from unrelated organisational members who engaged in a dialogue made visible through internal social media: "This [serendipitous discovery] would not happen unless I was talking to a person face-to-face about that project, or I was cced [carbon-copied] on emails, which [is] highly unlikely".

**External dialogue** via social media is a way in which the organisation communicates with customers and consumers. Dialogue can be initiated by either consumers/costumers or the organization (in contrast to broadcast, which is initiated by the organisation). For example, *Twitter* and *Facebook* allow individual external users (customers and consumers) to publicly address the organisation. In this way, the organisation "might receive [information] from external social media [...] letting us know there are bugs in [organisation's product]" (participant 5, product manager). "Twitter [is] very heavily weighted in terms of customer service. So, its main role there is listening to and responding to questions, comments made to [the organisation]" (participant 6, R&D manager).

However, not all public social media dialogues about an organisation are directly addressed to that organisation. Organisations use social media business intelligence and analytics tools to identify such dialogues and engage in them. Organisations "are searching for feedback, they're looking. So, when they set up [social media business intelligence tool], for example, they use [it] to listen and to monitor. They set up many different keywords and searches, so that everything will come up, so they can respond in real time. They've got the teams to support [that]" (participant 15, consultant).

Organisations also actively trigger external social media dialogue. A common method is to start discussions on specialist social media forums and groups. Participant 14 (IT executive), for example, said his organisation uses *LinkedIn* to generate dialogues and collect feedback. "We said, 'Hey, [organisation's name] just launched this product for [business function]. What do you think of what they've done?' and then we're able to get direct feedback."

Typically, a dedicated social media team engages in such external dialogues on behalf of the respective organisation.

#### Social Media Use Type: Collaboration

The "collaboration" use of social media is the facilitation of the co-creation of a particular, defined outcome (solution, product or service). That is, social media used in this way are not primarily facilitating communication, but primarily facilitating action and work.

**Internal collaboration** via social media takes advantage of social media's low barriers to co-create content. According to participants, social media's low barriers are due to, for example, the ease of editing content and the informal atmosphere that encourages contributions. One organisation, for example, uses "canvasses" in their internal social media to provide a work and communication space for idea and solution generation for particular problems that the organization has identified. "Canvasses [bring together] like-minded

groups and communities focusing on the topics in all areas of interest. So, communities can communicate in and around canvasses" (participant 2, digital strategy leader). In this way, social media use in an organisation leverages the collective intelligence and collective creativity of its members, and provides a space in which ideas and solutions can take shape.

Furthermore, organisations use internal social media to create completely new ideas. One organisation, for example, uses its internal social media as a lightweight internal idea generation platform. Participant 11 (community manager) described their system: "We have a crowdsourced idea generation platform that is actually owned by our strategy team. [It has] a voting system in it." While certainly also requiring dialogue, the collaborative use of internal social media goes beyond the support of cognition and communication, supporting action and work around the purposeful creation of new knowledge or new products.

**External collaboration** via social media is also used by several of the organizations that we studied. One organisation uses social media (a wiki) to enable greater collaboration between the organisation (an operator of shopping malls) and its external customers (retail shops). "We opened up our [wiki] site to externals, which would be our clients [...] it's great for using as a whole connective, private messaging centre. [...] There might be something going at [customer name] that's been really good, others [other customer] will come in and say, 'that was a great promo!' We never normally are able to get that kind of collaboration, because typically, particularly those in the same category, are technically competitors" (participant 1, retail manager).

In another example, an organisation uses external social media to troubleshoot issues with particular products with their customers. Solutions and workarounds for particular issues might be co-created by organisational members and customers. "I think it was seen as a kind of a touch point in terms of troubleshooting, and now they've developed into little communities of their own, where people discuss issues" (participant 16, communications manager).

#### **Social Media Use Type: Knowledge Management**

The "knowledge management" use of social media is the use of social media for the storage, maintenance and retrieval of knowledge.

Participants generally reported internal knowledge management via social media as a complement to the use of formal knowledge management systems. Some form of knowledge management system (from simple network drives with folder structures to formal knowledge management systems) existed in most organisations prior to the emergence of social media. Social media is used for knowledge management by storing knowledge directly on social media (e.g., in wikis or forum threads) or by using social media to post links to formal knowledge management systems. For example, in one organisation, "they [social media team] have also extended [internal social media] into placing files and things that the whole company might need. Just info sheets, that kind of thing. They put them on there because it's so much easier than trying to find it on a network drive somewhere" (participant 16, communications manager).

Furthermore, some participants described internal social media as inherently being able to generate a "pool of crowd knowledge [that] formalises the content" (participant 5, product manager). That is, knowledge that would not normally be stored in formal knowledge management systems becomes articulated in discussions and hence becomes explicit and searchable. "Any blog post, any knowledge management articles, etc., everything gets

searched. Primarily, it's just a means of [...] 'look, here's a hot link, go and read what soand-so had to say'" (participant 6, R&D manager). In another case, "we had people bringing up threads that were a year and a half, two years old. So they were obviously searching them in some form. They were going back and reusing the information [...] I'm seeing that more and more with people internally. If they've got a question, they won't go to the Internet to search, they'll go to Yammer" (participant 18, innovation manager).

**External knowledge management**: within the 20 organisations that we studied, we did not identify any instances of external knowledge management (i.e., with customers and consumers) via social media. However, organisations have certainly also started to use external knowledge management. In one example, Cisco uses a public wiki to let "Cisco users, customers, partners and employees improve Cisco product documentation by contributing their own suggestions, corrections and new information directly" (Cisco 2012). Organizations such as Apple, Google and Microsoft use forums to effectively provide a cocreated knowledge base for costumers and consumers.

#### Social Media Use Type: Sociability

The "sociability" use of social media is the use of social media for generating fellowship, loyalty and social relations between users. That is, the "social" aspects of "social" media are not "means" but rather "ends" in this use type.

Internal sociability refers to the creation of feelings of cohesiveness and fellowship among organisational members through the use of social media. This is particularly useful where groups of organisational members are functionally (e.g., retail and administration) or spatially (e.g., European, Asia-Pacific and North American parts) separated. For example, social media help to change the reputation of groups of organisational members: as participant 6 (R&D manager) said: "the security guys do a phenomenal job. Some of the things they've put up on Yammer – there was one yesterday where [someone] had left [their] iPad in the toilet and left, came back, and it was gone. They retrieved it within an hour." In another example, social media help to integrate an overseas team as participant 16 (communications manager) explained: "we also merged earlier this year with our New Zealand company, and because we can't all go to New Zealand and they can't be here, it's great for breaking down barriers between different people. You see what they're posting on Yammer; you get a feel for whom they are. It makes them more approachable."

A typical pattern that emerged from several accounts by participants is that organisational members use internal social media to narrate the work activities that they are undertaking. This social media use is then often the foundation for building social relations between organisational members. Participant 13 (e-commerce manager) shared the following example of internal sociability use:

"You can see in the timeline [in the internal social media] what other people are working on at the moment, and you can jump in and comment on it and vote for the particular work item. And also, there's that informal [atmosphere] between [them] – so people start [private] relationships over the distance, and they get to know each other personally, even better than if they'd met each other, they get to know about their colleagues at a distance [...] which I think is great. They get to learn about them and their families; that doesn't happen formally, but it tends to evolve over time."

Participants suggested that this use of social media leads to organisational members engaging more with their colleagues and the organisation, creating an improved work

climate, and is a positive contribution to retention of organisational members. "A workforce that narrates the work that they're doing [...] is more productive and engaged [and] with higher level of engagement you get a higher level of retention and it's a happier workplace" according to participant 13 (e-commerce manager).

**External sociability** improves relations with or between customers and consumers through social media. "It's about forming trust and a connection and allowing the [external] person to feel comfortable [about] us, it's about relationship [building]" (participant 6, R&D manager). This social media use type does not immediately relate to any short-term commercial aims of the organisation. Rather, external sociability is a long-term-oriented measure of positioning and developing the organisation. For example:

"We'll start discussions on particular things in the industry, or topical issues that crop up. If there's, hypothetically, if somebody publishes a white paper on gender issues in the profession, we'll post that and say, 'what do you think about this?' It's not our core business to get involved in that space; it's more a discussion around the issues to get to know our customers better." (participant 16, communications manager)

Based on the findings in the 20 organisations and our analysis thereof, we suggest that it is useful to differentiate between the above five social media use types in organisations. Below, we build on this finer-grained understanding of social media use in organisations to theorise about the relation between social media use and absorptive capacity.

#### **Social Media Use and Absorptive Capacity**

This section discusses six salient relations of the above five social media use types on organisational absorptive capacity.

#### **Social Media Use and Exploratory Learning**

According to the current conceptualisations of absorptive capacity, the exploratory learning process of absorptive capacity has two sub-processes: the recognition of external knowledge (Lane et al. 2006) and the acquisition of external knowledge (Camisón and Forés 2010). Organisational activities of locating, identifying, evaluating or acquiring external knowledge support these exploratory learning processes (Camisón and Forés 2010).

One common use of **internal broadcast** via social media is that external new knowledge (e.g., industry news, research findings, social media trends) is curated by an internal social media team and is broadcasted to the relevant departments within the organisation. In addition to the examples in the previous section, the following vignette suggests that the internal use of social media for broadcasting is more effective compared to alternatives:

"We've got a few internal blogs in pilot, for example, [for] practice area news [industry news] [...] In the past, we used emails to send that sort of information out but now we're looking at a blog format which will improve the speed of the information [...] the blogs are attached to RSS [Really Simple Syndication] aggregators, so basically the knowledge management team are curating the news that [is] coming through, so they'll see the latest news item and say 'yes, that's relevant to the team' [...] the knowledge management team is acting as a filter for it because there are so many feeds that are coming through. They look at all the feeds and they say 'yes, this one, this one, this one'. They'll tag it, and they'll add jurisdictions, and they might even change the summary to make it

more relevant for the people." (participant 4, technology and innovation manager)

This type of example suggests that the filtering and broadcasting of external knowledge to organisational members via internal social media (e.g., via *Yammer* or via blogs/RSS feeds as in the vignette) supports the organisation's ability to recognise and acquire new knowledge. That is, social media used in this way support the more effective exploration of new, external knowledge for the organisation.

## Proposition 1: The internal broadcast use of social media supports the exploratory learning capacity of the organisation.

In the example above, the new external knowledge already exists "out there" and the organisation then *passively* "finds" this external knowledge. In other cases, however, social media allow organisations to *actively* trigger the generation of new, organisation-specific knowledge through **external dialogue**.

For example, participant 5 (product manager) explained how his organisation (a IT company) systematically engaged external people in dialogue via social media to elicit user requirements for its products:

"Particularly with software, you need to know their [user] requirements. And it's enterprise software [...] it's [sold] to a sort of small core group of [...] customers, [...] and their problems are pretty unique to them. So, it is important to know what requirements they have and problems they encounter. So yes, [external social media] is one of the ways we get that kind of intel."

Another example how organisations actively trigger external dialogue was shared by participant 14 (IT executive):

"We were doing a product launch for a product that was all about performance [reporting] [...] So, we went to a very large [...] group on LinkedIn and basically starting asking, 'What performance metrics do you pass up to your management?' [...] Huge, huge response, and [we] used the responses to tailor the words that we would use in the [marketing] messaging."

Such instances suggest that the use of social media for external dialogue supports the localisation, identification, evaluation and acquisition of external knowledge by the organisation. That is, external social media allow the organisation to effectively acquire or generate relevant knowledge from customers and other external people.

## Proposition 2: The external dialogue use of social media supports the exploratory learning capacity of the organisation.

#### **Social Media Use and Transformative Learning**

Transformative learning is concerned with the organisation's ability to assimilate and transform acquired knowledge (Lane et al. 2006). The transformative learning process consists of the analysis and interpretation of knowledge (Szulanski 1996) as well as the transformation, maintenance and reactivation of knowledge (Camisón and Forés 2010). The organisation transforms common, external knowledge to organisation-specific, "uncommon" knowledge that is useful for its future value creation (Nag and Gioia 2012).

Participants reported that the **internal knowledge management** use of social media helps to store, maintain, retrieve and re-activate organisational knowledge. In particular, the ease with which internal social media can be edited, updated and searched (e.g., compared to formal knowledge management systems) supports the development and use of relevant knowledge in the organisation. Participant 7 (consultant) explained:

"The internal [social media] side of things, it's usually more about allowing particular business units to [...] engage with each other beyond email, and [...] the useful thing is about building up an org [organisational] memory. Because, obviously, unlike email threads, it's all a bit more searchable. So, when they bring on new staff, they're actually referred to previous threads that are about a particular aspect." (Participant 7, Consultant)

Beyond its storage ability, as described above, internal knowledge management via social media is also effective because it allows the storing of tokens of knowledge that would not typically be stored in formal knowledge management systems at all (and hence could easily be lost with organisational member turnover). Tacit or informal knowledge may become "externalised" (see also Nonaka 1994; Nonaka and von Krogh 2009) through being posted and discussed on social media. "As people leave, that tacit knowledge goes. But what we're seeing with Yammer is that by bringing in the information, exposing it to the masses, you are actually able to uncover some of that 'de-tacitised' information, uncover that information [...] and turn it into organisation knowledge" (participant 18, innovation manager). In other words, the knowledge management capacity that social media afford to an organisation may prevent that organisation from forgetting what it already knows.

When used for knowledge management, internal social media support transformative learning through effective storage and externalisation of knowledge.

## Proposition 3: The internal knowledge management use of social media supports the transformative learning capacity of the organisation.

The findings further suggest that, importantly, social media enable more **internal dialogue**, communication and discussion between organisational members. That is, social media facilitate the engagement of organisational members who would not otherwise get in touch across departments, locations and time zones. In many cases, this type of social media use helps to locate internal expertise and interpretation skills that are critical to make sense of new external knowledge for the organisation (see also Crossan et al. 1999; Nevo et al. 2012; Weick 1995). Participant 3 (communications manager) shared an example showing how such internal dialogue via social media plays out in practice:

"The CEO will post something [...] [on internal social media] and it will be a link to an [external website] article where it'll give you a little thumbnail, a little bit of a teaser [note: this is broadcast use], and [that will] make you think 'oh, that's interesting!' [...] Some of the discussions that they stimulate [among organisational members] are amazing [note: this is dialogue use]. All of the sudden you've got one post leading to a range of 40, 50, 60 comments on the topic, and you know, it's definitely used to foster external knowledge, that's for sure. We're often leveraging what everyone else is doing in the market. When something comes up, [we] quickly check onto Yammer [and] have a discussion about it."

The use of social media for open dialogue allows the organisation to effectively combine new external knowledge with knowledge that it already has. The following quote is another illustration of the usefulness to an organisation of internal dialogue via social media.

"[Internal social media are] really good because I can reach out to my counterparts in other countries. We can have discussions, whereas beforehand, you'd have to email about five people that know this person who knows who's responsible for this. When you have a network set up, all of the people in this social, digital area are easily contactable and you can just find them. It makes life easier and it makes businesses' processes quicker [...] We have offshore teams, and they find it really useful for engaging people across time zones. And being able to get instant answers instead of a barrage of emails [...] I think, on the whole, the company sees the benefits. It grows day by day. People might be asking questions about a particular area of the business; they need help and throw it up on Yammer. There are so many examples of how we get this done a lot quicker." (participant 16, communications manager)

This example suggests that the internal dialogue use of social media can contribute to the transformative learning process in the organisation in two ways. Firstly, it helps the organisation to generate "collective intelligence" by creating a space for collective sense making. Secondly, it helps the organisation to assimilate knowledge horizontally through the organisation by facilitating access to the knowledge bases of other organisational members (e.g., in other departments, or in other countries).

## Proposition 4: The internal dialogue use of social media supports the transformative learning capacity of the organisation.

#### **Social Media Use and Exploitative Learning**

The final learning process of absorptive capacity, exploitative learning, is concerned with the application and exploitation of knowledge that has been acquired, assimilated and transformed (Camisón and Forés 2010). The aim of this exploitative process is to create new knowledge outputs or new commercial outputs (Lane et al. 2006).

For the exploitation of knowledge, social media can provide the foundation to actually develop new knowledge or new products via **internal collaboration**. Participant 4 (technology and innovations manager) explained how social media collaboration spaces enable the organisation (a media company) to more effectively coordinate the sharing and publishing of content across different locations:

"For the [external] blog [...] because we've got people within every city [...] who are on the editorial committee and all coming up with ideas for posts. We needed a way to have it centrally coordinated. So the wiki was a perfect forum for that. We got a space within the wiki where we managed our roster. We have all the documents that we need. We got the style guide. We've got things like the black list with all the things that we can't talk about. That sort of stuff."

In the following vignette, social media are used to effectively collaborate on an organisation's financial budget:

"[Organisational members] created a private group [on the internal social media platform] for our 2013 budget [...] to communicate timing and involvement, and it's locked down to general managers and above. It's so they can actually post

updates and tell which centres they've been to and how they're progressing. [Internal social media are] used as a business tool as well." (participant 20, IT project manager)

Internal social media are also considered more effective then alternatives (e.g., email, calls, meetings) for conducting work on various types of projects.

"I: So, you actually have projects that are being collaborated on over Yammer? P: Absolutely [...] they are turning up more and more often [...] more and more, we're seeing groups focused on projects or just small-time-frame situations." (participant 18, innovation manager)

The collaborative use of social media supports organisations in creating particular outcomes and solutions (knowledge outputs) as well as products and services (commercial outputs). It helps the organisation to actually capitalise on its knowledge base by producing knowledge-based outcomes more effectively.

### Proposition 5: The internal collaboration use of social media supports the exploitative learning capacity of the organisation.

In some cases, cocreation and collaboration exploit of new knowledge directly on social media, creating new products (action, as above). In other cases, **internal dialogue** helps exploit new knowledge by creating a new understanding or connecting people (cognition), leading to action outside social media.

For example, several participants reported instances in which social media were helpful for bridging between departments. In the following vignette, participant 12, a consultant, described how the use of a blog allowed two different departments (marketing and product development) to connect with each other, helping the development of new products and services in general:

"I think some of the content in the blogs may have paved the way for some of the products that rolled out later that year [...] you would get people in marketing writing a blog about market needs, trends that were happening out there, and gaps [which] we were in a position to fill but [which] we weren't [filling], and then people in product development would read the blog and get working on developing a product to meet that customer need."

That is, the internal dialogue use of internal social media supports both transformative learning and exploitative learning. Social media used for dialogue helps the organisation not only to generate new internal knowledge based on external knowledge, but then to exploit that knowledge (see also Culnan et al. 2010; Standing and Kiniti 2011).

## Proposition 6: The internal dialogue use of social media supports the exploitative learning capacity of the organisation.

The difference between internal dialogue use and internal collaborative use is fluid in many cases. Internal dialogue use typically is long-term and open-ended (no particular aim is defined upfront), whereas internal collaborative use typically is short-term and project-specific (particular aim is defined upfront). The social use types are qualitatively different in the nature of the use, but certainly not unrelated: For one example, broadcast use of social media (e.g., social media team posting a news item) might inform dialogue use of social media (e.g., on-going dialogue between marketing and product development departments)

and ultimately lead to of social media collaborative use (e.g., work on a particular project by a dedicated team).

Figure 2 summarises our theoretical propositions in regard to how the different social media use types support (indicated by the arrows) the absorptive capacity process. In the data, as argued above, we found that internal broadcast, external and internal dialogue, internal knowledge management and internal collaboration support absorptive capacity (these use types are shown in dark grey and with a solid border). At the same time, based on our analysis of the 20 cases, we found no such support relation for the other social media use types (these use types are shown in light grey and a dotted border).

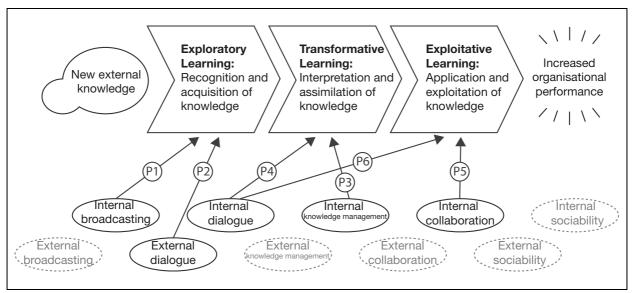


Figure 2: Social Media Use Types Supporting Absorptive Capacity (as Identified in the Study)

In summary, one of the notable findings of our study is that certain use types (but not others) support the processes through which organisations absorb (identify, transform and exploit) new external knowledge. Through this support of absorptive capacity, social media use contributes positively to the organisation's performance (on the relation of absorptive capacity and organizational performance see Flatten et al. 2011; Helfat et al. 2007; Lane et al. 2006; Roberts et al. 2012; Zahra and George 2002). While this claim of the positive impact of social media use has been made by trade press and consulting companies (e.g., McKinsey Global Institute 2012; The Economist 2010), the analysis provided in this paper qualifies the claim (by discussing that what is critically important for organisations is not social media use *per se* but rather the use of particular social media use types for particular purposes). This paper's discussion also theoretically grounds the claim (by arguing that social media benefit organisations by supporting their absorptive capacity). In doing so, the

<sup>&</sup>lt;sup>4</sup> The propositions, by the use of the word "supports" (i.e., not "causes"), are to be read as "recognised as substantial support of absorptive capacity through the respective social media use type in the data collected from the 20 organizations that we studied". The reverse implication of a non-existing proposition is that we did not find supporting data (i.e., a non-existing proposition neither indicates that some level of support is impossible in principle nor that such a use type is detrimental to absorptive capacity). That is, the propositions highlight use types that provide substantial support for absorptive capacity in the organization we studied and according to our analysis as provided above (for generalizability and boundary conditions of knowledge claims see further Lee and Baskerville 2003; Lee and Baskerville 2012; Sarker et al. 2013; Tsang and Williams 2012).

paper combines the various findings of very particular organisational benefits of social media (as discussed in the literature review) into an integrated perspective.

This paper is to be understood as being exploratory in its nature and it suggests a model that is aimed to support future investigation of the theoretical relation between social media use and the organisation. For scholars, the paper provides five social media use types, concepts that they might find valuable for their own studies on the nature and impacts of social media use. The paper also makes theoretical propositions regarding the relationship between these social media use types and absorptive capacity. As a next research step, for example, it will be useful to study if the social media use types form larger patterns over time or in processes (i.e., is it that broadcast leads to dialogue and then to collaboration? which such pattern are sustainable and useful?), which could be researched through longitudinal studies.

For decision makers in organisations, the analysis suggests that they should prioritise internal social media efforts over external social media efforts (i.e., because internal social media appear to have the stronger impact on absorptive capacity, according to our study). Also, the use of social media should extend beyond "sociability" uses and fulfil particular organisational purposes and needs in relation to knowledge.

The paper has several limitations that should be mentioned. The data were collected in the context of Western organisations in 2012-13. While we believe that the analysis provides insights that are valuable in other contexts, we neither aim nor claim to provide "universal, timeless truth" with the knowledge claims inductively developed here. When building on these claims, practitioners and researchers need to be sensitive to the similarities and differences of their respective future context to the context of this study. The world is diverse and it keeps changing - this is certainly so in the dynamic space of social media. Notably, we had no reports of negative impacts of social media use. This might be because we were interested in sustained social media use and did not cover social media use that was tried and abandoned. It stands to reason that organizations will give up on social media use that provides no benefits. The reader should note that social media use in not always successful and may in some cases even be detrimental (Hildebrand et al. 2013). Also, we collected our data within a limited time period and from a broad range for organisations. While this allowed us to draw on a rich base of instances of social media use, we did not study any one case over a long period of time. The in-depth analysis of particularly interesting cases over longer periods may reveal additional insights, as may the application of additional methodological lenses.

#### Conclusion

Based on key informant interviews of 20 organisations, we examined the relation between social media use and the absorptive capacity of organisations. We argue that absorptive capacity is particularly well suited to understanding the business and organizational impact of social media use. Absorptive capacity enables us to theorise about the distribution, transformation and combination of knowledge and insights via social media. This is demonstrated through our reading of the social media literature through an absorptive capacity lens as well as the analysis of field data. The analysis of social media use by 20 organizations reveals five different social media use types. The use types centre on social media being used for broadcast, dialogue, collaboration, knowledge management and sociability. These social media uses can be internal and/or external. According to the field data, internal broadcast, external and internal dialogue, internal knowledge management and internal collaboration support absorptive capacity. We did not identify support for

absorptive capacity from the remaining social media use types. The analysis, grounded in the data and informed by absorptive capacity theory, provides a finer-grained understanding and qualification of the often-claimed positive impact of social media use on organisations.

#### References

- Andriole, S.J. 2010. Business Impact of Web 2.0 Technologies, *Communications of the ACM* 53(12): pp. 67-79.
- Arazy, O., and Gellatly, I.R. 2012. Corporate Wikis: The Effects of Owners' Motivation and Behavior on Group Members' Engagement, *Journal of Management Information Systems* 29(3): pp. 87-116.
- Bacon, M. 2012. Pragmatism: An Introduction, Cambridge, UK: Polity.
- Barnes, N.G., Lescault, A.M., and Andonian, J. 2012. Social Media Surge by the 2012 Fortune 500. Report.
- Barney, J.B. 1991. Firm Resources and Sustained Competitive Advantage, *Journal of Management* 17(1): pp. 99-120.
- Berinato, S. 2010. Six Ways to Find Value in Twitter's Noise, *Harvard Business Review* 88(6): pp. 34-35.
- Boell, S.K., and Cecez-Kecmanovic, D. 2014. On Being 'Systematic' in Literature Reviews in IS, *Journal of Information Technology* 34(1): pp. 12.
- Boyd, D.M., and Ellison, N.B. 2007. Social Network Sites: Definition, History and Scholarship, *Journal of Computer-Mediated Communication* 13(1): pp. 210-230.
- Braun, V., and Clarke, V. 2006. Using Thematic Analysis in Psychology, *Qualitative Research in Psychology* 3(2): pp. 77-101.
- Burton-Jones, A., and Straub, D.W. 2006. Reconceptualising System Usage: An Approach and Empirical Test, *Information Systems Research* 17(3): pp. 228-246.
- Camisón, C., and Forés, B. 2010. Knowledge Absorptive Capacity: New Insights for Its Conceptualization and Measurement, *Journal of Business Research* 63(7): pp. 707-715.
- Chen, L., Marsden, J.R., and Zhang, Z. 2012. Theory and Analysis o Company-Sponsored Value Co-Creation, *Journal of Management Information Systems* 29(2): pp. 141-172.
- Cisco 2012. Cisco DocWiki: About, http://docwiki.cisco.com/wiki/DocWiki:About [last updated Feb 13, 2012] [last accessed Jun 15, 2015].
- Cohen, W.M., and Levinthal, D.A. 1989. Innovation and Learning: The Two Faces of R&D, *The Economic Journal* 99(397): pp. 569-596.
- Cohen, W.M., and Levinthal, D.A. 1990. Absorptive Capacity: A New Perspective on Learning and Innovation, *Administrative Science Quarterly* 35(1): pp. 128-152.
- Conner, K.R. 1991. A Historical Comparison of Resource-Based Theory and Five Schools of Thought Within Industrial Organization Economics: Do We Have a New Theory of the Firm?, *Journal of Management* 17(1): pp. 121-154.
- Crossan, M.M., Lane, H.W., and White, R.E. 1999. An Organizational Learning Framework: From Intuition to Institution, *Academy of Management Review* 24(3): pp. 522-537.
- Culnan, M.J., McHugh, P.J., and Zubillaga, J.I. 2010. How Large US Companies Can Use Twitter and Other Social Media to Gain Business Value, *MIS Quarterly Executive* 9(4): pp. 243-259.
- Curtis, A.M., Wells, T.M., Lowry, P.B., and Higbee, T. 2008. An Overview and Tutorial of the Repertory Grid Technique in Information Systems Research *Communications of the Association for Information Systems* 23(1): pp. 37-62.
- Daft, R.L., and Lengel, R.H. 1986. Organizational Information Requirements, Media Richness, and Structural Design, *Management Science* 35(2): pp. 554-571.

- Dhar, V., and Ghose, A. 2010. Sponsored Search and Market Efficiency, *Information Systems Research* 21(4): pp. 760-772.
- Efimova, L., and Grudin, J. 2007. Crossing Boundaries: A Case Study of Employee Blogging, *Hawaii International Conference on System Sciences (HICSS)*.
- Ezzy, D. 2002. Qualitative Analysis: Practise and Innovation, London, UK: Routledge.
- Flatten, T.C., Engelen, A., Zahra, S.A., and Brettel, M. 2011. A Measure of Absorptive Capacity: Scale Development and Validation, *European Management Journal* 29(2): pp. 98-116.
- Flyvbjerg, B. 2001. Making Social Science Matter: Why Social Inquiry Fails and How It Can Succeed Again, Cambridge, UK: Cambridge University Press.
- Germonprez, M., Hovorka, D., and Gal, U. 2011. Secondary Design: A Case of Behavioural Design Science Research, *Journal of the Association for Information Systems* 12(10): pp. 662-683.
- Gibson, J.J. 1979. The Ecological Approach to Visual Perception, Boston, MA, USA: Houghton Mifflin.
- Gioia, D.A., Corley, K.G., and Hamilton, A.L. 2013. Seeking Qualitative Rigor in Inductive Research Notes on the Gioia Methodology, *Organizational Research Methods* 16(1): pp. 15-31.
- Goldkuhl, G. 2008 of Conference. What Kind of Pragmatism in Information Systems Research?, AIS SIG Prag Inaugural Meeting.
- Gray, P.H., Parise, S., and Iyer, B. 2011. Innovations Impacts of Using Social Bookmarking Systems, *MIS Quarterly* 35(3): pp. 629-644.
- Haefliger, S., Monteiro, E., Foray, D., and von Krogh, G. 2011. Social Software and Strategy, *Long Range Planning* 44(5-6): pp. 297-316.
- Harkness, W.L., Segars, A.H., and Kettinger, W.J. 1996. Sustaining Process Improvement and Innovation in the Information Services Function: Lessons Learned at the Bose Corporation, *MIS Quarterly* 20(3): pp. 349-368.
- Harvey, C., Kelly, A., Morris, H., and Rowlinson, M. 2010. Academic Journal Quality Guide, London, UK: The Association of Business Schools.
- Helfat, C.E., Finkelstein, S., Mitchell, W., Peteraf, M.A., Singh, H., Teece, D.J., and Winter, S.G. 2007. Dynamic Capabilities: Dynamic Strategic Change in Organizations, Malden, MA, USA: Blackwell.
- Hildebrand, C., Häubl, G., Herrmann, A., and Landwehr, J.R. 2013. When Social Media Can Be Bad for You: Community Feedback Stifles Consumer Creativity and Reduces Satisfaction with Self-Designed Products, *Information Systems Research* 24(1): pp. 14-V.
- Jansen, B.J., Zhang, M., Sobel, K., and Chowdury, A. 2009. Twitter Power: Tweets as Electronic Word-of-Mouth, *Journal of the American Society for Information Science* & *Technology* 60(11): pp. 2169-2188.
- Jansen, J.J.P., Van den Bosch, F.A.J., and Volberda, H.W. 2005. Managing Potential and Realized Absorptive Capacity: How Do Organizational Antecedent's Matter?, *Academy of Management Journal* 48(6): pp. 999-1015.
- Kallinikos, J., Aaltonen, A., and Marton, A. 2013. The Ambivalent Ontology of Digital Artifacts, *MIS Quarterly* 37(2): pp. 357-370.
- Kane, G.C., Alavi, M., Labianca, G., and Borgatti, S.P. 2014. What's Different about Social Media Networks? A Framework and Research Agenda, *MIS Quarterly* 38(1): pp. 275-304
- Kaplan, A.M., and Haenlein, M. 2010. Users of the World, Unite! The Challenges and Opportunities of Social Media, *Business Horizons* 53(1): pp. 59-68.
- Kietzmann, J.H., Hermkens, K., McCarthy, I.P., and Silvestre, B.S. 2011. Social Media? Get Serious! Understanding the Functional Building Blocks of Social Media, *Business Horizons* 54(3): pp. 241-251.

- Kiron, D., Palmer, D., Phillips, A.N., and Kruschwitz, N. 2012. What Managers Really Think About Social Business, *MIT Sloan Management Review* 53(4): pp. 51-60.
- Koschmider, A., Song, M., and Reijers, H.A. 2010. Social Software for Business Process Modelling, *Journal of Information Technology* 25(3): pp. 308-322.
- Lane, P.J., Koka, B.R., and Pathak, S. 2006. The Reification of Absorptive Capacity: A Critical Review and Rejuvenation of the Construct, *Academy of Management Review* 31(4): pp. 833-863.
- Larson, K., and Watson, R.T. 2011 of Conference. The Value of Social Media: Toward Measuring Social Media Strategies, International Conference on Information Systems (ICIS).
- Lee, A.S. 2010. Retrospect and Prospect: Information Systems Research in the Last and Next 25 Years, *Journal of Information Technology* 25(4): pp. 336-348.
- Lee, A.S., and Baskerville, R.L. 2003. Generalizing Generalizability in Information Systems Research, *Information Systems Research* 14(3): pp. 221-243.
- Lee, A.S., and Baskerville, R.L. 2012. Conceptualizing Generalizability: New Contributions and a Reply, *MIS Quarterly* 36(3): pp. 749-761.
- Leonardi, P.M., Huysman, M., and Steinfield, C. 2013. Enterprise Social Media: Definition, History and Prospects for the Study of Social Technologies in Organizations, *Journal of Computer-Mediated Communication* 19(1): pp. 1-19.
- Levy, M. 2009. Web 2.0 Implications on Knowledge Management, *Journal of Knowledge Management* 13(1): pp. 120-134.
- Li, F., and Du, T.C. 2011. Who Is Talking? An Ontology-Based Opinion Leader Identification Framework for Word-of-Mouth Marketing in Online Social Blogs, *Decision Support Systems* 51(1): pp. 190-197.
- Lipsman, A., Mudd, G., Rich, M., and Bruich, S. 2012. The Power of "Like": How Brands Reach (and Influence) Fans through Social-Media Marketing, *Journal of Advertising Research* 52(1): pp. 40-52.
- Majchrzak, A., Cherbakov, L., and Ives, B. 2009. Harnessing the Power of the Crowds with Corporate Social Networking Tools: How IBM Does It, *MIS Quarterly Executive* 8(2): pp. 103-108.
- Majchrzak, A., and Markus, M.L. 2013. Technology Affordances and Constraints in Management Information Systems (MIS), in E. Kessler (ed.) Encyclopaedia of Management Theory, Thousand Oaks, CA, USA: Sage, pp. 832-835.
- Makadok, R. 2001. Toward a Synthesis of the Resource-Based and Dynamic-Capability Views of Rent Creation, *Strategic Management Journal* 22(5): pp. 387-401.
- March, J.G. 1991. Exploration and Exploitation in Organizational Learning, *Organization Science* 2(1): pp. 71-87.
- McAfee, A.P. 2009. Enterprise 2.0: New Collaborative Tools for Your Organization's Toughest Challenges, Harvard, MA, USA: Harvard Business Press.
- McKinsey Global Institute 2012. The Social Economy: Unlocking Value and Productivity Through Social Technologies. Report.
- Michaelidou, N., Siamagka, N.T., and Christodoulides, G. 2011. Usage, Barriers, and Measurement of Social Media Marketing: An Exploratory Investigation of Small and Medium B2B Brands, *Industrial Marketing Management* 40(7): pp. 1153-1159.
- Mithas, S., Ramasubbu, N., and Sambamurthy, V. 2011. How Information Management Capability Influences Firm Performance, *MIS Quarterly* 35(1): pp. 137-A115.
- Mueller, J., Hutter, K., Fueller, J., and Matzler, K. 2011. Virtual worlds as knowledge management platform a practice-perspective, *Information Systems Journal* 21(6): pp. 479-501.
- Myers, M.D. 1997. Qualitative Research in Information Systems, *MIS Quarterly* 21(2): pp. 241-242.
- Myers, M.D., and Newman, M. 2007. The Qualitative Interview in IS Research: Examining the Craft, *Information and Organization* 17(1): pp. 2-26.

- Nag, R., and Gioia, D.A. 2012. From Common to Uncommon Knowledge: Foundations of Firm-Specific Use of Knowledge as a Resource, *Academy of Management Journal* 55(2): pp. 421-457.
- Neuman, W.L. 2010. Social Research Methods: Qualitative and Quantitative Approaches (7e), Upper Saddle River, NJ, USA: Pearson Education.
- Nevo, D., Benbasat, I., and Wand, Y. 2012. Understanding Technology Support for Organizational Transactive Memory: Requirements, Application, and Customization, *Journal of Management Information Systems* 28(4): pp. 69-98.
- Nonaka, I. 1994. A Dynamic Theory of Organizational Knowledge Creation, *Organization Science* 5(1): pp. 14-37.
- Nonaka, I., and von Krogh, G. 2009. Tacit Knowledge and Knowledge Conversion: Controversy and Advancement in Organizational Knowledge Creation Theory, *Organization Science* 20(3): pp. 635-652.
- Norman, D.A. 2013. The Design of Everyday Things (3e), New York, NY, USA: Basic Books. Parameswaran, M., and Whinston, A.B. 2007. Social Computing: An Overview, *Communications of the Association for Information Systems* 19(1): pp. 762-780.
- Paré, G., Trudel, M.-C., Jaana, M., and Kitsiou, S. 2015. Synthesizing Information Systems Knowledge: A Typology of Literature Reviews, *Information & Management* 52(2): pp. 183-199.
- Paroutis, S., and Al Saleh, A. 2009. Determinants of Knowledge Sharing Using Web 2.0 Technologies, *Journal of Knowledge Management* 13(4): pp. 52-63.
- Patton, M.Q. 1990. Qualitative evaluation and research methods, Newbury Park, CA: Sage. Polkinghorne, D.E. 2005. Language and Meaning: Data Collection in Qualitative Research, *Journal of Counselling Psychology* 52(2): pp. 137–145.
- Ranganathan, C., and Brown, C.V. 2006. ERP Investments and the Market Value of Firms: Toward an Understanding of Influential ERP Project Variables, *Information Systems Research* 17(2): pp. 145-161.
- Rao, L. 2010. Yammer Debuts a Facebook for the Enterprise, http://techcrunch.com/2010/09/28/yammer-debuts-a-facebook-for-the-enterprise/ [last accessed Jun 15, 2015].
- Roberts, N., Galluch, P.S., Dinger, M., and Grover, V. 2012. Absorptive Capacity and Information Systems Research: Review, Synthesis, and Directions for Future Research, *MIS Quarterly* 6(1): pp. 25-40.
- Rui, H., Liu, Y., and Whinston, A.B. 2010. Chatter Matters: How Twitter Can Open the Black Box of Online Word-of-Mouth, *International Conference on Information Systems* (ICIS).
- Sarker, S., Xiao, X., and Beaulieu, T. 2013. Qualitative Studies in Information Systems: A Critical Review and Some Guiding Principles, *MIS Quarterly* 37(4): pp. iii-xviii.
- Schilling, M.A. 2013. Strategic Management of Technological Innovation (4e), Irwin, NY, USA: McGraw-Hill.
- Schlagwein, D., and Prasarnphanich, P. 2014. Social Media Around the GLOBE, *Journal of Organizational Computing and Electronic Commerce* 24(2-3): pp. 122-137.
- Schlagwein, D., Schoder, D., and Fischbach, K. 2011. Social Information Systems: Framework, Review, and Research Agenda, *International Conference on Information Systems (ICIS)*.
- Schulze, C., Schöler, L., and Skiera, B. 2014. Not All Fun and Games: Viral Marketing for Utilitarian Products, *Journal of Marketing* 78(1): pp. 1-19.
- Schweidel, D.A., and Moe, W.W. 2014. Listening In On Social Media: A Joint Model Of Sentiment And Venue Format Choice, *Journal of Marketing Research* 51(4): pp. 387-402.
- Silverman, D. 2011. Interpreting Qualitative Data (4e), London, UK: Sage.
- Standing, C., and Kiniti, S. 2011. How Can Organizations Use Wikis for Innovation?, *Technovation* 31(7): pp. 287-295.

- Stephen, A.T., and Toubia, O. 2010. Deriving Value from Social Commerce Networks, Journal of Marketing Research 47(2): pp. 215-228.
- Strauss, A.L., and Corbin, J.M. 1998. Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory (2e), Thousand Oaks, CA, USA: Sage.
- Sun, P.Y.T., and Anderson, M.H. 2010. An Examination of the Relationship Between Absorptive Capacity and Organizational Learning, and a Proposed Integration, *International Journal of Management Reviews* 12(2): pp. 130-150.
- Szulanski, G. 1996. Exploring Internal Stickiness: Impediments to the Transfer of Best Practice Within the Firm, *Strategic Management Journal* 17(SI): pp. 27-43.
- Tan, F.B., and Hunter, G.M. 2002. The Repertory Grid Technique: A Method for the Study of Cognition in Information Systems, *MIS Quarterly* 26(1): pp. 39-57.
- Tang, Q., Gu, B., and Whinston, A.B. 2012. Content Contribution For Revenue Sharing And Reputation In Social Media: A Dynamic Structural Model, *Journal of Management Information Systems* 29(2): pp. 41-76.
- The Economist 2010. Special Report: Social Networking (Jan 28, 2010).
- Todorova, G., and Durisin, B. 2007. Absorptive Capacity: Valuing a Reconceptualization, *Academy of Management Review* 32(3): pp. 774-786.
- Treem, J.W., and Leonardi, P.M. 2012. Social Media Use in Organizations: Exploring the Affordances of Visibility, Editability, Persistence, and Association, *Communication Yearbook* 36(1): pp. 143-189.
- Trusov, M., Bucklin, R.E., and Pauwels, K. 2009. Effects of Word-of-Mouth Versus Traditional Marketing: Findings from an Internet Social Networking Site, *Journal of Marketing* 73(5): pp. 90-102.
- Tsang, E.W.K., and Williams, J.N. 2012. Generalization and Induction: Misconceptions, Clarifications, and a Classification of Induction, *MIS Quarterly* 36(3): pp. 729-748.
- Turban, E., Bolloju, N., and Liang, T.-P. 2011. Enterprise Social Networking: Opportunities, Adoption, and Risk Mitigation, *Journal of Organizational Computing and Electronic Commerce* 21(3): pp. 202-220.
- Wagner, C. 2004. Wiki: A Technology for Conversational Knowledge Management and Group Collaboration, *Communications of the Association for Information Systems* 13(1): pp. 265-289.
- Wagner, C., and Majchrzak, A. 2007. Enabling Customer-Centricity Using Wikis and the Wiki Way, *Journal of Management Information Systems* 23(3): pp. 17-43.
- Webster, J., and Watson, R.T. 2002. Analysing the Past to Prepare for the Future: Writing a Literature Review, *MIS Quarterly* 26(2): pp. 13-23.
- Weick, K.E. 1995. Sensemaking in Organizations, Thousand Oaks, CA, USA: Sage.
- Wernerfelt, B. 1984. A Resource-Based View of the Firm, *Strategic Management Journal* 5(2): pp. 171-180.
- Whelan, E., Golden, W., and Donnellan, B. 2013. Digitising the R&D Social Network: Revisiting the Technological Gatekeeper, *Information Systems Journal* 23(3): pp. 197-218.
- Zahra, S.A., and George, G. 2002. Absorptive Capacity: A Review, Reconceptualization, and Extension, *Academy of Management Review* 27(2): pp. 185-203.