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The Value of Social Media

What Social Networking Sites Afford Organizations

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This thesis is dedicated to my beloved family, who made my life 'social' long before social media began to introduce the practices of friending, solidarity, and sharing. Our genetic bond is one of the great gifts of my everyday life!

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ABSTRACT

Social media are a phenomenon that has quickly become deeply rooted in the mechanics of our everyday lives, dramatically changing how we interact and collaborate with family, peers, and society. Meanwhile, organizations have increasingly been exposed to and affected by this societal use, and hence been nudged into also adopting social media platforms. Since few academic studies have examined what this change will mean to organizations, I aim to contribute a deeper qualitative understanding of the topic. The empirical foundation comprises six separate studies that together cast light the value of social media bring to today's organizations. The thesis contributes both empirically and theoretically to research into the organizational use of social media.

The constituent papers of this thesis can be seen as offering different perspectives on the potential value of social media, and what social networking sites (SNSs) afford organizations. Together, they contribute to an improved understanding of the roles and structure of social media, and of how SNSs create and share knowledge and thereby influence innovation. In the last decade, the rapid development of social media and their growing importance in both industry and society at large have spurred interest among both academics and practitioners, an interest that is likely to continue to grow. It is therefore important that the value of social media for organizational use, has not yet been fully explored, receives more attention, so organizational efforts and investments in social media often lack suitable guidance and strategies. This dissertation is designed to mitigate these challenges.

Keywords: *Social Media, Innovation, Social Networking Sites, Social Media Affordances, Social Media Logic, Knowledge Sharing, Innovation Networks*

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SAMMANFATTNING

Sociala medier är ett fenomen som på kort tid rotat sig djupt i våra vardagsliv, och dramatiskt förändrar de sätt på vilka vi samverkar och samarbetar inom familjen och med kamrater och samhälle. Samtidigt har organizationer i allt högre grad också blivit utsatta för och drabbats av denna samhällsanvändning och har därmed blivit nödgade att ta sig an denna klass av teknologi. Vi har ännu bara sett början de omvandlingseffekter som detta kommer att ha på sättet verksamheter kommer bedrivas i framtiden. Eftersom det finns en brist på akademiska studier av vad denna förändring innebär för organizationer, avser jag att bidra med en djupare kvalitativ förståelse av ämnet. Den empiriska grunden består av sex separata studier som tillsammans illustrerar det värde som sociala medier ger till dagens organizationer. Avhandlingen bidrar både empiriskt och teoretiskt till forskningen om organisatorisk användning av sociala medier.

Alla medföljande artiklar kan ses som olika perspektiv på potentiella eller uppfattade värden av sociala medier, och vad sociala nätverkssajter (SNSs) ger organizationer för handlingsbarhet. Tillsammans bidrar artiklarna till en ökad förståelse för sociala mediers roller och strukturer, liksom hur SNSs skapar och delar kunskap och innovationer. Med den snabba utvecklingen av sociala medier och den växande betydelsen både inom industrin och samhället i stort, kommer intresset för sociala medier sannolikt att fortsätta att växa både bland akademiker och hos praktiker. Det är därför viktigt att värdet av sociala medier för organisatorisk användning, som ännu är underutforskat, får större uppmärksamhet, eftersom vägledning och strategier för organisatoriska satsningar och investeringar i sociala medier i stort saknas. Denna avhandling är utformad för att adressera dessa utmaningar.

Nyckelord*: Sociala Medier, Innovation, Sociala Nätverksssajters, Sociala Mediers handlingsbarhet, Social Media logik, Kunskapsdelning, Innovationsnätverk*

LIST OF PAPERS

My thesis is based on the work contained in following six papers[1].

I. Bergquist, M., Ljungberg, J., Stenmark, D., and Zaffar, F. O. (2013). Social Media as Management Fashion – A Discourse Perspective. *In Proceedings of the European Conference on Information Systems (ECIS),* 5–8 June 2013, Utrecht, Netherlands.

II. Zaffar, F. O., and Ghazawneh, A. (2013). Objectified Knowledge through Social Media: The Case of a Multinational Technology and Consulting Corporation. *International Journal of Information Communication Technologies and Human Development (IJICTHD),* July-September 2013, 5(3), pp. 1–17.

III. Stenmark, D., and Zaffar, F. O. (2014). Consultant Strategies and Technological Affordances: Managing Organizational Social Media. *In Proceedings of Americas Conference on Information Systems (AMCIS)*, 7–9 August 2014, Savannah, Georgia, USA.

IV. Ljungberg J., Stenmark D., and Zaffar F.O. (2016). Social Networking Sites, Innovation and the Patient as Peer – The Case of PatientsLikeMe (PLM). *In Proceedings of European Academy of Management Conference (EURAM)*, 1–4 June 2016, Paris, France.

V. Ljungberg J., Stenmark D., and Zaffar F.O. (2017). Like, Share and Follow: A Conceptualisation of Social Buttons on the Web. *In Proceedings of Scandinavian Conference on Information Systems (SCIS)*, 6-8 August 2017, pp. 54–66. Springer, Cham. Halden, Norway.

VI. Zaffar, F. O., Ljungberg, J., and Stenmark, D., (2018). Social Media Logics and Perceived Business Value. *Unpublished Paper.*

[1] ***Author names listed by alphabetical order except for paper 2 and paper 6.***

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The PhD journey is genuinely a long shot, requiring passion, massive energy, and great integrity. Yet the goal once reached is not the final destination; rather, it is a departure point for the next challenging task. I am pleased to share the accepted offer of my next role as Team Leader, Technical Specialist in R&D at VCC.

Best Regards
Fahd Omair Zaffar
Göteborg, 180515, Sweden

'I love stories about ordinary people doing interesting things because they are prepared to grow, thereby to experience growth pains. Such a pain weighs ounces while regret weighs tons.' (Fahd O. Zaffar)

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PART 1

COVER PAPER

CHAPTER ONE

INTRODUCTION

To understand the use of social media by organizations, we need to analyze how different actors and organizations perceive, think about, and use social media. Tim O'Reilly (2005) coined the term 'Web 2.0' to refer to the next generation of Internet-based services and business models. Some examples of Web 2.0 technologies are blogs (e.g., blogspot.com), wikis (e.g., Wikipedia), social networking software (e.g., Facebook, in 2004), social media platforms (e.g., YouTube), and forums (McAfee, 2009).

Social media are defined as a set of Internet-based applications, having Web 2.0 characteristics as their ideological and technological foundations, that allow users to create, comment on, edit, and share online content (Kaplan and Haenlein, 2010; van Osch and Coursaris, 2013). According to McAfee (2009), platforms are collections of digital content in which contributions are globally visible and persistent. Today, social media platforms are equipped with Web 2.0 characteristics and are used for various purposes, ranging from private use to business communication (McAfee, 2009). Social media platforms are, as the term implies, social in nature and thus facilitate users in connecting and collaborating (McAfee, 2009; Helmond, 2015).

Although having started for fun and leisure, social media are shifting towards having more serious purposes (Park et al., 2009; boyd and Ellison, 2013; van Dijck, 2013; Ljungberg et al., 2016). A specific subset of social media are social networking sites (SNSs) that allow individuals to construct a public profile and offer features for self-presentation, sharing text, images, and photos, engaging in debates and dialogues, getting updates on the activities and whereabouts of friends, and developing and maintaining relationships with others (boyd and Ellison, 2007; Park et al., 2009; Ellison et al., 2014). An SNS is a platform built on Web-based services targeting social interaction and user-generated content that allows individual users to build a public (or semi-public) digital profile, link up with other users with whom they feel connected, view these user's activities, and share comments (boyd and Ellison, 2007; Kane et al., 2014; Kaplan and Haenlein, 2010; Treem and Leonardi, 2012).

The most prominent examples of SNSs, including Facebook, Twitter, YouTube, and LinkedIn, have become a crucial part of most people's daily lives (Faraj et al., 2011; Treem and Leonardi, 2012) as a means to communicate and maintain social relationships (Faraj and Azad, 2012). From the SNS owner's point of view, users' content and activities are part of the business model in terms of information production (van Dijk, 2013). Social media have had a dramatic influence on communities and societies over the last decade (Hampton et al., 2011). The impact of social media on and for organizations therefore represents an important area for information systems (IS) research.

1.1. Positioning in Information Systems and New Media Studies

Over the past two decades, social media have gradually become an integral and important part of people's everyday lives, influencing interactions and the maintenance of social relationships. More recently, organizations' increasing use of and exposure to social media and SNSs have dramatically changed the conditions of creating and capturing knowledge. Social media have been widely adopted and continue to spread rapidly in organizational settings for information dissemination and for interacting socially with users and other involved actors, and executives and managers are hoping that social media and SNSs will help improve core organizational processes. However, existing scholarship in IS and media studies has explained little about the roles of social media in knowledge sharing and innovation. While IS research typically focuses specifically on social media features, communication and media research is interested in social media as a broader technology. There is also a lack of research on social media within innovation studies (Mount and Garcia, 2014, being one of the few exceptions).

In this sense, this thesis is positioned by combining the two different disciplines' perspectives on social media use in organizations. In doing so, I am curious to understand how organizational use of and exposure to social media differ from the use of previously available information and communication technologies in creating knowledge and collaboration activities.

In IS studies, organizational use of social media has been researched by a number of scholars. For instance, Tredinnick (2006) and McAfee (2006) have found that online sharing and communication tools for organizations have been managed in a traditional centralized manner, leaving ordinary users or employees out of the process and thus unable to share information even within the organization. In addition, the comprehensive review by Treem and Leonardi (2012) emphasized the lack of empirical understanding of social media use and implications in the process of knowledge sharing inside and across organizations.

More recently, Wenninger et al. (2016) conducted a systematic literature review by analysing 126 articles published between 2008 and 2014, including the leading IS journals commonly known in the IS research community as the 'basket of eight'. The review addressed users' content contribution and consumption behaviours on social media platforms, in order to understand current research into as well as the dynamics behind online information sharing and its consequences into underlying processes of SNS usage (Wenninger et al., 2016). In addition, IS scholars argue that in organizations, social media are expected to foster knowledge sharing among peers (DiMicco et al., 2008).

Accordingly, the individual characteristics of knowledge seekers and contributors determine how and why interactions occur on the Web. Previously, scholars have paid attention only to the knowledge contributors' characteristics. Knowledge as an object that knowledge seekers expect to access was addressed in

recent work by Beck et al. (2014); regarding the organizational use of social media for knowledge sharing, they found that active contributions and collaboration affect the quality of knowledge sharing. In addition, Faraj et al. (2016) recently demonstrated that online communities on the Web create significant economic and relational value for involved participants and beyond. They emphasized that it is widely accepted that the underlying source of such value creation is the continuous flow of knowledge among users. They argued that the crucial condition for such flow, particularly of tacit knowledge, among participants on the Web is not just the social media themselves, as presented in the IS literature, but rather 'the technology's domestication by humanity and the sociality it affords' (Faraj et al., 2016, p. 668).

Furthermore, Majchrzak et al. (2016) pointed out to IS researchers that their attention should not only be on how social media platforms are used, but also on the users' goals and the capabilities of social media. Furthermore, they argued that by looking at social media as sets of affordances for particular actors, IS researchers can explain how and why the 'same' technology is used differently or has different outcomes in different contexts, deepening and enriching general and substantive IS theories (Majchrzak et al., 2016).

In new media studies, the concept of platform is more closely attached to social media in a cohesive and logical fashion. In my thesis, social media are depicted and closely tied to online sociality and peer production, what van Dijck (2013) refers to as 'platformed sociality'. Online collaboration, friending, and sharing are necessary elements of this sociality, and these are shaped by the apparatus of social media in the broader technological and business context. In this sense, my research positions itself by regarding social media as tools or Web 2.0 applications, and as platforms, i.e., a combination of technological features, business models, and a wide range of user activities (van Dijck, 2013). Such automated structures and activities, rooted in platforms, introduce new mechanisms into social life (van Dijck and Poell, 2013).

The term 'platform' has become a dominant concept for both organizations and social media scholars. In communication and new media studies, the platform concept has gained prominence, directing attention to the role of the software that powers social media in shaping contributions and online sociality (Bucher, 2012a; Hands, 2013; Langlois, McKelvey, Elmer, and Werbin, 2009; van Dijck, 2013; Bucher and Helmond, 2016). In this thesis, I inquire into SNSs as a participatory and collaborative part of the Web that was transformed into social media platforms, in line with what Helmond (2015) has referred to as 'platformization'. The economic and infrastructural model of the social web and its consequences plays a vital role in understanding social media dynamics and the decentralization of platform features entails taking programmability into account (Helmond, 2015).

In addition, Gillespie (2010) emphasized the participatory and economic aspects of platforms over their computational dimension, further arguing that platforms afford opportunities to communicate, interact, or sell. Many scholars have explored the technological affordances of platforms in relation to their political,

economic, and social interests (e.g., Hands, 2013; Langlois and Elmer, 2013). This further includes the critical interrogation of the platform concept (Gillespie, 2010), analysing the techno–cultural logic of platforms (Gerlitz and Helmond, 2013; McKelvey, et al., 2009), and investigating the role of the platform architecture in the participative Web (Bucher, 2012a; van Dijck, 2013).

1.2. Aim and Research Question

Organizations' increasing use of and exposure to social media are crucial for the ways in which future businesses will be shaped. According to the founders of SNSs, users' content and activities are part of their business model for new information production (van Dijck, 2013; Tempini, 2015). For innovation to work, digitally networked environments, such as SNSs, are considered essential (Hilgers et al., 2010). Therefore, SNSs have become a technology that has grown in importance for knowledge sharing, peer production, and innovation (van Dijck, 2013; Faraj and Azad, 2012; McAfee, 2009; Haefliger, et al., 2011; boyd and Ellison, 2007). Yet there is still a lack of understanding of the important and distinct roles that social media play in knowledge sharing and innovation. The impact of social media in and for organizations therefore represents an important area for IS research.

As paper 3 argues, a thorough review of the information management literature shows that scholars unanimously and rather unreflectively speak in favour of aligned, rigid, and highly standardized structures as far as organizational information is concerned. Spurred by increasing digitalization and connectivity, there is growing interest in various forms of distributed innovation, ranging from firm-controlled open innovation initiatives (Chesbrough, 2003) to more fully distributed forms of commons-based peer production (Benkler, 2006). Following this trend, many organizations have also started to utilize SNSs for the collaborative organizing of innovation.

As social media have been examined in both IS and media studies, the intersection of these two disciplines is worth considering; accordingly, in my thesis, I contribute to both these domains by applying an interdisciplinary approach combining these fields' slightly different perspectives on social media.

The opportunities of social media discussed in paper 1 argue what counts as social media, organizing for social media, and motivations for social media strategy. I therefore identify and discuss various examples of value gained from social media in relation the thesis as a whole. Furthermore, I examine the dynamic roles of social media in organizations by drawing attention to the affordances and logics of social media – i.e., the norms, strategies, structures, mechanisms, and value – underpinning the action potential of social media in organizations.

I will discuss four means by which social media add value for organizations, namely, by facilitating innovation, information management and knowledge sharing, creation of social capital and value more directly linked to business value and monetization. I argue that these means are entangled with the affordances and logic of social media, serving as the basis for understanding the value of social media in

benefitting all involved actors – and specially organizations. I further argue that social media and SNSs differ in subtle yet distinct ways from previous tools, as social media afford sociality and behaviours that were almost impossible to achieve before social media started influencing innovation and knowledge sharing in organizational settings.

The changing nature of social media and the value they afford organizations merit further research. To examine these matters, it seems reasonable to wonder about what opportunities social media provide users and organizations as well as to examine some specific cases. Therefore, the main research question of this thesis is formulated as follows: *What value do social media afford organizations?*

This thesis examines the values of social media perceived by organizations by applying a qualitative research approach. The data were collected from multiple online sources and from interviewing social media experts – executives in various multi-national organizations.

The rest of thesis is structured as follows. First, the concepts used as theoretical background are explored in chapters 2 and 3. After that, chapter 4, 'Method', describes how the data were collected and analyzed. Then an overview of the published papers is presented in chapter 5. Finally, the implications of my findings for research and practice are discussed in chapters 6 and 7.

CHAPTER TWO

FROM SOCIAL MEDIA TO SOCIAL NETWORKING SITES

Over the past two decades, there has been an unprecedented proliferation of social media. Whereas some online social and participative sites have become both popular and successful (e.g., Facebook, Twitter, and YouTube), others have quietly disappeared (e.g., Sixdegrees and Friendster). Basically, social media allow the users to create, and exchange content (Kaplan and Haenlein, 2010). Social media's emergence and social impact on societies and organizations became notable and influential with the introduction and 'hype' of Web applications in early 2000s. Various terms and concepts have been used concerning social media. The 'social web' is the term used by Guber (2007) in referring to social media as a group of websites and applications where user participation and user-generated content are the main value drivers. These terms mostly describe the Web as an environment that is open as well as participative (Ravenscroft, 2009; O'Resilly, 2007).

My thesis is an attempt to distinguish such Web-based applications from social media and, furthermore, to examine the diverse values of such Web-based applications as a sub-class of social media technologies. Next, I describe the development of this new class of technology, i.e., from social media more broadly to specific Web-based applications such as SNSs, that has unique features and affords sociality, knowledge sharing, and innovation in various contexts.

2.1. Social Media

To get a better sense of the emergence of social media, we need to go back a bit in history. The term 'Weblog' was first used in the early 1990s when a blogger wrote 'We blog', and the term 'blogging' was later introduced (van Dijck, 2013). Initially, the Web was mainly used as a medium for accessing information. However, with the advent of Web 2.0, it was transformed into infrastructure on which to build applications, i.e., a distributed operating system that could deliver software services. Web 2.0 is now understood as a wide set of services or a participative network that supports collaboration and participation (Madden and Fox, 2006).

This development helps us understand the logic of Web 2.0 (Stenmark, 2008) as a rhetorical technology with which 'the computing industry attempted to change the way we think of the Internet' (Matthew Allen, 2013, p. 264), from a locus for publishing online sites to a locus for social media platforms (Helmond, 2015). Later, growing access to the Internet increased the popularity of this concept, leading to the creation of online participatory sites today known as social media platforms (Helmond, 2015), for example, Blogger (1999), Wikipedia (2001), Myspace (2003), Facebook (2004), Flickr (2004), YouTube (2005), and Twitter (2006). The emergence of these platforms contributed to the prominence and 'hype' that social media have today. Social media can roughly be defined as:

"*a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content*". (Kaplan and Haenlein, 2010, p. 60)

Through this definition, social media can be seen as the sum of all the ways in which people use social media. In this context, previous research has to some extent revealed the potential and usage of social media such as wikis, online communities, Wikipedia, and microblogs (Boulos et al., 2006; Majchrzak et al., 2006; Faraj et al., 2012; Wheeler et al., 2008; Jenkins, 2009; van Dijck, 2009; 2013; Bibbo et al., 2010; Shirky, 2011). When defining social media, it has become a kind of norm to refer to the different constituent technologies, such as blogs, social networks, and wikis. The evolution of social media used to be and is still based on the evolution of Web 2.0 applications. Treem and Leonardi (2012) offered a wide-ranging discussion of social media and how they are used by organizations.

However, there still seems to be uncertainty about what should be included in the concept of 'social media', which sometimes appears to refer to the underpinning technology, sometimes to a medium at a conceptual level, and sometimes to both. The growth of social media platforms is often confused with the rise of Web 2.0 applications. The broad term 'social media' has been applied to various rapidly evolving technologies, including wikis, blogs, microblogs, SNSs, virtual worlds, and video-sharing sites (Kaplan and Haenlein, 2010). Such technologies continually offer new features, often blurring the distinctions among them. It is often difficult to distinguish what is technically distinct among these new technologies, because they share many characteristics of prior social or collaborative technologies, for example, Usenet, a worldwide discussion system created by Tom Truscott and Jim Ellis of Duke University in 1979 that allowed Internet users to post public messages.

Social media platforms offer the capacity to generate, edit, share, evaluate, and link content to other creators and information users (Lee et al., 2018; Johnson et al., 2015; boyd and Ellison, 2007; van Dijck, 2013). Furthermore, the potential benefits of social media include the possibility to reach out to customers, stakeholders, and citizens, to tap into conversations, and to enhance internal collaboration and communication (O'Reilly, 2007). In this sense, central to social media technologies are participation and interaction, which require two-way communication that was previously impossible via the Web. Social media has therefore become a dominant concept over other related popular terms such as Web 2.0 and Enterprise 2.0. As a consequence, social media emerged a new management fashion (Bergquist et al., 2013).

Today, social media influence human interaction on the individual and community levels, as well as on the larger societal level, and organizations are increasingly using them to perform a variety of tasks. Organizations often appear less interested in communities of users than in their data. Originally, the need for seamless continuous connection is what drove many organizations to this new set of technologies. Here, the work of Yochai Benkler (2006) has advanced our understanding of the ideological and technological foundations of social media

platforms. Web 2.0 applications and social media platforms can have significant impacts on the nonmarket sector of knowledge creation and creative information production (Benkler, 2006). Networked knowledge-sharing environments are shaped and guided according to strategies devised for social media platforms.

In other words, social media have enabled the development of a cooperative nonmarket, peer-production system that establishes a foundation for interaction and collaboration among individuals who share common interests and gather around common problems (Benkler, 2006). In this sense, Benklers' prediction of a 'networked public sphere' emerging beside 'commercial mass media markets' is consistent with the adoption of social media platforms.

In 2010, when Facebook's CEO announced that Facebook would make the world more open and transparent by making the Web more social, it was among the first movers that understood the potential benefits of doing so for users. While many organizations either ignored or struggled to make sense of social media, social media platforms and services were rapidly growing into an important societal phenomenon, eventually having growing impact on many businesses. A huge number of organizations reacted to social media, because their information or content and applications are massively influenced and modified by users in either a participatory or collaborative fashion.

Yet few organizations have overcome this fear of uncontrolled information dissemination and open behaviour over the Web, so most find themselves uncomfortable when considering or using social media. Nevertheless, services such as Facebook and Twitter and sites such as LinkedIn and YouTube, together with similar applications designed from their owners' perspective for interaction, collaboration, and sharing knowledge more openly and transparently for the public good, have become an integral part of many people's everyday lives and lately for organizations' operations and outreach (McAfee, 2009; Haefliger, et al., 2011; Faraj and Azad, 2012; van Dijck, 2013; Johnson et al., 2015; Lee et al., 2018).

Next, I describe the evolution of social media into SNSs, the significance of SNS realization as covered in literature, and SNS applications and services used by organizations.

2.2. The Emergence of Social Networking Sites

The rise of Internet usage and the enticing features of social media originated the concept of social networking sites (SNSs) (Haefliger, et al., 2011). SNSs are typically classified as a specific type of Web 2.0 application (Beer and Burrows, 2007) or type of social media (van Dijck, 2013, p. 8). Over the past decade, with the maturity of social media both from the research perspective and from the adoption side by organizations, recent trends show that more users have started shifting towards SNSs for their personal and professional activities; moreover, these activities have not simply been channelled by any particular SNS, but have often been programmed with the specific objective of redirecting users' actions and behaviours (van Dijck, 2013).

By definition, SNSs typically allow individuals to construct a public profile, articulate a list of other users with whom they are connected, and view their list of connections (boyd and Ellison, 2007; Ellison et al., 2014). Prominent examples of such SNSs, namely, Facebook, LinkedIn, Twitter, Instagram, and YouTube, which are intended for communicating, collaborating, and maintaining social relationships on the Web, have become an important part of people's day to day activities and interestingly organizations also started to look into the opportunities attached with SNSs (Faraj et al., 2011; Faraj and Azad, 2012; Treem and Leonardi, 2012; Bergquist et al., 2013). The possibility of users exploring other people's profiles and social networks can create unexpected latent ties that facilitate rapid and spontaneous community building (Schau and Gilly, 2003; Haythornthwaite, 2005; Haefliger et al., 2011).

The term 'social network sites' also appears in public discourse, and the two terms 'network' and 'networking' are often used interchangeably (boyd and Ellison, 2007). I employ the term 'networking' in my thesis for two reasons: emphasis and scope. Networking emphasizes relationship initiation, often between strangers (boyd and Ellison, 2007); relationship building and connections with users and communities are important in my research, with respect to understanding the diversity and dynamic roles of social media for organizations. In my thesis, I have applied the term 'SNSs' in this sense to a special sub-class of applications under the umbrella of social media, to refer to a group of Web-based services that allow users to create, edit, share, and comment on content among other participating users on the Web (Kaplan and Haenlein, 2010; boyd and Ellison, 2007).

These SNSs have a dramatically different structure from that of previous Web technologies. More recent developments in SNSs indicate the transformation of the Web from 'the informational Web' into 'the social Web' (Gerlitz and Helmond, 2011, 2013). The social Web can be understood as a digital environment that supports 'collaborative development of content, cross-syndication and relations created between users and multiple Web objects – pictures, status updates or pages' (Gerlitz and Helmond, 2013, p. 1351).

One such technological feature developed in connection with SNSs is the 'social button'. The emergence of social buttons can be associated with networked connected ties in an online participatory environment, created through ideological and technological norms developed through the realization and arrangements of Web 2.0. Social buttons allow individuals to share, endorse, or appreciate users or their content within and across various social media platforms. In addition, social buttons also provide means to visualize certain actions and turn them into tangible measurements that can be harvested, repurposed, and sold. This can be illustrated by Facebook's 'Like' button, introduced in 2009, which has the capacity to instantly metrify and intensify users' affects, i.e., materializing emotions as numbers on the Like counter (Gerlitz and Helmond, 2012). In these ways, SNSs have transformed the Web from 'the informational Web' into 'the social Web' (Gerlitz and Helmond, 2011, 2012).

For many organizations, the focus of concern has shifted from social media in general to s in particular. Scholars argue that SNSs have had a dramatic impact on

organizations and society at large (Hampton et al., 2011). The success of SNSs largely depends on their users' active contributions, and on what drives them to contribute and consume information online on these SNSs. In this context, Wenninger et al. (2016) recently conducted a systematic literature review by analysing 126 articles published between 2008 to 2014, including leading IS journals commonly known as the 'basket of eight' in the IS research community. This review was intended to address user behaviour on SNSs in terms of content contribution and consumption, in order to understand current research into and the dynamics behind social information contribution in, the consequences of, and the underlying processes of SNS usage (Wenninger et al., 2016). Their findings show that a majority of existing work focused primarily on social information contribution, its antecedents and favourable outcomes. Very little dealt with how individuals' contribution behaviour affects their well-being; in particular, the dark sides of SNS use merit further attention in this arena of evolving SNSs (Wenninger et al., 2016).

Beside this, Lee et al. (2018) investigated the sustainability of online communities on a longitudinal basis, focusing on their dynamic temporal development with regard to how they formed, became robust, and either declined or were sustained. Their work mainly covered the emergence of online communities, online contributions to SNSs, and the ways leadership can exert influence to achieve engagement and promote the dissemination of social information (Johnson et al., 2015; Oh et al., 2016; Lee et al., 2018).

Together, these scholars argue that the identification and significance of influencers who lead or encourage users' participation and become cause in mostly cases on SNSs to retain users and influence with their activism and interactions on SNSs. This networked influence indicates network patterns in which one actor influences the behaviour of many others in the networked environment, and is considered one of the key factors to gain benefits from these SNSs for organizations.

SNSs are increasingly being implemented, as they have enormous potentials to enhance knowledge sharing, collaboration, and innovation. Understanding why users participate in such activities, what makes them willing to contribute to information sharing and innovation activities, is closely connected to what these SNSs offer and how the pillars of social media logic facilitate the process. Therefore, the significance of social media affordances and logic are central my thesis. Next, I present these two inter-related and subtle concepts, social media affordances and logic, in order to better understand the organizational view of social media.

2.3. Social Media Affordances

The term 'affordance' was originally coined by Gibson (1977), mainly to explain the phenomenon of how different species of animals perceive a single object in different ways. Gibson suggested that an actor perceives objects not in terms of their inherent physical properties or qualities, but in terms of their possibilities for interaction (Gibson, 1979; Treem and Leonardi, 2012). This perception of an object's utility is called an affordance, and the action potential offered by an object is always relative to

the observer (Seidel et al., 2013). The concept of affordance is generally used to describe what material artefacts such as Web technologies allow users to do (Bucher and Helmond, 2016). According to Gaver (1991), affordances 'are properties of the world defined with respect to people's interaction with it' (p. 80). The existence of affordances is applicable to both individual actions and social interactions (Gaver, 1991).

Here I discuss different ways in which social media affordances have been conceptualized and operationalized across two disciplinary boundaries, i.e., IS and new media studies. I think it is unfortunate that, to date, there is no scholarly consensus on a single way of understanding the concept of social media affordances. Here my work finds an opportunity to consider the voices of scholars from both disciplines. In this sense, my curiosity drives me towards the types of social media affordances that these two disciplines suggest are valued by organizations in practice.

The specific intellectual trajectory of IS studies extends from ecological psychology (Gibson, 2015) to technology and design studies (Norman, 1988), communication and media studies (van Dijck and Poell, 2013; Bucher and Helmond, 2016; van Dijck, 2013), and information systems management (Majchrzk et al., 2013; Treem and Leonardi, 2012; Ellison and Vitak, 2015). In the IS context, affordances can be defined as 'possibilities for goal-oriented action afforded to specified user groups by technical objects' (Markus and Silver, 2008, p. 622). The notion of affordances has also been broadly applied in organizational research to analyze the design of everyday objects (Norman, 1999). For instance, Hutchby (2001) was among the first to acknowledge the potential of the affordance approach to analyze the complex relationship between technologies and actors, by stressing that an affordance is always a relationship between an object and a social entity.

Some scholars focus on technology affordances and constraints theory (Gibson, 1977, 1979; Markus and Silver, 2008; Leonardi, 2011, 2013; Faraj and Azad, 2012; Treem and Leonardi, 2012; Volkoff and Strong, 2013; Majchrzak and Markus, 2014;) as particularly well suited to helping IS scholars build theory about ICT use (Majchrzak et al., 2016). Similarly, the affordance concept has also been applied in information systems research (Seidel et al., 2017) to investigate technologically induced social change (Orlikowski and Barley, 2001; Zammuto et al., 2007) and the impacts of new technologies (Treem and Leonardi, 2012; Ellison et al., 2014; Majchrzak et al., 2016). The vast majority of scholars have applied the concept of affordance to explore the opportunities of new technologies and their impacts on users and organizations. Accordingly, most scholars have considered affordances only as enablers and positive potentials to perform particular actions (Pozzi et al., 2014; Volkhoff and Strong, 2013); however, affordances can also constrain actors to carry out certain actions or sets of specific uses (Gibson, 1986; Majchrzak et al., 2013; Zammuto et al., 2007).

While organizations are increasingly adopting social media, their implications for organizations are yet not clear (Treem and Leonardi, 2012; Majchrzak et al., 2016; Seidel et al., 2017). In my thesis work, I chose to apply the four most commonly

adopted affordances in both IS and communication and media studies: visibility, persistence, editability, and association. Many scholars claim that these affordances are unique to social media in relation to earlier organizational communication tools.

According to Treem and Leonardi (2012), *visibility* means that social media afford users the ability to make their behaviours, knowledge, preferences, and connections visible to others in the organization. *Persistence* refers to the fact that communication remains accessible in the same form as the original display after the actor logs out of, for example, Facebook or the blog application. The information provided by the actor remains available to other users and does not expire or disappear (Treem and Leonardi, 2012). *Editability* means that individuals can take their own time to carefully craft and edit a communicative act before it is made publicly available. *Associations*, which denote recognized and established connections, come in two forms in social media: a person to another person, or a person to a piece of information. When social media afford associations with other individuals or content, they support social connections, give access to relevant information, and enable emergent connections (Treem and Leonardi, 2012).

In my thesis, I use these four affordances identified by Treem and Leonardi (2012) mainly to discuss the usage of social media for information dissemination and knowledge sharing by SNS users. Social media affordances are also widely discussed and different types of affordances are identified by communication and new media scholars.

Next, I present the prominent types of social media affordances that these scholars recommend to organizations, to gain value in practice.

I start with Bucher and Helmond (2016), who have emphasized how social media afford social practice – a sense in which few scholars use the notion of social affordance – for example, the possibilities that technological changes afford for social relations and social structure (Leonardi, 2014; Wellman, 2001). Similarly, Gibson (2015) argued that what an animal affords the observer is not merely a personal behaviour but also an experience of social interaction, thereby suggesting that 'behavior affords behavior' (p. 127). The underlying question remains the same in such conceptualizations, as affordances still concern how technology and society relate to each other. In this sense, Hutchby (2001) developed the concepts of functional and relational in relation to affordances: *functional* refers to the fact that affordances are enabling, as well as constraining, whereas *relational* refers to seeking attention that may be different from one specie to another. The term communicative affordance is used almost synonymously with social affordance, both of which describe how technology enables or constrains social action (Schrock, 2015).

The affordance concept continues to play a vital role in media studies and social media research, especially in addressing the relationship between technology and people (e.g., Ellison and Vitak, 2015). In this sense, some scholars have focused on the social structures formed in and through a given technology (e.g., boyd, 2011; Postigo, 2016). Within these two disciplines, social media and SNSs have often been analyzed in terms of offering 'affordances and constraints' (e.g., Baym, 2010; boyd,

2011; Ellison and Vitak, 2015; Leonardi, 2014; Stenmark and Zaffar, 2014). Similarly, others have used an affordance approach to focus attention not on Web-based technologies only, but also on the new dynamics of users' online participation, contributions, and social collaboration, which social buttons or similar SNS features may afford (Ljungberg et al., 2016; Treem and Leonardi, 2012; Bucher and Helmond, 2016; Stenmark and Zaffar, 2014). As boyd (2011) argued in her work on SNSs as a form of networked platform, SNSs are essentially shaped by four core affordances, namely, persistence, replicability, scalability, and searchability (boyd, 2011).

Bucher and Helmond (2016) attempted to conceptualize social media affordances in two levels: high- and low-level affordances. High-level affordances are considered more abstract, and are defined as the types of dynamics and conditions enabled by social media platforms (Bucher and Helmond, 2016). In contrast, low-level affordances are considered more at the feature level, and are typically located in specific features, such as social buttons, screens, and platforms (Bucher and Helmond, 2016). Although I have not referred to these concepts explicitly in this thesis, I did use the concepts of both high- and low-level social media affordances when conducting the analyzes reported in the appended papers.

2.4. Social Media Logic

Social media and SNSs have become central to hosting the Web-based applications 'that together formed an expansive ecosystem of connective media' (van Dijck, 2013). Inferring from this basis, van Dijck and Poell (2013) developed the idea further by identifying four pillars of social media logic derived from the theory of 'media logic' developed in the era of mass media (Altheide and Robert, 1979). According to van Dijck and Poell (2013), social media logic refers to the processes, principles, and practices by which social media process information, communication, and news and channel social traffic. It can also be viewed as a 'particular set of strategies and mechanisms' that can be explained in terms of four pillars: programmability, popularity, connectivity, and datafication. These pillars not only serve as analytical tools of social media logic but also help in identifying contrivances (i.e., core features of social media), illustrating such features and affordances of social media as matters of systematic interdependence. These four pillars play a central role in the syntax of social media logic. The intrinsic properties of the artefacts are the affordances, which are subtle but have abilities similar to those offered by the pillars of social media logic. For instance, Treem and Leonardi (2012) use term 'social media affords visibility' that content is visible on Web, however, van Dijck and Poell (2013) use slightly different term i.e. 'ability of social media e.g. programmability' for publishing and steering content on the Web.

I have noticed between interplay of these conceptualizations that the pillars can be seen as 'enablers' and the affordances can be seen as outputs – visibility, in response to actions called by pillar of social media logic – programmability. Next, I describe further these four pillars of social media logic with regard to the abilities of social media.

The first pillar of social media logic is *programmability*, which concerns the ability of social media to schedule and steer content on the Web in a way that can help organizations keep their users 'glued to the screen' from one segment to the next. As social media rely heavily on users' contributions, the creative content supplied by users is crucial to the success of programmability, as both users and platform owners mutually shape the environment (van Dijck and Poell, 2013). However, in response to actual usage, a platform must align its strategies in order to satisfy users, who are capable of influencing the flow of information in this process. In other words, van Dijck and Poell, (2013) argued, programmability is the transformation of content and audience into code and users. The power of algorithms lies in their programmability: programmers steer users' experiences, content, creativity, and relationships through platforms (Beer, 2009). For example, at LinkedIn, users can post content and steer information streams, while the platform owner can tweak the platform's algorithm to influence relational activities, such as liking, sharing, following, friending, profiling, recommending, and favoriting. These underlying mechanisms are often invisible and technological programmability in social media logic is difficult to analyze, because algorithms are kept secret and constantly adapted to evolving practices (Ellison et al., 2011; Bucher, 2012).

Popularity, the second pillar of social media logic, is described as the popularity of issues, things, and ideas and the influence of people on one another. Each platform has its unique mechanisms for boosting popularity. For example, popularity can be measured in mostly quantitative terms. Inscribed in Facebook's EdgeRank and Twitter's Trending Topics are algorithms that make some issues or topics more valuable and devalue others. Facebook's Like button counter automatically selects emotive and positive evaluations of given content. Moreover, though the Like mechanism claims to promote a social experience, the Like button simultaneously figures in an automated 'like economy' (Gerlitz and Helmond, 2013). This popularity is conditioned by both features of programmability, i.e., algorithms and socio–economic components.

In their early years, it was promised that social media platforms would become more egalitarian and democratic so that all users could equally participate and contribute content. However, platforms such as Facebook, LinkedIn, and Twitter eventually matured, and 'their techniques for filtering out popular items and influential people became gradually more sophisticated' (van Dijck and Poell, 2013). Despite these platforms' egalitarian image, some users on these platforms are more influential and visible than others. One explanation of this is that popularity boosting is a two-way process: while algorithms have the power to automatically assign differentiated value, users themselves can simultaneously engage in planned activities to increase their visibility. Basically, the logic of online popularity resides in banners identifying 'most viewed' videos or in the follower counter on YouTube, friend stats or the following counter on Facebook, and the follower counter on Twitter and LinkedIn. For instance, users such as PewDiePie on YouTube have more visibility and carry more weight than others, even than President Trump. On Twitter, however, Trump is more visible than other politicians, while similarly, the soccer star Cristiano Ronaldo

carries more weight on Facebook than do others. In this sense, SNS metrics are increasingly accepted as legitimate standards for measuring and ranking people and ideas; these rankings are then amplified by the community dynamic through social features such as the Like, Share, and Follow buttons.

The third pillar of social media logic is *connectivity*, which is considered the heart of sharing, interacting, and communicating actions. In other words, the participation of users has a more conceptual meaning that captures the logic of connectivity. Connectivity can also be seen as the affordance of the platform that helps connect content to users' activities and organizations. In line with these features, connectivity equally emphasizes the mutual development of users, platforms, and organizations, and more generally offers productive environments through online sociality. The main idea behind this introduction of a third pillar is to argue that social media logic helps users connect with other users based on their common interests and also helps people have customized connections, choosing whom they want to communicate with to develop a personal relationship or communities of interest.

According to Bennett and Segerberg (2012) this type of collective action is mixed with connective action – a hybrid that increasingly applies 'to life in late modern societies in which formal organizations are losing their grip on individuals, and group ties are being replaced by large-scale, fluid social networks' (p. 748). van Dijck (2013) claimed that such networks do not require collective identity or organizational control; instead, social media function as organizing agents in these contexts. The mechanisms of automated personalization and networked customization are new in the context of social media logic. Connectivity should thus be seen as an advanced strategy of algorithmically connecting users to content, users to users, platforms to users, users to advertisers, and platforms to platforms. For instance, automated links between users and products established via Facebook Likes help advertisers utilize recommendation tactics to promote products to 'friends' – even though users are unaware of being used for this purpose.

Datafication constitutes the fourth and most critical pillar of social media logic. It is referred to as the ability of a social media platform to render into data phenomena that have never been quantified before. For example, each type of content conveyed over Internet-based applications, be it music, books, or videos, is treated as data. More specifically with regards to SNSs, from the perspective of users, social media appear to be anonymously tracking, archiving, and retrieving data about them, and such insights are even rooted in online relationships (e.g., friends, followers, likes, shares, endorsements, and trends), which are datafied on social media. Above all, the success of the first three pillars – i.e., programmability, popularity, and connectivity – is conditional on datafication.

Furthermore, datafication gives social media the ability and potential to develop techniques for predictive and real-time analytics. In the social business world, social media platform owners are massively mining online social traffic for a variety of purposes – indicators of trending topics, keywords, sentiments, public viewpoints, or

frequently shared and liked items. For instance, Twitter promotes itself as an echo chamber of people's opinions.

However, while processing data, a platform designer does not merely 'measure' certain expressions or opinions, but also helps to shape them during the activity or process of developing issues. Opinions and sentiments expressed via Twitter are extremely vulnerable to manipulation (van Dijck and Poell, 2013). Similarly, Facebook processes a vast quantity of user content every second. Much of the value of SNSs lies in their continuous creation of content, for example, social movements of communities, personal recommendations and reviews of offerings, and expressions of sympathy and solidarity. Through datafication logic, organizations can retrieve and analyze such insights, subsequently turning these aggregated raw data into meaningful information with which to shape important business decisions regarding knowledge management and innovation.

Next, I describe the context of my research, which helps position it more clearly. Far from being neutral platforms for everyone, social media and SNSs have changed the conditions and rules of social interaction and the ways knowledge is created and shared inside and across organizations through collaborations and innovation activities.

CHAPTER THREE

KNOWLEDGE AND INNOVATION

To help SNSs users share knowledge in order to facilitate innovation by making more active use of social media, which is my objective, knowledge creation and collaboration activities are required. Next, I describe the major theoretical concepts underlying this research, taking into account various findings regarding how organizations leverage social media and SNSs to promote knowledge and innovation, and how such practices foster the development and navigation of innovation networks.

3.1. Previous Research on Knowledge Sharing and Collaboration

The mechanisms for accessing, controlling, and publishing knowledge (Phang et al., 2009) involve collaborative mechanisms or systems that foster social interactions among users (Kankanhalli et al., 2005), such that users gain access to information and interact with one another in practice-related networks (Brown and Duguid, 2001; Wasko and Faraj, 2005). Such social, interactive, and collaborative networks can be divided into two types. The first type is communities of practice (Wenger, 1998), which are groups that have strong internal bonds and in which the users or members know one another, interact in person, and coordinate with one another over projects (Brown and Duguid, 2001). In contrast, the second type is networks of practice (Wasko and Faraj, 2005), which are large groups that have weak internal bonds and in which the users or members are distributed globally, do not necessarily know one another, and have almost no face-to-face interactions.

The evolution of Web 2.0 has ensured that social media now have a major role in business operations. Many organizations are still struggling with whether to implement social media technology and, if so, how to derive benefits from them. Social media platforms are seen as proliferating across organizations, as external experts and managers attempt to leverage the power of the informal information economies of their companies (Leonardi, 2015). Given such striking findings and predictions reported in the literature, it is unsurprising that organizations and scholars have begun to theorize about how social media might advance organizational knowledge sharing (Treem and Leonardi, 2012; Majchrzak et al., 2013; Jarrahi and Sawyer, 2013; Kane et al., 2014).

Better understanding the position of this work requires reflection on the concepts of knowledge sharing and collaboration. The knowledge-based view of the organization suggests that knowledge is a scarce resource, and that the ability to manage it determines an organization's competitiveness (Grant, 1996). Nonanka (1995) created an elaborated knowledge conversion model comprising four stages:

socialization, externalization, combination, and internalization (SECI). As knowledge passes through these stages, its state changes between implicit and explicit forms. This model was further developed by Huysman (2002), who specifically explored the mechanism of the knowledge-sharing cycle. Knowledge sharing mostly takes place despite the absence of existing social relationships (Faraj et al., 2011); however, with the help of social media, it can be organized and lead towards innovation through coordinated actions and open strategies.

However, the prevailing view concerning what makes social media unique technologies for organizational knowledge sharing is that they provide affordances through which information can be seen, stored, and added to by anyone in the organization (Treem and Leonardi, 2012; Majchrzak et al., 2013; Kane et al., 2014). According to Leonardi (2015), the use of social media can increase the accuracy of people's meta-knowledge (i.e., knowledge of 'who knows what' and 'who knows whom'), for example, at work.

In organizations, knowledge sharing often happens in a variety of ways (Hyusman, 2002; Faraj et al., 2011; Zaffar and Ghazawneh, 2013). For example, on Wikipedia.com, individuals add knowledge to articles and shape and integrate the knowledge that others have contributed. Similarly, in the case of IBM, employees add information to communities of interest via IBM connections and gain benefits from across the globe through one another's contributions, which are globally accessible to IBM employees (Zaffar and Ghazawneh, 2013). Furthermore, organizations are increasingly adopting social media despite the fact that their implications for organizational behaviour are as yet unknown (Treem and Leonardi, 2012). Some well-known practitioner organizations, such as IBM, KPMG, and Ernst & Young, actively use social media technologies to share information, form collective intelligence, and increase employee engagement (Faraj et al., 2011; Majchrzak et al., 2013; Zaffar et al., 2013; Bergquist et al., 2013).

In addition, scholars argue that social media technologies are crucial in enabling organizations to connect with customers, users, and partners, since these technologies create opportunities for peers to interact both within and outside the organization (Treem and Leonardi, 2012; Majchrzak et al., 2013; Faraj et al., 2016). Our understanding of the dynamics of knowledge sharing and collaboration in innovation activities is significant, not only because of the increasing prevalence of social media and active contributors, but also because such communities of common interest have unique characteristics by which they interact and share on social media platforms. In this sense, it is important to address the more general phenomenon of organizational knowledge collaboration through social media for innovation purposes.

Similarly, O'Reilly (2007) identified the numerous benefits of social media, including the leverage to reach a wide range of customers and stakeholders and to enhance communication and collaboration for innovation activities. Social media play a vital role in overcoming problems encountered during collaboration among users (McAfee, 2009). *Knowledge collaboration* is defined as 'the sharing, transfer, accumulation, transformation, and co-creation of knowledge' (Faraj et al., 2011).

Many scholars have noticed that social media platforms may be capable of fostering unconventional knowledge collaboration and innovation (Faraj et al., 2011; , Li et al., 2014; Majchrzak and Malhotra, 2016). In online communities, knowledge sharing involves individual acts of offering knowledge to others as well as adding to, recombining, modifying, and integrating knowledge that others have contributed. Knowledge sharing is a critical element of the sustainability of online communities (Faraj et al., 2011), as individuals share and combine their knowledge in ways that benefit them personally, while contributing to the community's greater worth (Wasko and Faraj, 2000; Blanchard and Markus, 2004; von Hippel and von Krogh, 2006; Murray and O'Mahoney, 2007).

Next, I describe innovation and knowledge production from Benklers' (2006) perspective, and the ways in which peer production allows the innovation network to develop and navigate.

3.2. Innovation and Peer Production

A host of user-related practices and growing interest in new, more open organizational forms are attracting increased attention in the strategy, organization, and innovation literatures (Felin et al., 2017). These encompass a wide range of phenomena and practices, such as crowdsourcing, crowdfunding, open innovation, peer and community production, innovation contests, and user innovation, that many organizations have adopted successfully and others are striving to benefit from (Harhoff and Lakhani, 2016).

According to Van de Ven et al. (2008), *innovation* is a non-linear and cyclic process that includes the development as well as implementation of numerous creative ideas initiated by various actors engaged in specific relationships. These relationships frequently extend beyond organizational boundaries and involve the external users that contribute to the innovation process, mainly by contributing competencies and resources (Van de Ven et al., 2008, Chesborough, 2003a, 2006a). This type of innovation is highly recognized in information technology (IT) (Tuomi, 2002; Hanseth and Lyytinen, 2010), as research demonstrates that it is rare for firms to possess all the knowledge required in order to innovate new information services based on a well-diversified combination of IT systems (Andersson et al., 2008). The main result of this innovation is a need for networked relationships as well as collaboration among organizations focusing on technological innovation (Chesborough, 2003, 2006).

Systems are products comprising multiple components (Katz and Shapiro, 1994; Marschak, 1962), for example, computers, automobiles, telecommunications services, and video games. Collaborating firms are enabled to capture, elaborate on, and capitalize value created outside the company, but may also be obliged to contribute to value creation in which the appropriation of invested resources is beyond their control (e.g., Dahlander and Magnusson, 2005; Chesbrough and Appleyard, 2007). This joint development of value creation is still an emerging phenomenon in which the boundaries between commons-based and proprietary, open

and closed, firms and communities, peer production and market are not always clear. Chesbrough (2003) suggested that firms could accelerate innovation and expand market opportunities by using the purposive inflow and outflow of knowledge across their boundaries. Openness here refers to the controlled exchange of ideas and intellectual property with external stakeholders, such as customers, suppliers, partners, and competing firms, often by using techniques such as innovation contests and crowdsourcing (Surowiecki, 2005; Howe, 2008) and the exploitation of online communities (Dahlander and Magnusson, 2005; Rolandsson et al., 2011). One particular external source for innovation is the consumer or user of a product.

Coase's (1937) theory of the firm is seen as a landmark contribution in helping us understand organizational boundaries and the comparative dynamics between organizations and markets (Gibbons, 2005; Zenger et al., 2011). Coase, in short, argued that the existence of transaction costs in markets leads to the emergence of the firm. The argument emphasizes the coordinator, who allocates resources and generally supports the coordination of new knowledge production. Another serious attempt to explain the development of distributed innovation is Benkler's (2002) notion of commons-based peer production (CBPP). He describes CBPP as a new mode of knowledge production in which large aggregations of individuals are independently searching for opportunities to be creative (Benkler, 2002), in contrast to hierarchical authority in firms and the price signals of markets as coordination mechanisms. In addition, Benkler (2006, 2014) argued that CBPP is based on the coordination of a critical mass of voluntaristic independent contributors who are self-allocated and engage in self-managed tasks.

While Coase's theory undoubtedly advanced our understanding of the nature of organizations and markets, it is deficient in addressing the social element among users. However, the combination of product or service modularity (e.g., Baldwin and Clark, 2003) and sharply decreased computing and communication costs has transformed the nature of organizational boundaries and the ways firms innovate (e.g., Lakhani et al., 2013; Felin and Zenger, 2014). In this sense, increased and widespread Internet access has helped enable and advance peer-production systems. For example, for innovation to work, digitally networked environments are considered essential, and this typically includes the Internet and Web-based services (Hilgers et al., 2010). In this sense, social media and SNSs' are useful tools that have attracted considerable attention for their ability to create knowledge through self-managed coordination. Benkler's (2002) notion of a new mode of knowledge production claims, when the outputs and information resources are considered common resources, that the process of knowledge contribution can advance the common good.

3.3. Innovation Networks

Drawing on the literature on open, digital, and distributed innovation and strategies involving platforms, an *innovation network* is conceptualized as a socio–technical system that spans organizational networks and boundaries (Chesbrough et al., 2006; Boland et al., 2007; Yoo et al., 2008, 2009, 2012; Van de Ven et al., 2008). The

innovation network comprises various actors and stakeholders embedded in technological functions that shape, coordinate, and initiate innovation processes (Van de Ven et al., 2008). Such innovation-based networks are increasingly open and distributed, changing the roles of and relationships between external sources of innovation (Ågerfalk and Fitzgerald, 2008; Yoo et al., 2009, 2012). Few scholars have explored such relationships, the connections among peers in networked organizations, or how such roles and relationships influence the innovation processes (Powell and Grodal, 2005; Ngwenyama and Norbjerg, 2010).

According to Yoo (2010), *innovation in innovation networks* happens due to social phenomena, for example: 'obtaining, transforming and sharing knowledge is a negotiation (social action) and sense-making process, through which an actor's identity and relationships to others are negotiated and re-defined' (Yoo et al., 2009, p. 10). Accordingly, *digital infrastructures* can be defined as the basic information technologies and organizational structures, along with the related services and facilities, necessary for an enterprise or industry to function. Therefore, initiating innovation of an innovation network encounters complexity because of the dynamic nature of innovation actors in the digitization of products and services (Yoo et al., 2009) and the transformation of Web into platformization (Helmond, 2015).

The participation of various actors in the innovation process (Chesbrough et al., 2006; Simard and West, 2006; Boland et al., 2007; Yoo, 2010), both internal (Powell and Grodal, 2005; Van de Ven et al., 2008) and external actors (Chesbrough 2003a; Van de Ven et al., 2008; Chesbrough et al., 2006, 2012), and the relationships among peers (Benkler, 2006, 2014), which can be deep, wide, formal, and informal (Simard and West, 2006, p. 235), shape and redefine the actor's role in social space with other users in the network (Yoo et al., 2008, 2009; Yoo, 2010) to achieve multiple purposes such as motivation, learning, and production (Benkler, 2002, 2006, 2014) as well as negotiation and collaboration as such (Boland et al., 2007).

Furthermore, the literature on business networks and collaboration reveals that organizational actors and stakeholders contribute to innovation networks in order to procure and assign resources (Ciemons and Row, 1992; Alter and Hage, 1993), such as political benefits (Galaskiewicz, 1985), to enhance efficiency and productivity (Oliver, 1990) and to promote innovation (Ticoll et al., 1998).

However, in innovation networks, phenomena such as the control and coordination of various actors and ties among peers range from centralized practices (Henfridsson et al., 2009; Henfridson and Lindgren, 2010) to relatively decentralized approaches reported in the open-source software literature (Ljungberg, 2000; Fitzgerald et al., 2006; Yoo et al., 2008), and different values associated with free and open-source software interact in the intersection of corporations and movements (Yoo et al., 2008; Bergquist et al., 2012).

Finally, the SNS users and open innovation literatures have also questioned our paradigm, specifically in terms of the locus and source of innovation. The highlighting of the alleged new role of the participating user was critiqued by van Dijck (2009) and van Dijck and Nieborg (2009), as early Web 2.0 discourses became

infused with a rhetoric of democratization, empowerment, and emancipation. Central actors in this so-called participatory Web (Madden and Fox, 2006; Beer, 2009) are SNSs such as Facebook, LinkedIn, Twitter, YouTube, and Flickr, creating an online participatory culture (Benkler, 2006, 2014; Jenkins, 2006). These SNS applications and services share what Tim O'Reilly (2005) referred to as an architecture of participation in which users add value to SNSs by creating and sharing content.

CHAPTER FOUR

METHOD

4.1. Philosophical Positioning and Research Design

Walsham (2006) stated that interpretive research plays a vital role in the field of IS. I position myself as an interpretative researcher because I agree with the argument that much of our reality is based around knowledge development (Walsham, 1993, 2006). In addition, interpretive research focuses on the complex nature of human sense-making rather than on dependent and independent variables (Kaplan and Maxwell, 1994), and addresses phenomena according to human-assigned meanings (Orlikowski and Baroudi, 1991). In-depth case study research is often considered the main vehicle of interpretive research (Walsham, 1995), along with ethnographic and action research (Walsham, 2006). My research work, which can loosely be described as case based, follows an interpretive approach to qualitative research.

In this thesis, I aim to improve our understanding of the different values that social media generate for organizations. I try to understand and highlight the potentials of social media platforms that stem from their ability to connect users' Web activities with particular interests. Through computer-mediated interactions and socialization activities, users develop themselves and create value for the community by helping one another. Examining the use of social media for such diverse activities as peer production, open and distributed innovation, and information and knowledge sharing typically requires an interdisciplinary approach – a potentially risky undertaking. However, interdisciplinary studies have always been a central part of IS research, since IS and IT affect and are affected by so many aspects of our society – management, economy, organizational theory, psychology, behavioural studies – apart from technology itself.

My work has recently applied a management perspective to social media use, which presents its own challenges. In fact, it is difficult to convince a business manager to set aside time to meet an unknown research student, since executives are largely occupied with scheduled meetings and on-going business activities. Nevertheless, I succeeded in identifying businesses, through both personal contacts and LinkedIn, whose managers were willing to be interviewed. In all, I conducted 23 interviews with executives from 19 organizations, covering roles such as director, manager, specialist, coordinator, consultant, or social media expert in charge of social media efforts. My interviews focused on the organizational use of social media and on how executives devise strategies to utilize the particular affordances of social media platforms to derive business benefits.

Before I move on to the next section, I would like to ease the reader's path into the rest of the thesis, by describing how I collected data for my PhD research, establishing the foundation for all the constituent papers.

4.2. Data Collection

The research presented here is based on both primary and secondary data. To collect *primary data,* researchers can choose to conduct interviews, observations, and surveys or to exchange emails (Eisenhardt, 1989, 1991; Eisenhardt and Graebner, 2007; Gerring, 2007; Yin, 1994, 2009). I collected primary data by interviewing executives or external experts on social media from 19 organizations. Of the 63 organizations contacted, 26 expressed interest in participation within the given time frame. Subsequently, I made arrangements to visit 23 executives in 19 organizations. The respondents from the remaining seven companies could not accommodate me, due to either personal commitments or, mostly, professional commitments; the demands of a busy schedule are understandable, and I appreciate their interaction as far as it went.

Eventually, I was able to conduct 23 interviews in 19 organizations. I applied selection criteria based on organizational size and scope together with an online organizational presence using social media. This resulted in a set of organizations ranging from newly established to very mature companies across a variety of industries. The names of the some of the organizations and respondents have been kept confidential at the request of the respondents, while others have been disclosed with respondent approval. The interviewees were selected by purposive sampling intended to provide variation in terms of gender, role, and work tasks.

To collect *secondary data*, I used Web-based data sources to study evolving research phenomena that offer valuable insights. When conducting research on emerging phenomena such as social media platforms, where relying solely on first-hand observations can be costly and difficult, secondary data are a useful resource. The main advantage of secondary data is their low cost of acquisition because they already exist. According to Cowton (1998), secondary data are defined as 'data collected by others, not specifically for the research question at hand' (p. 424). However, a typical concern with such data is the perceived distance between the researcher and the context in which the data originated (cf. Walsham, 1995), attributable to the researcher's lack of control over the data production (Cowton, 1998). Secondary data have frequently been used in IS research (cf. Freeman and Jarvenpaa, 2000; Siau and Long, 2004; Romano et al., 2003; Srivastava et al., 2007).

Furthermore, secondary data sources can produce large volumes of qualitative data that are otherwise difficult to obtain using techniques such as interviews and surveys (Romano et al., 2003). In addition, secondary data sources are rich in nature (Schultz, 2002, 2010) while still being low in cost, which is not the case with data derived using more traditional methods, such as observations and interviews (Creswell, 2003, 2007; Vekentash et al., 2013). In my research work, qualitative data were compiled and collected from ten data sources (see Table 1). Next, I describe how the data were analyzed and what theories were selected to shed light on the data.

4.3. Data Analysis

In my thesis work, I applied two main approaches to analysing the data: a grounded theory-inspired approach for the primary data and Romano et al.'s (2003) data analysis methodology for the secondary data.

I start with the *analysis of secondary data*. Building on Miles and Huberman's (1994) principles of data reduction, data display, and conclusion drawing, Romano et al. (2003) suggested a method for dealing with Web-based qualitative data. Romano et al.'s method equipped me with set of tools that provide a structured approach to dealing with dynamic data gathered from multiple online sources. This methodology consists of three steps: elicitation, reduction, and visualization. *Data elicitation* is basically the process by which data from multiple sources are gathered and compiled (see also Miles and Huberman, 1994). *Data reduction* deals with relevance during the process of analysis and iteration, and it involves the selection, simplification, abstraction, and transformation of raw data, to condense the data and filter out the most relevant parts. *Data visualization* involves the preparation of organized coded comments from the data reduction process. The outcomes of data visualization are not only the visualizations themselves, but also the 'relationships, patterns, and principles that are revealed through meaningful visual presentations of the data' (Romano et al., 2003, p. 224).

I now move on to the *analysis of the primary data*. All 23 interviews were recorded and transcribed verbatim using open coding, resulting in a total of 179 pages of transcript. Using NVivo 11 Pro, a qualitative data analysis digital tool, I applied thematic coding to derive categories from the transcribed data. Throughout the data analysis process, Nvivo was used to facilitate comparisons between nodes, codes, and categories. Later, the patterns were identified across different organizations in terms of how respondents described their organizations, their strategies for using social media in business operations, how they structured ties, what type of information they shared and with whom, and what implications this entailed. As suggested by Charmaz (2006), memos containing emerging ideas and thoughts were written throughout the analysis process. The categories were then identified and developed based on the most significant and frequent codes.

Now, I reflect on the use of theories and how they are applied to analysing the data, paper by paper. In the first paper, I apply management fashion theory and discourse analysis in examining the normative guidelines and policy recommendations proposed by social media consultants and other fashion-setters. In paper 2, I apply wikinomics theory, which advocates mass collaboration knowledge sharing elements. The communities of practice (COP) concept and the knowledge-sharing cycle (Hyusman, 2002) were added to these four pillars to create a framework with which to analyze the IBM case. In the third paper, the combination of information management theory and social media affordances (i.e., visibility, persistence, editability, and association) was used to analyze the data. Information is often tightly administered by a small elite and information management is seen as a managerial responsibility. I examined the unique features embedded in social media

that distinguish them from earlier organizational communication tools. In paper 4, I apply Benkler's (2006) notion of commons-based peer production (CBPP) as new mode of knowledge production in which large aggregations of individuals independently seek opportunities to be creative. I regard PatientsLikeMe as an online participatory innovation platform in the realm of community-based, open, distributed, and collaborative innovation. In paper 5, in analysing social buttons, I apply the three dimensions of social capital originally proposed by Nahapiet and Ghoshal (1998). These three dimensions are structural social capital, cognitive social capital, and relational social capital. In paper 6, finally, I apply social media logic to the inductively derived themes that emerged out of my interviews.

#	Data Sources	Description
1	Interviews with executives in organizations	Two interviews with executives at Global Automotive Industry*[2] - Director, Public Relations and Social Media - Director, External Corporate Communications and Media Relations Three interviews with executives at Global Computer and SW Co. - Manager, Social Media - Director, Social Communities and Communications - Country Manager, External Corporate Relations Two interviews with executives at Multinational Engineering and Consultancy Firm - Director, Digital Solutions - Manager, Recruitment and Training Four interviews with executives at marketing and advertising agencies - Managers, Social Media and Content Strategy One Manager, Digital Marketing and Social Media at Multinational SW Co. One Head of Social and Innovation at Global Management Consultant Firm One Head of Social and Content Strategy at Scandinavian Logistics Solutions Co. One Head of Digital Strategy at Scandinavian Insurance Company One Social Media Account Specialist at Global Computer Software Firm One Manager, Public Relations and Social Media at High-Tech

[2] * NOTE: THE ORGANIZATIONAL NAMES ARE ANONYMIZED.

		Company One Senior Information Strategist at IT Consultant Co. One Social Media Content Specialist at FMCG Organization One Senior Recruitment Consultant at Staffing and Recruitment Co. One Content Specialist at Global Technology and Entertainment Co. One Director, Communications and Public Affairs at Public Organization One Head of Social Media and Corporate Comm. at Global Mechanical and Engineering Organization
2	Publically available Interviews	- President Benjamin Heywood, Chair Jamie Heywood, Chief Marketing Officer David S. Williams III, and R&D Director Paul Wicks, all of PatientsLikeMe (2011: 15 minutes) - Co-founder, Jamie Heywood, of PatientsLikeMe (PLM) (2012: 13 minutes)
3	Recorded talks	Recorded talks of PLM officials (TED, TEDx, and TEDMED) - Two talks by co-founder and President Benjamin Heywood (2011: 12 minutes and 2013: 16 minutes) - One talk by Co-founder Jamie Heywood (2014: 49 minutes) - One talk by R&D Director Paul Wicks (2015: 23 minutes) - Three talks by Health Data Integrity Manager, Sally Okun (2013: 7 minutes, 2012: 52 minutes, and 2012: 3 minutes)
4	PDF reports	- Top 500 reports were collected using the Google search engine - Search term used 'social media strategy corporate management' - All reports were in English - Reports were from all world regions - 3232 pages in total
5	Blog Posts and News Articles	Blog posts from blogs.patientslikeme.com (total number of posts: 3001) - 117 articles and blogs from multiple Web-based sources - Highly profiled group-edited blogs about science and technology's impact on health care, such as Scienceblogs.com, pmlive.com, ihealthbeat.org, rwjf.org, commonhealth.wbur.org, cbsnews.com, and thegovlab.org - Highly profiled tech news and analysis websites (i.e., wired.com and fiercebiotechit.com) that cover ethical and privacy issues in the data sharing and money-making strategies of PatientsLikeMe - General magazine and newspaper websites, comprising

		BusinessWeek.com, WSJ.com, NYTimes.com, sciencebasedmedicine.org, forbes.com, Foxbusinessnews.com, washingtonpost.com, and theguardian.com
6	Emails and LinkedIn messages	Personal conversations - 67 LinkedIn messages exchanged between author and executives from 18 different companies - Six email messages exchanged between PLM's customer representative and one of the authors
7	Online Articles	Thirty-six peer-reviewed medical papers and book chapters using PLM as a research case
8	Testimonials	Testimonials collected from PatientsLikeMe (PLM) website - 51 formal statements by patients, partners, researchers, and physicians (anonymized using letters, e.g., patient A)
9	Press releases	Press releases from the PatientsLikeMe (PLM) website - 69 press releases from November 30, 2006 to November 17, 2014
10	Social Media Platforms and Social Networking Sites (SNSs)	Identify various types of social buttons by selecting eight SNSs (in alphabetical order) - Facebook, Google+, Instagram, LinkedIn, Pinterest, Tumblr, Twitter, and YouTube. - Identified and collected 73 different social buttons - Organized these buttons into three categories i. Like button ii. Share button iii. Follow button

TABLE 1 DATA SOURCES FOR AND DESCRIPTION OF THE PHD THESIS

CHAPTER FIVE

OVERVIEW OF THE PAPERS' CONTRIBUTIONS

Below, the constituent papers of the thesis are presented in chronological order, which, as I shall argue in the discussion, also reflects my evolving views of social media in and for organizations. In what follows, I briefly present the main contributions of the papers.

Paper I

Social Media as Management Fashion – A Discourse Perspective

Social media platforms and services have rapidly grown into an important societal phenomenon, recently also having a growing impact on business. Using the management fashion theory concept and discourse analysis, this paper illustrates how a management fashion discourse on social media analyzes and enacts social media as a disruptive force that managers must consider in, for example, strategies, normative guidelines, and policies. This paper analyzed the discourse constructs identified in the data through the lens of management fashion theory, positioning social media discourse as a particular form of management fashion.

The main finding of the paper is that the development of social media discourse differs somewhat from that of previous IT fashions, primarily because social media discourse is propelled by forces outside the company, entailing both challenges and opportunities. Social media still seem to be in the ascendancy, and there are few signs of any emerging downswing. Social media are perhaps 'the next big thing' in IT for the foreseeable. The 'problem discourse' defines hindrances to the strategic development of social media and the reasons for these hindrances, providing an agenda for change. The 'solution discourse' theorizes social media as a business case and provides arguments for how managers should organize internally to meet the new demands e.g. the ways to organize the company around social media features. The 'bandwagon discourse' provides role models, policies, and codes of conduct for the successful dissemination of social media in the organization.

Paper II

Objectified Knowledge through Social Media: The Case of a Multinational Technology and Consulting Corporation

Web 2.0 technologies and services help organizations create knowledge and support the creation of collaborative environments (McAfee, 2006). Previous research has indicated that social media tools, such as wikis, are becoming increasingly popular for managing knowledge and collaboration within enterprises. Similarly, the term 'emergent social software platform' is used by McAfee (2009) to refer to knowledge creation and collaboration for internal use. Such social media platforms advance the

process of knowledge sharing, converting knowledge from its various modes.

The phases of the knowledge-sharing cycle are internalization, externalization, and objectification, and the involved knowledge can be in two forms, i.e., explicit and implicit. Central to this research is the proposed knowledge-sharing cycle model, which has three main stages: internalization, externalization, and objectification. This model was adapted based on the internal social media strategy of IBM Corporation. The main social media features that facilitate knowledge sharing are blogs, wikis, and communities. The wiki platform is noted to be a suitable tool for information editing, sharing, and dissemination, as the platform facilitates IBM personnel across the globe in working on the same project simultaneously, while making live edits and updates. Furthermore, this paper emphasizes that IBM has a type of open-information culture that promotes access to resources, which is facilitated through social media and associated incorporated features.

The major finding is that social media are used to support knowledge sharing and the conversion of implicit and explicit knowledge into various forms of knowledge to enhance knowledge acquisition. Furthermore, in IBM, social media are seen as promoting active collaboration among all employees within the organization.

Paper III

Consultant Strategies and Technological Affordances: Managing Organizational Social Media

Organizations increasingly seek to explore the new opportunities that social media offer in terms of engaging with customers, users, and partners. This paper advances our knowledge of the extent to which social media strategy consultants advise organizations to adopt approaches that are in line with the affordances of social media features as understood in the academic literature. To investigate this matter, the research presented in this paper considers four main affordances of social media: visibility, persistence, editability, and association.

The major finding of this study is that the affordances of social media seem best aligned with a decentralized approach to information management, whereas most consultants advocate a traditional centralized strategy. Moreover, this work also found that the vast majority of consultants' advice on social media strategy fails to address the issue of information management. It further alerts both IS research fellows and social media experts in organizations that the misalignment between social media affordances and strategy and the lack of explicit advice on information management may stifle the potential of social media platforms, negatively affecting organizations' ability to implement and use social media to realize organizational benefits.

Paper IV

Social Networking Sites, Innovation and the Patient as Peer – The Case of PatientsLikeMe (PLM)

SNSs have started to shift from being used primarily for leisure and fun to having

more serious purposes. One such more serious area is health and medicine, where several disease-specific communities of interest have recently established a presence on SNSs. By applying Benkler's (2006) notion of commons-based peer production (CBPP), this work approaches PatientsLikeMe as an online participatory innovation platform in the realm of community-based, open, distributed, and collaborative innovation. Furthermore, this paper discusses how the features of SNSs interact with peer production to facilitate innovation.

The first main finding of this paper is that peer production and social networking interact best when it comes to the decentralized conception and execution of problems and solutions, and when it comes to the ability to motivate participation and contribution, especially from end-users. In particular, it is the possibilities to share, comment on, and link and the resulting social gratification that align positively with peer production. The second main finding, from a CBPP perspective, is that centralization and decentralization can co-exist on different levels. The case also shows that, although motivation can take different forms for different stakeholders, in PLM there is a strong and aligned focus on health innovation. Users' participation is enhanced through social media features. Finally, the results indicate that there is no separation between governance and property in this case, but a rather firm-centric governance model. PLM thus meets some but not all of the criteria for commons-based peer production. Nevertheless, Benkler's theory of CBPP turned out to be a useful analytical tool when trying to understand the case.

Paper V

Like, Share and Follow: A Conceptualization of Social Buttons on The Web

This theoretical and argumentative paper analyzes the implications of social buttons as used on SNSs. Although social buttons have been around for many years, there is still little research on their effects despite their pivotal functions in SNS success. Social buttons facilitate relationship maintenance with low transaction costs, in relation to both strong and weak ties. Central to this paper is the conceptualization of social buttons, i.e., Like, Share, and Follow buttons; the analysis is then conducted by applying social capital theory.

The analysis demonstrates that the clicker and clickee are affected differently by these social buttons on the Web. This paper proposes seven concepts to describe the social implications of these buttons. It further suggests that the Like, Share, and Follow buttons are productive in relation to social capital, with implications for the clicker and the clickee such as building identity, bridging, bonding, popularizing, acknowledging, creating awareness, and recognizing. In sum, this paper offers three major contributions: (a) the distinction between clicker and clickee; (b) the subtle but distinct differences between buttons; and (c) a set of ways through which social buttons become productive.

Paper VI

Social Media Logic and Perceived Business Value

Organizations are using social media but yet not clear as to how can they gain business benefits from doing so. This paper addresses this gap by analysing organizational social media experts' views of the business value of social media use, applying an exploratory qualitative approach to the case of external experts and social media executives in organizations. Social media logic can be viewed as a 'particular set of strategies and mechanisms', and this study pursues its approach through the lens of the four theoretical pillars of this logic: programmability, popularity, connectivity, and datafication.

The paper theorizes the process and mechanism of value creation and capture, and finally discusses the implications. In terms of these pillars, the case findings indicate that, although value creation takes different forms for different stakeholders, there is a strong and aligned focus on value creation from programmability as compared with popularity, although connectivity is also seen as an important ability of social media. Datafication mostly functions to help organizations analyze the value captured, determining the returns on social media efforts for which all companies are striving, i.e., organizational profits. Furthermore, user participation in information sharing is facilitated by social media features.

	Value of Social Media	SNS User	Case
Paper 1 Social Media as Management Fashion	*Opportunities for organizations	Organization	Social media corporate strategy discourse
Paper 2 Objectified Knowledge through Social Media	*Knowledge sharing	Organization	IBM
Paper 3 Consultant Strategies and Technological Affordances	*Information management *Knowledge sharing	Organization	Alignment between SNS affordances and strategy
Paper 4 Social Networking Sites, Innovation and the Patient as Peer	*Peer production *Innovation	Organization Community/network	PatientsLikeMe (PLM)
Paper 5 Like, Share and Follow: A Conceptualisation of Social Buttons on the Web	*Creation of social capital	Individual Community/network	Social buttons
Paper 6 Social Media Logic and Perceived Business Value	*Value creation/capture	Organization	Business value of social media

TABLE 2 CONSTITUENT PAPERS: OVERVIEW AND POSITIONING IN ACCORDANCE WITH THEIR CONTRIBUTIONS[3]

[3] *Note each asterisk indicates value gained from social media

CHAPTER SIX

DISCUSSION

Before I proceed to discussing different perspectives on the value and impact of social media for SNS users, there is a need to reflect on the meaning of social media in today's society. In doing so, primarily, I will briefly revisit paper 1 to discuss the promises and opportunities of social media identified in 2013; this section will then continue by presenting the values identified in the rest of the five papers.

6.1. Revisiting the Promises of Social Media

Here I would like to discuss what I have learned over my years of PhD research into the promises and opportunities of social media (e.g., as explored and highlighted in paper 1). Paper 1 positions the social media discourse as a particular management fashion, in which problems are outlined together with the promises of social media to solve them. In paper 1, I reported three main issues discussed in consultants' reports: what counts as social media, organizing for social media, and motivations for social media strategy. In the following, I will revisit these issues in relation to my thesis as a whole.

What counts as social media?

From the perspective of paper 1, most scholars and practitioners have neglected to define social media and what they really mean for organizations. The definition most widely cited by academic scholars of IS and new media studies over the years is the one offered by Kaplan and Haenlein in 2010. boyd and Ellison (2007) had offered the very first SNS definition, which was later updated in the context of enterprise SNS (e.g., Ellison & boyd, 2014). However, the confusion and the lack of a commonsensical definition of social media and enterprise social media remain.

This dissertation advances our understanding of social media in organizations by providing a set of examples of what organizations consider to be social media and of the opportunities afforded by social media. Four categories of social media were identified in paper 1.

The first is *communication social media*, comprising blogging tools (e.g., Blogger, Twitter, and WordPress) and social networking tools (e.g., Facebook, LinkedIn, and MySpace). The second is *collaboration social media*, including social bookmarking (e.g., Delicious), social news making (e.g., Digg and Reddit), and collaborative authoring tools (e.g., Wikipedia and Google Plus). The third category is *multimedia social media*, including photo sharing (e.g., Flickr and Zoomr), video sharing (e.g., YouTube and Vimeo), livecasting (e.g., Ustrem.tv and Stickam), slide sharing (e.g., Slideshare), and music sharing (e.g., Last.fm and imeem). The fourth category is *entertainment social media* (e.g., Second Life) and game sharing (e.g.,

Miniclip and Kongregate). The categories that have prevailed and been most successful over the last few years are generally the first three, more precisely, a few platforms among them (i.e., Twitter, Facebook, LinkedIn, Instagram, Google Plus, and YouTube).

Moreover, with the passage of time, these platforms are more frequently being addressed as social networking sites by various scholars in IS and new media studies. It has also been noted in my papers appended to this thesis that organizations are striving to deploy such sites and technological features so that they can interact and collaborate with external users more frequently and in an optimized fashion for organizational profits. A similar development is the increasingly prominent notion of social media platforms. Scholars (e.g., Hands, 2013; Langlois & Elmer, 2013) have explored the technological affordances of platforms in relation to their economic and social interests, critically interrogating the platform concept (Gillespie, 2010), analysing the techno–cultural logics of platforms (Gerlitz & Helmond, 2013; McKelvey et al., 2009; Bucher & Helmond, 2016; Helmond, 2015), and investigating the role of the platform architecture in the participative Web (Bucher, 2012a; van Dijck, 2013).

This sets the stage for me to study SNSs in particular and what these afford organizations. Have they had any valuable impact, or is it just a matter of fashion or hype driven by consultant companies?

While I have been working on this, the treatment of social media in general and SNSs in particular has matured somewhat in both research and practice, with respect to the opportunities they offer. However, the dark side of social media requires further serious attention from both academia and industry. Social media were broadly understood as Web-based services that enable users to interact with each other. This understanding is still valid in a sense, as SNS platforms are used in the production, consumption, and exchange of information by their users. For instance, people use SNSs not only to communicate with their friends and family about their everyday lives, but also to talk to other people about their customer experience with organizations. SNSs have become a quick and easy way for users to talk about what is on their minds in real-time.

Organizing for social media

Many consultants promised that in the new organizational environment marked by the emergence of social media, organizations would require new roles and departments to deploy social media practice (paper 1). In addition, the interview data collected for this research from 18 organizations also indicate that many executives have assumed completely new roles in order to organize for and benefit from social media in their organizations. The ‘solution discourse’ theorizes social media as a business case and provides arguments for how managers should organize internally to meet the new demands associated with social media. For example, paper 4 illustrates how a whole organization could be organized around social media features.

The example of PatientsLikeMe (PLM) is unique for two reasons. First, the PLM case illustrates how an organization can organize entirely around social media. Second, the PLM case further illustrates how the business model itself can be organized around social media features (paper 4). Basically, in paper 4, I reported that the features of SNS interact with peer production in order to facilitate innovation. Patients base their contributions on their own experiences of diseases, treatments, and drugs. Such contributions are prompted with the help of SNS features. These features can monitor and visualize a member's own health, and allow members to view other members' health and lifestyle progress. In this case, the SNS features together with specific tools are crucial for organizing social media in an organization, in order to nurture the environment for coordination and motivate various users.

Organizations may also need to organize teams and key functions in accordance with the affordances that SNS features offer organizations (e.g., papers 2, 3, and 6). For instance, the findings reported in paper 2 indicate that IBM personnel were early adopters in utilizing SNS features and in benefitting from the functions that SNSs offered within IBM across many countries. The ways in which IBM organized itself were fairly well aligned with the central features of social media, for example, the concept of sharing, connecting, and communities organized by engaged employees with the help of the technological features of social media (e.g., wikis, communities, social buttons, and blogs) (paper 2).

Motivations for social media use

The motivations identified in paper 1 were seen to be driven by both opportunities and threats. First, there are opportunities in terms of increasing the efficiency of internal and external communication and collaboration, to improve creativity and innovation and better reach the targeted market. Second, certain threats can also motivate organizations, such as the risks of being left behind, losing control, declining productivity, and losing opportunities to build trust (paper 1).

Both opportunities and threats are crucial for setting clear guidelines for social media use. Starting with the risk of being 'left behind', paper 1 tells us that organizations that adopted social media early on gained economic value from their investments in social media, surmounting the fear that a brand may face troubles stemming from the characteristics of social media (e.g., the openness of social media and the distribution of power among involved actors). For organizations to gain control over social media and to develop policy and strategy arrangements for them, paper 1 identified a need for new departments or roles, perhaps met by setting up a social media team. In contrast to this, this thesis found an example of social media supplying motivation, with the whole organization, i.e., PLM, being designed and operated around SNS features (paper 4). In the PLM case, users have the opportunity to communicate openly about their illnesses across geographical boundaries. With the help of user data, PLM together with other partners plan and develop new customized treatments and products capable of supporting patients.

In this sense, the phenomenon of control can be crucial for the success of social media. Social media control is directly connected to user engagement, raising the

question of whether organizational loss of control over social media affects user engagement and, if so, how. Social media writers continue to debate this matter, as avoiding social media is no longer an option (paper 1). The issue is not only what people outside the organization do; rather, management also risks losing control over employees if social media use is not synced with overall corporate strategy in a decentralized fashion (paper 3).

Another motivation for social media use by organizations is to avoid damage to company reputation; to this end, clear social media strategies should be in place for both internal organizational players and users outside the firm. For instance, customers or competitors may – correctly or incorrectly – say negative things about the organization that may spread quickly and negatively affect the organization.

With the growing maturity of social media over the years, the boundaries between what we do as professionals and what we do as private citizens are becoming less blurred. Yet organizations that are inadequately prepared to cope with potential incidents, for example, on an organizational Facebook page, may still incur serious losses. The organizational motivation for establishing a social media strategy identified in paper 1 focused mainly on these factors. Since the publication of that paper, however, the motivations for using social media have changed, as attested to by the latest findings reported in this thesis research.

Most organizations have acknowledged the potential of social media features, such as social buttons, for developing communities and trust among involved actors (paper 5). Similarly, the ways organizations conduct online business these days, for example, advertising on Facebook, hiring new talent through LinkedIn, engaging customers over YouTube, and announcing social events or disseminating official information over Twitter, are among those new and different motivations (papers 2–6). Tapping into social media conversations and topics primarily shows organizations where their targeted audiences are spending time online and on what SNSs, and what subjects and issues are of interest to them (paper 1). The motivations for devising social media strategies to address these matters ensure that organizations will benefit from their social media investments (paper 6).

Next, I will discuss various examples of value gained from social media in relation the thesis as a whole (see Table 2).

6.2. Innovation

Furthermore, I looked into the case of a combination of peer-production and social networking features in the online service known as PatientsLikeMe (PLM). This case study improves our knowledge of open and distributed innovation in general, and of commons-based peer production in particular. The combination of peer-production and social networking features has potential to increase efficiency and transparency, which can be seen as elements of knowledge creation and innovation (paper 4).

Applying Benkler's (2006) notion of commons-based peer production (CBPP), I approached PLM as an online participatory innovation platform in the realm of

community-based, open, distributed, and collaborative innovation. In this case, I found distinct structures and mechanisms that resembled the features of social networking sites. The strategic, self-managed, but still coordinated interaction between SNS features and peer production helped make innovation happen in PLM (paper 4).

Furthermore, my analysis indicates that centralization and decentralization can coexist on different levels. For instance, I previously noted that social media are better able to afford organizational benefits when deployed in a decentralized fashion (paper 3). However, the insights reported in paper 4 suggest an improved and more efficient strategy to utilize social media to promote innovation among citizens, stakeholders, and patients (paper 4). In addition, the PLM case also shows that although motivation takes different forms for different stakeholders, nevertheless, a strong and aligned focus on health innovation explains where individuals' contributions are directed and how they are encouraged through features incorporated into social media platforms (paper 4).

Perhaps the most interesting finding in this sense is that there is no separation between governance and property in PLM, but rather a firm-centric governance model that helps the firm open its boundaries for innovation through coordinated tasks and a culture of information sharing by patients (paper 4). Peer production and social networking can be seen to interact best given the decentralized conception and execution of problems and solutions and given the ability to motivate and spur participation and contributions – especially by end-users. Furthermore, SNSs provide opportunities for involved actors to participate, collaborate, and learn during innovation processes in firms (papers 4 and 6). I found social media to be a useful catalyst to make innovation activities happen within and across the boundaries of the organization (paper 4).

6.3. Information Management and Knowledge Sharing

Papers 2–4 contribute to an understanding of the use of social media for information management and knowledge sharing in organizations. First, the case of IBM illustrates how firms use social media internally for information sharing to facilitate the knowledge-sharing cycle through collaborative efforts. The proposed knowledge-sharing cycle model has three main stages: internalization, externalization, and objectification. The findings indicate that social media platforms were used to support knowledge-sharing practices and to help convert knowledge into different forms, i.e., from tacit to explicit knowledge, and into common or shared knowledge, to enhance knowledge acquisition in IBM (paper 2).

This model was adapted based on the findings of a case study of the internal social media strategy at IBM Corporation, where the Enterprise 2.0 platform assists the process of knowledge sharing, converting knowledge from its various modes. Knowledge can be viewed as explicit or implicit in nature.

At the stage of internalization, knowledge is converted from explicit to implicit knowledge, which leads to individual knowledge. Blogs, wikis, and communities

facilitate this process. In the process of externalization, knowledge is converted from implicit to explicit knowledge. In this stage, knowledge is transferred from individuals to the rest of the organization, adding to intellectual capital. At the stage of objectification (i.e., making knowledge commonly accessible to everyone, with a shared understanding), shared knowledge is standardized and made accessible throughout the organization. In IBM, this was achieved mainly with the aid of wikis together with the support of SNS features incorporated into IBM Connections (paper 2).

Then I looked into the affordances offered by social media to understand their applications and potentials for organizational use. The work behaviour, knowledge sharing, and organizational activity streams are three types of actions made visible through the use of social media in organizations. The affordances of visibility and persistence refer to the state in which communication remains visible and accessible in the same form as the original presentation after the actor logs out from social media, as in the PLM case (paper 4) and IBM case (paper 2). This dissertation notes three ways in which the affordance of persistence affects organizations, namely, by sustaining knowledge over time (papers 2 and 3), creating robust forms of communication (papers 4 and 6), and growing content (paper 2, 4, and 6).

These two social media affordances for knowledge sharing seem best aligned with a decentralized approach, whereas most consultants advocate a traditional centralized strategy. However, I also noted that the vast majority of consultants' opinions on social media strategies cannot address the issue of knowledge management. Two alarming findings are the misalignment between affordances and strategy and the lack of explicit advice on information management. In combination, these may stifle the potential of social media platforms and thus have a negative effect on organizational ability to implement and use social media platforms to achieve common knowledge (paper 3).

Over the years, social media platforms have rapidly grown into a phenomenon that is important to both organizations and society at large, and social media have evolved from online social activities into online business-related activities conducted via different SNSs. Whereas the societal use of social media has already been researched for quite some time, there is growing need to study social media use in organizations due to the lack of well-grounded practices for such use. Specifically, there is limited research into the organizational use of social media for knowledge sharing and innovation, and my thesis is an effort to address this lack.

Next, the discussion explores the main question addressed in this thesis, i.e., the organizational value of social media, specifically, what SNSs afford organizations. The main arguments presented here are extracted from papers 2–6.

6.4. The Value of Social Media

In my thesis, the notion of value is treated as commonsensical, considered a benefit for the organization. As I previously said in the chapters treating theory, value is an elusive concept. The term 'value' has different meanings depending on where or in what *context* the value has been created: either a *user* outside the company creates value, or the organization itself is a main source of business value and the main actor for whom this value has worth, i.e., the beneficiary. To clarify, I define 'business value from social media' as 'all the value created and captured by an organization through the use of social media'.

The process of value creation is often confused with the process of value capture. Scholars argue that value creation and value capture should be viewed as distinct processes. The source of value can be an individual, an organization, or even society. However, the party that creates value may or may not be able to capture or retain the value in the long run (Bowman & Ambrosini, 2000; Lepak et al., 2007). The concept of value creation highlights the context-specific nature of the value-creation process. Note that one important consequence is that there may be competing views as to what is valuable among different users of value (Bowman and Ambrosini, 2000). Furthermore, the view of value also depends greatly on the core domain of business in which the organization makes returns on investing in social media, meaning who captures the value and how.

What remains is to answer the overall research question addressed in this dissertation: What value do social media afford organizations? Varieties of value are derived from social media at the organizational, societal, and individual levels. There is no single way of deriving value from social media, but multiple ways value can be derived, as will be discussed shortly. First, I present what is considered value in papers 2–5; paper 1 is excluded, since I already revisited it at the start of this chapter. Then, at the end of this chapter, I will discuss value as it is presented in paper 6.

Value from Knowledge and Information Sharing

Different sorts of values determine the organizational use of social media for business purposes. One essential but often overlooked factor is that information sharing with and among SNS users can make a crucial difference. In this sense, the findings of paper 2 indicate that the value of social media lies in their ability to facilitate the processes of knowledge sharing and of converting knowledge from its various modes, for instance, the transformation of knowledge from tacit to explicit knowledge, and into knowledge commonly known by everyone in the organization. This value can be achieved by organizations with the use of social media platforms as an instrument facilitating an open information culture that promotes access to organizational resources.

Similarly, the value identified in paper 3 emphasizes the capability and characteristics of social media affordances. In addition, in paper 3, I noted that SNS use is best aligned with a decentralized approach to knowledge-sharing practices in

organizations; nevertheless, most social media experts advocate a traditional and centralized social media strategy, which my thesis results cannot endorse.

Further, the value identified in paper 4 reinforces the significance of the features and functionalities of SNS that interact with peer-production principles. Here the value of social media can also be seen as located in their capacity to facilitate innovation. Knowledge sharing and innovation are closely connected concepts: innovation cannot happen in practice without a basis of knowledge, creative use of open audiences, and coordinated communication. In addition, the values of peer production and social networking interact best when it comes to their ability to motivate and spur participation and contribution – especially from end-users.

Many organizations use social media platforms to interact with their employees or with customers and other stakeholders. A number of organizations, including IBM and PLM, made sense of social media quite early. However, both these organizations represent extreme cases: this is demonstrated in paper 2 (the case of IBM) regarding internal social media use by IBM personnel for knowledge sharing and community building, and in paper 4 (the case of PLM) regarding an entire organization structured around SNS features that allow patients around the globe to use the PLM platform for information sharing, solidarity, and learning about illness from one another's experiences. Through using social media internally, organizations can meet important objectives, such as reducing costs, increasing revenues, and stimulating innovation.

Value from Innovation

Increasingly, organizations are attempting to navigate SNSs and use social media platforms as tools to enhance business performance. This is reflected by increased spending on social media initiatives for information management (paper 3), knowledge sharing (papers 2, 4, and 6), social capital (paper 5), and creating and capturing business value (paper 6). Despite this, there is a significant opportunity that is not being tapped, namely, using SNSs to facilitate innovation in the product development and user engagement phases (paper 4). Consultants' reports and recent academic work in the field of social media for innovation suggest the same. Yet I noted that, despite the promises, the expected positive results of social media use are frequently not realized in practice (papers 3 and 6).

Broadly speaking, I found that for many organizations, the results of using social media for innovation and knowledge sharing fell short of expectations (papers 1, 2, and 6), as social media primarily tend to help organizations gain insights into users and markets.

Organizations that jumped on the social media bandwagon and invested in social media initiatives without a clear strategy or the right skills and knowledge have not achieved the results they had envisioned. The organizations that gained the most value from using social media for knowledge sharing and innovation were those that used social media in every stage of the development process (e.g., PLM and IBM), building organizational processes and structures to facilitate coordinated and

communicative activities for effective information sharing (papers 2 and 4). Before embarking on social media initiatives for innovation, executives need to develop clear strategies and normative guidelines and ensure that their organizations have the supportive business models and people in place required to be successful (e.g., PLM, paper 4).

Overall, my papers show that social media can be used for wider business purposes, especially for knowledge sharing, innovation, and creating social capital. My work indicates that the acceptance of social media use for innovation purposes has been less widespread. Nevertheless, I believe that social media, especially SNSs, provide game-changing opportunities for organizations to benefit. However, realizing these opportunities requires more than just a presence on Facebook and Twitter with a engaged user base of fans or followers. To use social media for innovation, organizations need clear strategies and objectives.

Value from Social Capital

Prospective SNS users are intrigued by the features of social media embedded in social buttons and trigger actions, such as interactions, sharing, and popularity and relationship building. These types of SNS structures highlight and shape helpful interactive communities on the Web that people want to join (e.g., PLM). Similarly, IBM has established internal communities based on shared interests (paper 2). These communities help establish crucial connections among weak ties, and with the use of social buttons, such relationships can be fostered (papers 5 and 6). By engaging in real-time conversations, answering questions, and sharing helpful and relevant content, organizations can build meaningful communities and relationships with SNS users, encouraging their engagement in order to achieve long-term business benefits and organizational goals (papers 5 and 6).

Papers 2, 4, and 6 show that organizations use social media to broaden their reach, market their products and services, and accomplish branding initiatives. I have also noted that an active presence on Twitter, Facebook, and LinkedIn is extremely beneficial to organizations, helping them to spread their message and hire new talent, as well to connect and engage with new and existing SNS users (papers 3, 4, and 6). The value identified in paper 5 is rooted in the conceptualization of social buttons and their implications when used on SNSs. In this sense, the value of social buttons as core features of SNSs lies in their ability to create social capital. This value comes from the use of social buttons (e.g., Like, Share, and Follow) to facilitate relationship maintenance with low transaction costs, in relation to both strong and weak ties on the Web (paper 5).

The results of my thesis research can be summed up as belonging to three different streams: knowledge sharing, innovation, and social capital. Each offers a distinctive approach to thinking about the different phases of knowledge sharing, innovation, and building social capital. My thesis explores the whole set of competences required in order to leverage social media for innovation in organizations (paper 4).

To realize the potential of social media for knowledge sharing and innovation, organizations as users of SNSs must engage in three interrelated activities. First, organizations must actively listen to their users and stakeholders and learn from their data or content. Second, organizations need to engage users and employees and facilitate dialogue during the innovation process and knowledge-sharing activities. Third, organizations need to find and promote active users and early adopters who bring more engagement in building relationships and creative content around products and services.

The Business Value of Social Media

Besides these values of social media, another sort of value was identified in paper 6. In my work, I observed that content, relationships, and experiences are valuable for deriving business benefits. I argue that content and relationships are closely interconnected: the content that organizations share with users and how they interact with them together create value from social media for organizations.

The value created with the programmability logic can be accrued when the datafication logic is activated. Most importantly, datafication is an enabler, and organizations succeed in implementing social media by rendering into data what needs to be quantified, so that predictions for future investments and tasks can be optimized. My results indicate that the logic of datafication is generally the second most significant enabler after programmability for all organizations. Despite that fact, most organizations are not satisfied with their abilities to track, quantify, and measure social media data, so they strive to perform better and improve their deployment of tools and expertise to reap the full benefits offered by the datafication logic.

Modern and evolving monetization opportunities are thus associated with advanced analytical measurement and tracking tools implemented through strategies in which content, information, relationships, and engagement are analyzed. Furthermore, this approach gives social media the ability and potential to develop techniques for predictive and real-time analytics.

Besides this, to capture the value created using social media, organizations also require an effective open and decentralized strategy together with somewhat controlled and programmed mechanisms that can strike a balance between value creation and value capture (instead of losing sight of value capture), a balance that is crucial for organizations to stay innovative and competitive. Such an open strategy is realistic about the need for a sustainable approach, so that organizations do not just put effort into creating value by developing content and relationships but are also capable of capturing this created value with the use of social media platforms. While SNS affordances can assist businesses in knowledge sharing and therefore influence innovation (papers 2–4), there is a pressing need for organizations to better understand the mechanisms by which SNSs can create and capture value (paper 6), such as the production of social capital (paper 5).

To conclude, social media logic mainly facilitates actionable goals for organizations and defines anticipated value for them. Nevertheless, I identified that the first three pillars of social media logic, i.e., programmability, popularity, and connectivity, enable value creation, while the fourth pillar, i.e., datafication, alone allows organizations to capture the value created for them by social media use (paper 6).

In sum, organizations' increasing adoption of social media platforms is crucial to how they derive business benefits. In addition, social media have dramatically changed the way people connect, interact, collaborate, and learn. Individuals, communities, and organizations are three crucial social media users because of their categorical contributions via SNSs. There are various perspectives on social media and their value, which is elusive in nature but conceptualized here as all the benefits derived by organizations through their use of social media.

6.5. Implications for Theory and Practice

Overall, my research has identified several crucial implications for research and practice. This thesis highlights the social implications for users and peers when interacting with social media to derive benefits from them. I contribute, mainly to research, by extending theoretical concepts and understanding concerning the use of social media by organizations for knowledge sharing and innovation. For instance, the combination of peer-production and social networking features, with its potential to increase efficiency and transparency in important areas of societal development where market or state initiatives are not enough, deserves more research attention. Looking even deeper into PLM as a case would build our knowledge of open and distributed innovation in general, and of commons-based peer production in particular.

The present analysis of social buttons as used on SNSs identified several implications. When a button is clicked, an action is performed with implications for the clicker as well as the clickee. To describe these actions and their implications, a set of concepts – i.e., identity building, bridging, bonding, popularizing, acknowledging, creating awareness, and recognizing – is not enough, and I believe that more attention is warranted, to discern the social implications of such social buttons for those who click them and for those whose buttons are clicked on the Web. In this sense, I contributed a social capital theoretical insight that the studied SNS users were embedded in the social structure of their Web communities and that social capital-building motives played a major role in their behaviour online.

The research presented here indicates that existing literature lacks clear guidance and strategies for how organizations can make the best use of SNSs. An implication for research is that it is necessary for organizations to strike a balance between the traditional way of doing business and modern social business on the Web. Furthermore, the ways in which activities can be coordinated among peers and customers in which actions by people contributes and communities of similar interest can be coordinated, aligned, and responded to by organizations.

For practice, this thesis has several important implications. We are amidst a reorganization of the economy in which the social media platform owners may be developing power that is even more formidable than that of the factory owners in the early industrial revolution. What implications do social media strategies and mechanisms have for the design of platforms and for platform designers? The answers to this question touch on both organizations struggling to benefit from social media platforms as well as those in the process of expanding their social media activities.

When developing social media strategies in practice, organizations should always weigh the impact of various social media applications, and strive to increase both the breadth and depth of their social media engagement to create more knowledge for the business. Furthermore, I have identified certain loopholes from *PLM* that are not easily transferred to other areas, due to specific characteristics of motivation in this case. In areas such as the development of health-care and treatments, *PLM* illustrates a promising approach. In this sense, an attentive executive equipped with the right set of strategies and tools can transform how investments are made in social media and how organizations benefit from such investments.

This research has also identified that resource allocation and features are developed and controlled by the owners of social media platforms, while flexible design capabilities are more supportive of the members of innovation networks. This finding has practical implications concerning the design of such platforms, implications of use to social media platform owners. In addition, the dual powers of users to influence the flow of information and of platform owners to tweak algorithms accordingly have become intricately intertwined not only with the pillars of social media logic, but also with advertising strategies, online relationships, activism, and corporate practices.

Starting with the risk of being left behind, the massive penetration of social media throughout society and everyday life has had considerable impact on individuals as well as organizations. Broadly speaking, the results of paper 1 indicated four arguments as to why organizations should develop social media strategies: risk of being left behind, risk of losing control, risk of declining productivity, and the opportunity for trust building (cf. paper 1). For organizations seeking to gain value from social media, there is no longer a question as to *whether* to incorporate social media in the overall business strategy, although for some there remain questions as to *how* and *when* (Lepak et al., 2007). In its purest form, the value created through an open process would be 'non-rival' in that when someone 'consumes' it, this would help create a good experience for both current and subsequent users (Chesbrough & Appleyard, 2007).

6.6. Future Research and Recommendations

Research on social media typically focuses on its benefits; considerably less is known about the dark side of social networking sites. The recent development of social media fanatics and the phenomenon of fake news have emerged as daunting developments,

posing crucial challenges for social media platform owners and the actual users. Considering both the positive and negative impacts of social media, executives and policy makers find themselves confronted with a complex choice as to whether social media platforms should be regulated and, if so, how.

Moreover, can these platforms serve to facilitate meaningful knowledge sharing and digital innovation, particularly in public organizations? Another avenue for further research in the area of modern business practices concerns the data generated by social media users. Gathering such data takes the commons of social relationships and extracts value from it, but eliminates privacy and creates the prerequisites of a surveillance society. Accordingly, perhaps the most insidious and growing challenge – and therefore opportunity – is how to address privacy and surveillance issues at the individual, organizational, and societal levels.

It is difficult to precisely define the scope of these new developments associated with social media and mediated value, since a new social media platform economy is emerging. Alongside the application of social media, mediated services and data as well as new algorithms potentially capable of changing the nature of work and the structure of the future economy are also emerging. The exact nature of this change will be determined by the choices we make, which will shape the future. I believe that the concept of open-source development and similar ideas such as open digital innovation, the intellectual commons, and peer production represent phenomena that merit further research, whose results will advance the process of knowledge creation and sharing and eventually benefit the process of innovation in organizations.

CHAPTER SEVEN

CONCLUSION

Applying a qualitative research approach, and using data from multiple online sources in combination interviews with 26 executives from 20 multinational organizations, this thesis offers a comprehensive understanding of how social media value is perceived in and for organizations. Organizations' increasing use of and exposure to social media are crucial for the ways in which future businesses will be shaped. Social media has already dramatically changed the way organizations connect, interact, communicate, collaborate, and learn. This thesis has contributed to a deeper understanding of what this change means to organizations.

I have discussed four ways in which social media adds value for organizations: (1) By facilitating innovation, (2) Through information management and knowledge sharing, (3) Via production of social capital, and (4) By value, more directly linked to business value and monetization. I argue that these perspectives on value are entangled into affordances and logic of social media and also serve as foundation to understand the diverse roles of social media for all involved actors. Noticing that social media is harboring a unique set of affordances, I have examined to what extent organizational social media strategies align with these characteristics. The findings indicate that since most texts on social media strategy advocate a traditional centralized top-down approach to information management, this is likely to clash with the bottom-up nature of social media technology. Social media also function as an organizing agent to shape coordinated processes among its users with the support of open strategies, decentralized conception and execution of problems and solutions. In this sense, social media operates as an instrument that enables knowledge creation and facilitates knowledge sharing and thereby influence innovation in innovation networks.

Hoping the reader will benefit from the papers appended to this dissertation, not only for the light they shed on today's challenges regarding organizational use of social media for knowledge sharing, collaboration and thereby influence innovation, but also for the lessons they offer for IS and media scholars and practitioners, in a dynamic and rapidly changing global business environment.

Although the different perspectives on social media and its value are yet not fully explored, and organizational efforts and investments in social media are still missing clear directions and guidance, my thesis helps mitigate some of these dilemmas, complexities, and challenges. However, as social media and its use will continue to evolve and confront individuals, communities, organizations, and societies in the age of open, digitalization and platformization.

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PART 2

COLLECTION OF PAPERS

PAPER 1

SOCIAL MEDIA AS MANAGEMENT FASHION – A DISCOURSE PERSPECTIVE

SOCIAL MEDIA AS MANAGEMENT FASHION – A DISCOURSE PERSPECTIVE

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ABSTRACT

Social media platforms and services have rapidly grown into an important societal phenomenon, lately also with increased impact on business. The relative novelty of its occurrence in a business context, the lack of well-grounded best practice and the scarcity of research, result in organizational decision-makers having to rely on vendor descriptions and trade press articles to make sense of social media. By using management fashion theory and discourse analysis, we examine how a management fashion discourse on social media unfolds and enacts social media as a disruptive force that managers must consider in the form of e.g. strategies, normative guidelines and policies. Our analysis shows that social media discourse differs somewhat from how previous IT fashions have developed, primarily due to the fact that social media discourse is propelled by forces outside the company. We analyze the discourse constructs identified in the data using management fashion theory and position social media discourse as a particular form of management fashion. The 'problem discourse' defines hinders towards strategic development of social media and the reasons for their existence, which provides an agenda for change. The 'solution discourse' theorizes social media as a business case and provides arguments for how managers should organize internally to meet the new demands. The 'bandwagon discourse' provides role models, policies and codes of conduct for a successful dissemination of social media into the organization.

***Keywords**: Social Media, Corporate Strategy, Management Fashion, Discourse Analysis*

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INTRODUCTION

Social media has rapidly grown into an important societal phenomenon. Services like Facebook and Twitter and sites like Flickr and YouTube have, together with a plethora of other applications aiming at communication and collaboration, become an important part of many people's everyday lives (McAfee, 2009). This broad diffusion has resulted in social media starting to invade also the business scene. Organizations are therefore now struggling to understand if, why and how they could benefit from this development and whether they should make investments in the underlying technology. The potential benefits of social media include the possibility to reach out to customers, stakeholders and citizens and tap into conversations as well as enhancing internal collaboration and communication (O'Reilly, 2007). In many ways social media has become a dominating concept over other related popular terms such as web 2.0 and enterprise 2.0.

As a consequence, social media is becoming a new management fashion. However, there seems to be uncertainty what should be included in the concept of 'social media'. The concept appears to refer sometimes to the underpinning technology, sometimes to a medium at a conceptual level, and sometimes to both. Generally, social media refers to a group of Internet-based technologies that allow the creation and exchange of user generated content (Kaplan & Haenlein, 2010). At the core of these technologies is the capacity to generate, edit, share, evaluate and link content to other creators and information users. The relative novelty of social media, the lack of well-grounded best practice and the scarcity of research result in organizational decision-makers having to rely on vendor descriptions, trade press articles and consultants' white papers to appreciate the potential of social media (Baskerville & Myers, 2009; Ramiller, 2009). This motivates the need for IS research to study how social media actually becomes a management fashion enacted through management reports.

Like in previous waves of management fashions (e.g., workflow systems, business process re-engineering, knowledge management), the proponents raise expectations of the technologies' potentials to improve organizational performance, and call for new corporate strategies to make use of the technology. However, social media as a fashion differs radically from earlier typical IT-fashions in its spectacular diffusion in many sectors, and its penetration of people's everyday life. While a decision on e.g. workflow systems would be an in-house undertaking involving primarily IT-managers, decisions to use social media has already been made by the employees and affect the organization regardless of management. Social media is in this sense impacting companies, whether or not they have a strategy. Further, social media makes the company exposed to forces outside the organizational boundaries in a way that appears different from previous fashions. Put in another way, social media opens up the company for a societal change, entailing a much higher complexity than previous fashions. Due to its dual character of being an everyday phenomena and a means for rationalizing and legitimizing business, several discourses are encapsulated

within the organizational framework while social media is incorporated and written into the organization.

In this paper, we investigate how a social media strategy discourse unfolds in strategy consultant and vendor reports, white papers, handbooks and strategy guides. Social media is not addressed as a fashion per se. Instead we use management fashion theory and discourse analysis to examine the normative guidelines and policy recommendations social media consultants and other fashion setters propose. The research question that guides this paper is: how is social media enacted as a management discourse?

The paper is organized as follows: first we introduce management fashion theory from a discourse perspective. This is followed by a method section where the selection, collection and coding of the reports is described. The following result section presents the identified discursive constructs, which are then discussed from three fashion perspectives. The paper ends with a conclusion.

Management Fashions

The dominant perspective in the diffusion of innovation literature reinforces a pro-innovation bias, i.e., it takes for granted that innovations and their diffusions will benefit adopters (Rogers, 1983). It is assumed that adopters make independent, rational choices guided by goals of technical efficiency and never decide to adopt an inefficient administrative technology or to reject an efficient one. It has been claimed that this underlying assumption makes it difficult to address questions on when and how technically inefficient innovations diffuse (Abrahamson, 1991). In order to develop an alternative to the rational, efficient choice perspective on management techniques, Abrahamson developed a theory of management fashions (Abrahamson, 1991; 1996; Abrahamson & Fairchild, 1999). Management fashions are shaped by norms of rationality and progress. The rational normative expectation of management techniques (i.e. efficient means to important ends), together with the progressive normative belief that management techniques will progress over time (i.e. will repeatedly be replaced by new or improved techniques), create a market for discourses disseminating rational, progressive management knowledge (Abrahamson & Fairchild, 1999). These discourses are characterized by being emotionally charged, enthusiastic and unreasoned. The typical trendsetters are knowledge entrepreneurs like business school academics, consultants, business gurus, business press writers and technology vendors that have an interest in generating demand for the fashion.

Contrary to the efficient choice perspective, the management fashion theory suggests that organizations imitate each other's adoption of inefficient administrative technology, and that they are influenced by outside fashion setters that lead the diffusion of inefficient innovations or the rejection of efficient innovations. A management fashion is a product of a management-fashion-setting process involving particular management fashion setters – organizations and individuals who dedicate themselves to produce and disseminate management knowledge (Abrahamson, 1996). It is defined as "transistory collective beliefs, disseminated by the discourse of

management-knowledge entrepreneurs, that a management technique resides at the forefront of rational management progress" (Abrahamson & Fairchild, 1999, p. 709).

By studying the life cycles of management fashions like job enrichment and quality circles, Abrahamson and Fairchild (1999) identified three discourses in a fashion's upswing (problem discourse, solution discourse and bandwagon discourse), and three in its downswing (debunking discourse, surfing and sustaining discourse). The problem discourse of the quality circle fashion, theorized that the global competitive threat, particularly from Japan, was the source of problems facing USA. The solution discourse theorized what responses that were appropriate to that threat, and the bandwagon discourse reported on successful examples of adoption of quality circles. In the debunking discourse, quality circles were completely rejected as an inefficient fad, but without any suggested substitute. A surfing discourse was used to denote how certain knowledge entrepreneurs slide smoothly from one fashion to another, by rejecting the old one in favor of a substitute technique. The sustaining discourse, advocates continued use of a technique, despite problems. It may provide explanations for failures and suggestions to fix problems.

The theory of management fashion easily translates to the area of information systems, and Abrahamson's management fashion theory has been applied on IS either as a source of inspiration (Ramiller, 2001) or more thoroughly applied on IS research and practice (Baskerville & Myers, 2009). Baskerville and Myers (2009) follow Abrahamson quite strictly and give the same arguments, e.g. pointing out the importance for academics to engage in the fashion setting discourse. They follow the lifecycles of four fashions: office automation, computer-aided software engineering, business process re-engineering, and e-commerce. They define an IT fashion as "a transitory collective belief that an information technology is new, efficient and at the forefront of practice" (ibid p. 64). It is important to note that even if fads and fashions are technically inefficient, they may benefit an organization if they are symbolically efficient, e.g. by projecting an image of innovativeness (Abrahamson, 1991; Wang, 2010); for political reasons (Newell et al., 1998), or in collective learning processes (Wang & Ramiller, 2009). Wang (2010) points to the effect that following a fashion can have in terms of legitimizing organizations and their executives, regardless of performance improvement.

Wang (2010) also points out the core issue of IT-management fashions: vendors, consultants, market analysts and gurus are producing the discourse constituting the next big thing and the image of what it means to be at the forefront, while executives and IT-managers simultaneously are on the lookout for the next big thing in IT that will improve their organization's ability to perform and compete. Currently one of the most dominating upswing discourses in IT concerns how to take advantage of social media, and what strategies to rely on doing this.

Social Media Strategy: A Discourse Lens

Management reports on social media can be seen as part of ongoing discursive practices where media is used to shape individual and collective decision-making

(Cukier et al., 2009), which calls for a theoretical lens that captures the constituting dimension of such reports. A discourse is the way a certain object is spoken about, that systematically forms or constitutes that object of which it speaks (Focault, 1972; Winter Jørgensen & Philips, 2000). Discourse analysis focuses on texts, which can be in the form of written texts or other form of narratives (Alvarez, 2002; Doolin, 2003; Iivari, 2010; Winter Jørgensen & Philips, 2000). The reports are injected with strategic significance, which contributes to the social media discourse and gives it the power to invoke and advocate organizations to act in a certain way (Ezzamel & Willmott, 2008; Vasconcelos, 2007). Managers addressed in the reports are prompted to act in their role as drivers of change and development. In this way the discourse constitutes social reality, and forms an organizing vision of the future that will function as an engine for development (Burton Swanson & Ramiller, 1997; Chia, 2000; Phillips & Oswick, 2012).

There are three important aspects of an organizing vision for IS innovation processes (Burton Swanson & Ramiller, 1997). The first aspect is *interpretatio*n, which concerns the vision's ability to make sense to organizational actors. Social media is not immediately available to managers as an engine of innovation. On the contrary, it can be argued that social media has largely developed outside the organization and is associated with individuals' private digital communication and interaction. The management reports provide actors with the necessary interpretations to see the purpose of social media in an organizational context. It places the discourse in a broader purposeful technical, economic and social context and thus reduces uncertainties about the expected outcome of social media for the organization's performance, as well as defines what response the organization must mobilize to take advantage of the innovation (Burton Swanson & Ramiller, 1997). The "prepare for social media" narrative identified in the social media reports is established, elaborated and operationalized to present an anticipated future of social media practices, and defines possibilities and threats to the organization based on that view of the world.

The second aspect is *legitimization* of the vision. Here the IS innovation is scrutinized from the perspective of the perceived outcome, and it is motivated why the organization should embrace the particular innovation. Social media has not historically shown a potential for companies that easily would motivate an uptake of a social media strategy. Legitimization grounds the innovation in the broader business context and gives both social media and its anticipated organizational propagators the authority to act on behalf of the strategic advantages the innovation will create. Legitimization often links the innovation to a larger structural change as a way to meet the challenge, and has been proved to have a positive effect on organizational reputation (Staw & Epstein, 2000). The business process reengineering (BPR) vision (Hammer & Champy, 1993) was legitimized as a response to an industrial era that had come to an end (Burton Swanson & Ramiller, 1997). Similar arguments where advocated in the so called "dotcom bubble" during the late 1990s, where the age of industry was pronounced dead and replaced by the digital age built on a new digital economy of e-business (Panko, 2008). The point is not whether the vision is right or

wrong. Both BPR and e-business have proven important even if not in the way the visions projected the future. Instead the importance of the visions comes from how they facilitate the process of innovating.

The third aspect is *mobilization*, in order to activate, motivate and organize forces to realize the vision (Burton Swanson & Ramiller, 1997). This phase is more hands on in the sense that mobilization brings about activities such as conference expositions, giving exposure and making the vision concrete and tangible. The management reports studied here are to some extent part of mobilization as the companies that produce the reports often consult in the area, and the reports can be an indirect showcase for systems, solutions and competences needed when realizing the social media vision. Mobilization is a creative force and developing social media as a marketplace for organizations extends the existing market for social media where the users are mainly conceptualized as private end users outside the company.

METHODOLOGY

This study is an investigation of management discourse, i.e., the collective vocabulary used in social practice when referring to a phenomenon. As Abrahamson and Fairchild point out, a management fashion discourse is emotionally charged, enthusiastic, and unreasoned (1999). This basically excludes scientific papers. Consequently, we use generally available reports, white papers, handbooks and strategy guides as our data on social media as fashion discourses. Building on Miles and Huberman's (1994) principles of data reduction, data display, and conclusion drawing, Romano et al. (2003) suggest a similar method when dealing with web-based qualitative data, which they refer to as elicitation, reduction and visualization. Below our application of the steps is described.

Elicitation means collecting the data and in our case, this was done by querying Goggle for papers on corporate social media management strategy. When identifying a discourse, it is imperative to retrieve as much of the relevant information as possible. One cannot find (or digest) everything but a systematic approach that captures the most influential voices must be ensured. We used the Google search engine to identify and collect PDF reports for two reasons; Google is reported to be the market leader in most Western countries (Beel et al., 2010) and; Google use a page rank algorithm that incorporate the judgment of other web commentators (Brin & Page, 1998). Using Google thus gave both the best coverage (i.e., finding most of the document related to the topic) and the best precision (i.e., ranking the most influential papers highest). This method is not able to access documents behind company firewalls. However, such documents are not part of a public and general discourse.

We specifically searched for documents in the Portable Document Format (PDF) for two reasons. First, unlike a web page or a blog, which is constantly under construction, a PDF connotes stability and gives a more formal status to a text. A PDF document contains a finalized text that is ready for distribution. Secondly, the PDF

format has become a de-facto standard for electronic document exchange that a large number of companies have adopted as a preferred format (Castiglione et al., 2010).

The search terms 'social media strategy corporate management' were used in combination with advanced features where language was set to 'English', regions to 'all regions', updated to 'anytime', and file type 'PDF files (.pdf)'. The top 500 reports were selected for further investigation.5

Reduction is an iterative process of selection, coding and clustering (Romano et al., 2003). For the selection process, we used three different retention criteria: 1. Documents should explicitly mention corporate social media strategy. 2. Documents should target management and decision makers, and 3. Documents should have written by management/strategy consultants in social media. Having screened the 500 documents, 165 documents were found to fulfil all three criteria. They constituted a total of 3,232 pages.

<table>
<tr><td colspan="2">Elicitation</td><td colspan="2">Reduction</td><td>Visualization</td></tr>
<tr><td>Collection</td><td>Top 500 PDFs reports were collected using Google search engine.</td><td rowspan="2">Reduction Criteria</td><td rowspan="2">1. Documents should explicitly mention corporate social media strategy
2. Documents should target management and decision makers
3. Documents should be authored by management/strategy consultants portrayed as experts on social media</td><td rowspan="6">1. Aggregated code clusters with themes and subthemes
2.Identification of discursive constructs</td></tr>
<tr><td>Search term</td><td>Social media strategy corporate management</td></tr>
<tr><td>Language</td><td>English</td><td rowspan="2">Selection</td><td rowspan="2">165 reports were selected based on the reduction criteria</td></tr>
<tr><td>Region</td><td>All</td></tr>
<tr><td>Time</td><td>Updated to anytime</td><td rowspan="2">Coding</td><td rowspan="2">Main categories identified:
purpose, motivation, normative guidelines, risks, challenges and degree of empirical backing</td></tr>
<tr><td>File Type</td><td>PDF</td></tr>
</table>

TABLE 3 A METHOD TO ANALYZE INTERNET-BASED QUALITATIVE DATA ADAPTED FROM (ROMANO ET AL., 2003)

Coding and clustering were done in a grounded, bottom-up fashion. The first round of coding took place during the reduction process, while going through the documents to match them to the three reduction criteria, we also became immersed with the data and begun to explore the content for recurring themes (Strauss & Corbin, 1998). After

[5] A table with reference numbers and links to all the chosen 165 reports is available at: http://document.chalmers.se/download?docid=86d9663d-cc99-4fc1-a2f3-0577daa9a25f

the reduction was finished, the coding continued, including axial coding were we constructed categories and subcategories. As is common in the practice of grounded theory (Urquhart, 2007), this coding was not in the form of neat linear rounds, but we constantly moved between axial and open coding (Strauss & Corbin, 1998). Codes were successively added to a common code book to form an initial coding scheme (Charmaz, 2006). Codes were subsequently discussed and renamed until a consensus was reached amongst the authors.

By using tables to *visualize* the tentative results, we grouped the codes to form larger clusters of related topics. These were also subject to discussions and renaming. We identified three broad thematic topics in the reports. Then, through continuing this iterative process we identified five discursive constructs that appeared central to the reports, which are analyzed in the Discussion section, and related to the fashion discourses in Abramson and Fairchild's theory of management fashions.

RESULT

We here describe three main themes of how social media strategy was communicated in the reports.

What counts as social media?

A majority of the reports (129) neglect to provide an explicit definition of what is social media. It appears to be tacitly assumed that everyone knows what is meant. Some (e.g., pdf166: IBM or pdf389: SanDisk), simply mention the phrase social media and immediately start to discuss various steps for how to set up a suitable strategy. However, many (36) of the reports refer to specific applications and services, and thereby provide a broad spectrum of examples of what they count as social media. These illustrations serve as an implicit definition of what social media entails, although no explicit definition is provided.

Many of these provided examples belong to the *communication category*, including blogging tools (Blogger, Twitter, WordPress) and social networking tools (Facebook, LinkedIn, MySpace). Another well-represented category is *collaboration*, including tool social bookmarking (Delicious), social news making (Digg, Reddit) and collaborative authoring (Wikipedia, Google+). A third category is *multimedia*, which include photo sharing (Flickr, Zoomr), video sharing (YouTube, Vimeo), livecasting (Ustrem.tv, Stickam), slide sharing (Slideshare) and music sharing (Last.fm, imeem). A fourth and last category is labelled *entertainment* and contain virtual worlds (Second Life) and Game sharing (Miniclip, Kongregate). In addition to specific applications such as these above, technologies such as blogs and wikis are frequently mentioned in more general manners.

Application and technical layers are sometimes mixed (9 reports). In an IBM Global Business Services whitepaper (pdf118) the author writes:

"People are using social media channels to not only communicate with their friends and family about their every day lives, but to talk to other people about their

customer experience with companies and organizations. Customers can now blog, post messages on Facebook, podcast, or twitter about their customer experience and reach a wide array of other customers, or potential customers, to promote positive or negative word-of-mouth advertising. Social media channels have become a quick and easy way for customers to talk about what is on their mind in real-time."

Attempts are also in some cases (18 reports) made to define what social media is, circling around references to Internet-based technology, and user generated content and free exchange of content:

"Social media is the production, consumption and exchange of information through online social interactions and platforms." (pdf400: Marketo, Inc. whitepaper)

"Social media is broadly understood as web-based services which enable users to interact with each other [...]" (pdf187: Marketwire whitepaper)

Motivation for creating a social media strategy

Twenty-five reports have a focus on what is described as the double nature of the massive diffusion of social media. That it is something that both create opportunities and threats. There is a set of opportunities in making communication and collaboration both internally and externally more efficient, to increase creativity and innovation and to reach out to customers and other stakeholders. There is also a set of threats. These sometimes overlap as a potential threat easily can be rephrased as a potential opportunity. Broadly speaking we identified four different arguments why companies should develop a strategy for social media; Risk of being left behind, Risk of losing control, Risk of productivity drop and Opportunity for trust building.

Starting with the risk of being "left behind", the massive penetration of social media through entire society and everyday life is something that has a high impact on individuals as well as on companies and public organizations. It is argued that soon everyone will use social media to communicate and collaborate, and those who for one reason or another do not engage will be overrun by both customers and competitors. Social media is like a freight train on the move – an unstoppable force that you do not want to get in the way of. Instead, you should board it as soon as possible as it will otherwise leave you alone on the platform.

"Social media is changing the world – and it is forcing organizations like the [name of particular org] to rethink communications and marketing strategies and to learn to navigate this new online landscape – or be left behind" (pdf65: City of Kitchener Online Communication Strategy)

"*Early adopters are gaining real economic value from their investments in social media*" (pdf28: Bain & Company)

Another way to motivate companies to engage in social media strategies is to appeal to their perceived "need for control". Previously, information was issued via press releases and through appointed spokespersons and organizations were in

control of their communication, it is argued, but with social media any employee, sub-contractor or customer can have an opinion that is shared by thousands of people.

"With the advent of digital and social media, communication anarchy is the new norm. Social media has shifted control of the corporate message away from the organization and towards the consumers and other stakeholders, and running away and hiding is no longer the safe" (pdf63: Burson-Marsteller)

The debate that goes on in social media is outside the control of the company but avoiding engagement and try to ride it out is no longer an option, according to these reports. But it is not only about what people outside the organization do, management also risks losing control over the employees, the reports warn.

"Take precautions: develop a policy to govern your employees' use of social media. Also use social media to monitor, enhance and protect your brand/reputation." (pdf408: Computer Science Corporation)

A third motivator, slightly overlapping with the previous, is the risk of "trash-talking" that could damage a company's image should proper social media strategies not be in place. Customers or competitors may – correctly or incorrectly – say negative things about the company that would spread rapidly and negatively affect the company's reputation. The diffusion of social media has also blurred the borders between what you do as a professional and what you do as a private citizen. When you blog or tweet it is not always clear if what you communicate represents your personal opinion or that of your company. Hence, not only people outside the organization can damage its image; employees risk doing it too. Referring to social media as "nightmare in real time" an Ernest & Young report reported what they claim to be "recent examples that illustrate the challenge social media can pose for companies that are unprepared":

"*Someone with access to an international manufacturer's Twitter account sent out tweets containing swear words, forcing the company to revisit its account security access procedures*." (pdf33: Ernest & Young)

While 16 PDFs focus on the risks with social media engagement, and stress that a social media strategy should be implemented to mitigate such risks, nine PDFs highlight the opportunities that social media entails (or the risk of missing the opportunity of getting a competitive advantage through social media). One opportunity mentioned explicitly is the possibility for company-customer "trust-building" that a sincere social media dialogue can open. Even better is when satisfied customers use social media to promote a company or its products. By actively monitoring user forums companies can also customize their information to match the needs of their audience.

"The most trusted form of advertising today is a recommendation from another person 'just like me.' Tapping into these conversations shows where your audience is spending time online and what subjects and issues are of interest to them" (pdf169: Expansion Plus).

Organizing for social media

More than a fourth of the reports (44) have explicit hands-on advise to organizations on how they should implement a social media strategy. These tend to be of a normative character suggesting for example five, seven, or ten steps to a successful social media usage (e.g. pdf18: Spreadfast, pdf44: Marektwire, and pdf227: Awareness). Many of the suggestions regard how one should organize the engagement in social media in terms of activities like tracking followers, number of likes and tone of comments from consumers and stakeholders, as well as monitoring the social media initiatives. Other suggestions regard which professional roles and departments that should be involved and in charge when it comes to social media strategy and implementation.

The reports differ in where responsibilities of social media should belong. A large portion of the reports point out existing roles and departments as key actors. Marketing, public relations, human relations, and communication are among those departments most often mentioned to be responsible for social media strategies.

"Marketing and sales are two functions that are intimately linked with social media." (pdf265: Accenture)

"Newer areas including social media are now also falling under the Chief Communications Officer (CCO)[..]". (pdf314: Korn/Ferry Institute)

IT department and Chief Information Officers (CIO) are also mentioned, but to a less degree.

"The IT function, by virtue of the technology-driven nature of social media, is also in the "high-impact" zone. While the job of the chief information officer has become broader and more influential in the past two decades, social media expands the CIO's role even further." (pdf265: Accenture)

Another recurrent theme claims the need for new roles, and some even new departments.

"Corporations have anointed an Open Leader, the Social Strategist [...] this emerging role is critical in the adoption of new media for corporations." (pdf390: Altimeter)

"Your company will have a social media department" (pdf 24: Linkage)

THE DISCURSIVE ENACTMENT OF SOCIAL MEDIA FASHION

Building on research on management fashions (Abrahamson 1991; 1996; Baskerville & Myers 2009; Newell et al. 2001) we show how social media is discursively enacted as relevant and attractive for organizations, and how managers are addressed with normative prescriptions on how to act. From the earlier described three broad basic themes, we identified five discursive constructs central to the reports (Table 2). The

first construct makes sense of social media by defining it in relation to existing technologies, applications and services and elaborates its relevance for organizations; the second defines a social media disruption and builds arguments for why social media is unavoidable for organizations; the third construct creates social media as an actionable goal for companies and defines anticipated benefits for the organization; the fourth construct defines normative models for managers to use when preparing the organization for successful social media implementation; the fifth construct provides what could be considered as evidence that following the prescriptions would lead to success.

Construct	Discursive logic	Empirical example
Sensemaking	Homogenizing diversity of technologies into 'social media' is necessary for anchoring its relevance for organizations	The reports impose companies to use a particular social media to communicate with customers
Disruption	Structural changes towards a social media society makes it unavoidable for managers and organizations	"Communication anarchy" calls for entirely new management strategies
Strategic advantage	Early adoption creates strategic advantages. Non-action implies hazardous consequences	The blogging CIO meets stakeholders online which makes communication easy and efficient
Organizational consequences	Prescribes normative models and actions scripts for managers and organizations	Elaborates on new roles, departments, policies, and competences needed
Evidence	"Proves" social media importance by success stories and data on success	X.xx % of companies with a social media strategy earn Y.yy % more money

TABLE 4 SOCIAL MEDIA FASHION DISCOURSE MATRIX

In the following, the above discursive constructs are related to three of the discourses in the theory of management fashions by Abrahamson and Fairchild (1999): the problem discourse, the solution discourse, and the bandwagon discourse. These three discourses are defined as generic discourses in management fashion, and are identified in the fashion upswing, i.e. when a fashion is introduced and is making its way to the centre of attention. The problem discourse is built up mainly from the two first constructs: sense making and disruption. The solution discourse is mainly built up from the strategic advantage and organizational consequences constructs. Finally, the bandwagon discourse is mainly built up by the evidence construct, where examples of success or statistics of success serve as arguments that social media strategies really work. The three downswing discourses identified by the authors are left out since they where not recognized in our sample of reports used to identify the social media discourse. There can be two reasons for this. One is that social media is in an upswing phase. In systems of discourses some discourses tend to dominate on behalf of others (Leclercq-Vandelannoitte, 2011). Social media appears to be in a process of increased attention in the studied management reports, which could explain the lack of examples of discourses that dominate the downswing phase. The other reason could be that the applied search terms, especially 'strategy' might promote discourses dominating upswing fashion.

Problem discourse

The problem discourse proposes different explanations of specific hinders towards strategic development and the reasons for their existence, which provides an agenda

for change. There are few problem discourses identified within IS management fashion. However, Baskerville and Myers (2009) report on the previously mentioned example with BPR. The BPR management fashion discourse built on the argument that the old organization often hamper possibilities offered by information technology. Organizations must therefore be re-engineered to fully take advantage of IT. The social media problem discourse is different in that it has developed outside the organization and its benefits have not primarily been connected to organizations and thus the realm of management strategy work. Facebook, Twitter and blogs are commonly seen as something that connects to people's private life. The reports therefore need to make sense of social media by defining it and connecting to business as a way to power the organization to take a certain course of action (Ezzamel & Willmott, 2008). Boundaries between 'social media' and 'other media' are blurred and there is no clear nexus of what characterizes the former. The discourse offers structures according to different categories which also create boundaries for what social media is not. Such discursive practices of homogenization enact 'social media' as a relatively consistent phenomenon with high societal disruptive impact, which is now hitting the organization. The "logical consequence" is that managers must take action to meet the challenge. Another contributory factor is the blurring of borders between the company and the outside world that makes phenomena such as social media a concern also for the organization's internal strategic work. Social media integrates the professional and private role and make them hard to distinguish. In combination with the ease of use, availability and short distance to publicize, a potential risk emerges: the blogging CIO is a potential hazard, which calls for management action. Policies, standards and organizational routines can be presented as "anxiety-reducing solutions" (Abrahamson & Fairchild, 1999).

Solution discourse

Establishing social media as a graspable phenomenon and defining problems and threats that call for action opens up for the solution discourse, which is a fashion upswing discourse describing the fashion with claims that it is all powerful in scope and impact (Abrahamson & Fairchild, 1999). This discourse makes social media compatible with the company's mainstream activities by defining it as a business case. An investment in social media will – if done right – result in profit. The discourse divides activities in internal and external solutions. Internal social media efforts make global scale sharing of information and collaboration easy and efficient. Increased competition calls for rapid innovation. Social media can spur change, which in combination with the statement that especially early adopters gain the highest economic value, sets out a course for internal renewal of companies. External social media solution discourse focus on new ways to connect with customers. Social media is a low cost effective market channel with technologies for making customers loyal and exposed to information. An important argument is here the crowd-sourcing abilities of social media in that it connects customer capabilities to the company via poll technologies and access to customer profiles and networks. As a consequence, social media can become aligned to brand equity strategies. Social media is ascribed

the potential to connect the firm brand via individual representatives for the company who communicate with customers via interest groups. Companies can create Facebook-communities where customers make clusters of 'likes' visible to potential customers; followers on Twitter and subscribers to blogs co-construct the brand and create trust-based relationships.

Bandwagon discourse

The bandwagon discourse is a fashion upswing discourse that theorizes successful firm adoption of the fashion. In what seems to be an attempt to compensate the fuzziness of social media, the impact is objectified with numbers referring to studies stating e.g. the percentage of companies that are involved in social media efforts or by referring to the "millions of users out there" who make up the infrastructure for social media success that will make the company invest in a particular platform. Speed metaphors are used to theorize success of both internal and external social media investments. An important aspect of enacting the bandwagon is the issue of preparing for social media. Organizations need to monitor, track and manage, which put demands on maintenance. The whole company must be involved and a company wide strategy is needed. The discourse thus defines the manager as the active change agent at the centre of the corporation. Delegation is suggested in the form of new roles and responsibilities sometimes even social media departments. The reports include normative set of rules or steps needed to pursue a successful social media implementation.

CONCLUSION

Social media platforms and services have rapidly grown into an important societal phenomenon. The lack of well-grounded best practice and the scarcity of research, result in organizational decision-makers having to rely on vendor descriptions and trade press articles to make sense of social media. By using management fashion theory and discourse analysis, we have examined how a management fashion discourse on social media unfolds and enacts social media as both the next big thing in IT and a disruptive force that calls for management action and corporate strategies. Our analysis shows that social media discourse differs somewhat from how previous IT fashions have developed, primarily due to the fact that social media discourse is propelled by forces outside the company, entailing both risk and opportunity. Social media still seems to be in its upswing phase, and there are few signs for any emerging downswing.

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PAPER 2

OBJECTIFIED KNOWLEDGE THROUGH SOCIAL MEDIA: THE CASE OF A MULTINATIONAL TECHNOLOGY AND CONSULTING CORPORATION

OBJECTIFIED KNOWLEDGE THROUGH SOCIAL MEDIA: THE CASE OF A MULTINATIONAL TECHNOLOGY AND CONSULTING CORPORATION

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ABSTRACT

The developments of new technologies, new scientific initiatives and a new globalized market are giving rise to new forms of collaboration, referred to as mass collaboration. This phenomenon is mainly derived from communities and self-organization, and is based on Web 2.0 technologies, services and tools. This new form of collaboration and technologies are giving rise of emergent social software platforms (ESSP's) that are adopted by firms worldwide. The main aim of this research is to understand how firms are using such new technologies and collaborative efforts to assist knowledge sharing to achieve objectified knowledge. Central to this research is the proposed knowledge sharing cycle model, which has three main stages - internalization, externalization, and objectification. This model is adapted based on the findings of a case study of internal social media strategy of IBM Corporation. The findings indicate that ESSP's can be used to support knowledge sharing practices and to help convert knowledge into its different forms in enhancing knowledge acquisition.

***Keywords**: Social Media, Knowledge Sharing, Mass Collaboration, Web 2.0, E 2.0, and ESSP*

INTRODUCTION

In contemporary society, collaboration is common, as it is proven to be effective for solving problems, building consensus, and easing decision-making processes (Straus and Layton, 2002). Historically, it has been governed through collaboration hierarchies, in which every contributor is controlled and supervised by other top participants, such as employees dominated by managers and customers controlled by organizations (Tapscott and Williams, 2006). However, through new technologies and scientific initiatives, new forms of collaboration emerge in the global market, predominantly initiated by communities and self-organizing agents. Organizations struggle to develop competitive solutions against challenges, such as user satisfaction, and the demand for relevant knowledge, useful applications and higher R&D costs (Wikhamn, Ljungberg, Bergquist & Kuschel, 2011).

This form of collaboration, known herein as mass collaboration (Tapscott and Williams, 2006), enabled by the introduction of Web 2.0 technologies (O'Reilly, 2005), has led organizations to rethink their methods of creating business value and managing and distributing information. Furthermore, mass collaboration challenges many mature and established firms such as BMW, Boeing, and Procter & Gamble to rethink their collaborative strategies (Tapscott and Williams, 2006). This is emphasized by the surprisingly high and increasing number of firms adopting Web 2.0 technologies and services in recent years (Libert and Spector, 2008), which help these organizations to create new and unique collaborative environments (McAfee, 2006). Web 2.0's adoption is expanding especially for corporate affairs (Grossman and McCarthy, 2007; Hideo and Shinichi, 2007) so that organizations are able to improve their products and services, or even solve intractable problems (Tapscott, 2008).

Previous research has indicated that social media tools, like wikis, are becoming increasingly popular for managing knowledge and collaboration within enterprises. Some studies have contributed to this field by creating awareness among organizations about the benefits of using ESSP's for knowledge creation. The value in capturing and creation is the capacity to skilfully manage, organize and carry out innovations in order to mobilize SME processes. The Chesbrough's research in last decade emphasizes new advances and settings for the intersection between users and producers, suppliers and producers, or within open code software communities (Lichtenthaler, 2011; Huizingh, 2011; Enkel, Gassmann, and Chesbrough, 2010).

The significance of the sharing and collaboration of knowledge that is mediated by social media is important to understand at its root level in order to come up with productive and sustainable solutions. According to Jan Ljungberg (2010), "IT opens up new possibilities, creates new challenges and functions as a disruptive force in the traditional innovation process." The strength of competitive businesses is development of technological and innovative products based on new and complex technologies (Bertola, P. & Teixeira, J.C., 2003). This new and complex digital world revolves around social media and technologies in one-way or another. An important factor in an organization´s success is therefore to protect and improve organizational

knowledge as a source of continuous innovation (Bertola, P. & Teixeira, J.C., 2003).

The concept of Enterprise 2.0 is quite young. Researchers argue that intellectual capital is the largest asset of any organization, serving as its greatest source of power (Druker, 1993; Toffler, 1990; Quin, 1992). These authors agree that the future belongs to those who are endowed with knowledge (Nonaka, 1996). We live in a knowledge-driven world, which therefore makes the "knowledge worker" the greatest single asset an organization can have (Druker, 1993). Proof of this is that some of the most popular management concepts developed over the past few decades have had specifically to do with knowledge (Huysman, 2002). Researchers and practitioners confirm that sharing knowledge improves organizational performance (Lesser & Storck, 2001).

Often, organizations do not realize what they know, and locating and retrieving knowledge within organizations can be problematic (Huber, 1991). IT is used as an enabler in most knowledge management initiatives (Alavi & Leidner, 2001). The research question this paper aims to answer, therefore, is: *How is social media being used within an organization to facilitate knowledge sharing and collaboration to achieve an objectified knowledge?* Though the problem focuses on knowledge sharing, more emphasis is placed on ESSP's. This paper covers only the ESSP's that are applied and used in the case study

The body of this paper is organized into seven sections. Section two discusses the literature on IT tools for knowledge sharing and collaboration among peers. Sections three and four cover the theoretical basis and research methodology, respectively. Section five explains the social media strategy adopted by International Business Machines (IBM) in Sweden. Our analysis of the case is presented in section six, while the last section draws the conclusion and recommendations for future research.

RELATED LITERATURE

Wikinomics and the Mass Collaboration

Mass collaboration happens when many participants work on a single project, whether in small groups or as individuals, with the whole rarely, if ever, meeting. These projects are often modular in nature. They execute tasks, generate solutions (e.g. InnoCentive), or create new knowledge (e.g. Wikipedia). Mass collaboration is said to owe its success to its decentralized model of collaboration, which outperforms more centrally controlled models (Brafman and Beckstrom, 2006).

Mass collaboration is characterized by four main principles, introduced by Tapscott and Williams (2006): peering, sharing, openness, and acting globally. Peering, or peer production, is the act of allowing users to participate in the creation and development of products and services, while coactively sharing, classifying, and rating contents that enhance the production (Tapscott and Williams, 2006; McKercher and Mosco, 2007; Wilkinson, 2008). Meanwhile, s*haring*, considered to be one of the distinctive features of mass collaboration, simply refers to the free

exchange of knowledge, which creates new opportunities for development. Tim Bray, the director of Web technologies at Sun Microsystems, is known to have said that "we genuinely believe that radical sharing is a win-win for everyone; expanding markets create new opportunities" (ibid, 2006, p.27). *Openness*, according to Tapscott and Williams (2006), refers to having boundaries that are porous to external solutions, ideas, and knowledge. Being *open* to outside human capital outperforms companies that rely solely on their internal resources and capabilities. This type of openness is associated with "candour, transparency, freedom, flexibility, expansiveness, engagement, and access" (p.21). Lastly, *acting globally,* or making mass collaboration projects available on the Internet through Web 2.0 technologies, enables firms to access new ideas and solutions by engaging more innovative and open-minded users around the world.

While traditional collaboration is mainly dedicated to the sharing of common interests, goals, abilities, and areas of expertise among people, mass collaboration, in contrast, finds its way to a large number of individuals from various knowledge areas, with diverse interests, expertises, and specializations (Tapscott and Williams, 2006; Panchal and Fathianathan, 2008; Libert and Spector, 2008). An example of a successful mass collaboration project is *Wikipedia*, an online collaborative encyclopedia that attracts millions of internet users from all over the world. Wikipedia enables users to view, create, edit, or remove articles in different subjects. This project currently has about 10 million volunteers contributing 9.5 million articles in 256 languages (Panchal and Fathianathan, 2008, p.1).

Another example is *InnoCentive*, a mass collaboration project that is specifically created for the global community. Its main goal is to allow researchers, scientists, engineers, inventors, R&D groups, and companies to collaborate to achieve solutions for research and development problems in a broad range of disciplines like chemistry, biology, engineering, math, computer science, entrepreneurship, and others (Tapscott and Williams, 2006; Harrison and Sullivan, 2006; Lakhani et al.,2007; Dodgson et al., 2008; Libert and Spector, 2008). This project attracts more than 80,000 independent problem solvers from more than 150 countries (Lakhani et al., 2007). They help more than 34 mature firms, including Proctor & Gamble, Dow Agro Sciences, and Eli Lilly (Brown and Boulderstone, 2008). These firms pay problem solvers $10,000 to $100,000 per solution in addition to the subscription fees they pay (Ahonen and Lietsala, 2007).

Social Media

Social media is setting revolutionary trends for online business and communication. But there seems to be confusion about what constitutes social media (Kaplan and Haenlein, 2010). According to Forrester Research, 75% of Internet users used social media in the second quarter of 2008. Kaplan further states that users have joined social networks, read blogs, and acted as community members. Still, companies seem uncomfortable with adopting social media, which would allow users the opportunity to speak freely among other workers. Given its technical advances, social media is more powerful than conventional media. Literature published over an array of sources

in the last six years talks about the aimed characteristics of social media and the benefits of the Web 2.0 concept by O'reilly in 2004. Of course, there have been critics as well, but there is a need to integrate the main concepts in order to establish the purpose of social media as an innovation in organizations.

Social media could become the backbone of a successful organization in many perspectives. First of all, right now there is a need for more time, where the internet has reigned supreme, and now we have social networking sites, blogs, and other emergent social tools that serve different purposes. The concept of Web 2.0, the technology used in social media, was first presented in the Web 2.0 Conference in 2004. Tim O'Reilly introduced this term as the next generation of web services and business models. Enterprise 2.0 does not differ from web 2.0. It is the use of web 2.0 technologies within organizations for business purposes. McAfee (2009) describes platforms as a collection of digital content, where contributions are globally visible and persistent. Some examples of Web 2.0 technologies are blogs (blogspot.com), wikis (Wikipedia), social networking software (Facebook, in 2004), social media platforms (YouTube), and forums.

Social media is the symbol of revolutionary trends that should be of interest to organizations that focus on online business and communication. There seems to be confusion among managers and academic researchers as what exactly should be included under social media (Kaplan and Haenlein 2010). According to Forrester Research, 75% of Internet users used "Social Media" in the second quarter of 2008. McAfee (2009) describes social media platforms as a collection of digital content where contributions are globally visible and persistent. Some examples of Web 2.0 technologies include: blogs (blogspot.com), wikis (Wikipedia), Social Networking software (Facebook, in 2004), Social media platforms (YouTube), forums etc. We believe that the two concepts are not separate bodies because knowledge sharing and collaboration are directly and indirectly dependent on social media. In other words, the social network has become the driving force for knowledge sharing and collaboration, both internally and externally, for SME's. For example, powerful microprocessors, inexpensive and reliable memory, and broadband communication have made it possible to digitize core the functions of an organization (Yoo, 2010).

Social media is something that has changed the philosophy of academic researchers, managers and general users, all of whom are directly or indirectly part of it. Any website that welcomes you to interact with the community of practices or with other consumers falls into the definition of social media. Social media integrates the idea of open source. Its purpose is to share the goal, share the work and share the result (Goetz, 2003). ESSP's are equipped with the characteristics of web 2.0 and are used for different purposes today. These tools are called social software because they are social in nature. They help people collaborate through computer-mediated communication (McAfee, 2009). These tools are freeform; hence, they are optional and free from imposed structure like workflows, interdependencies, and decision right allocations. They are egalitarian and free from ranks, and they thus accept a wide variety of data types (McAfee, 2009). Examples of ESSPs are blogs, wikis, social

networking software, social media platforms, and forums. It is the "new strategy to knowledge management" as a "Community of Practice (COP)," according to Keyes (2006). Communities are based on interest and expertise, and they bring together people with a common interest or skill, and give them a place to exchange knowledge and ideas. The competence of digital tools within the network can play a pivotal role, such as that of socio-material configuration or integration (Suchman, 2007), which assumes either independent or interdependent entities (Barad, 2003). Instead, all of these entities (whether social or technological, human or material) are inseparable. Social media usage among users has remarkable findings. On average, these users spend over five hours a day on social media, and as of 2010, worldwide this use has increased 82% as compared to findings in 2009 (Nielsen, 2010). Now almost 70% of American households play computer games (ESA, 2010).

Theoretical Frame of Reference

The conceptual diagram below illustrates the main theories to be used in the analysis. Wikinomics advocates for mass collaboration and constitutes four main pillars. These include being open, acting globally, sharing, and peering. There is a fifth concept added to these pillars, communities of practice. These five concepts are all user activities and are performed with the aid of web 2.0 platforms (ESSP's) such as blogs, wikis, social networking sites, and forums. When these platforms are used within organizations for organizational goals, the web 2.0 concepts become Enterprise 2.0. This then generates and uses information in order to support the knowledge sharing cycle. After a detailed analysis of empirical findings, the authors developed the knowledge sharing cycle to illustrate how collaborative intelligence supports the achievement of set goals.

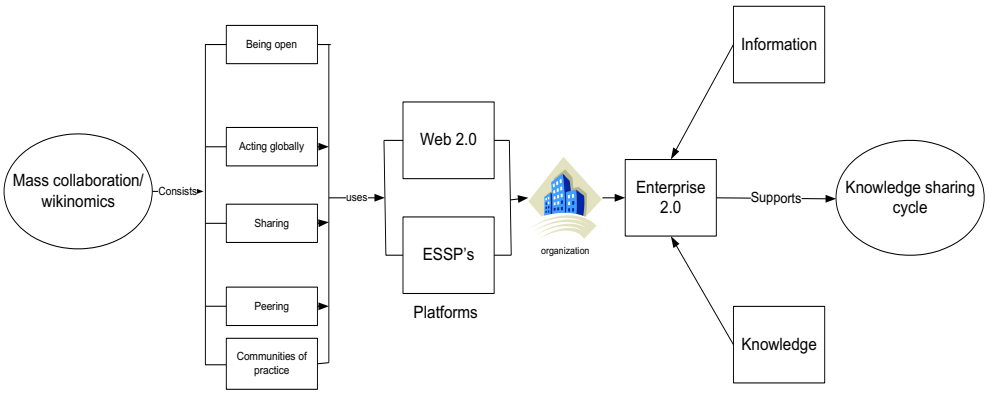

FIGURE 1 THEORETICAL FRAME OF REFERENCE

THEORETICAL BASIS

Knowledge Sharing Cycle

Knowledge can be implicit or explicit. The explicit form of knowledge is much harder to capture than the implicit because it transfers from one state to another (Huysman 2002). Nonanka (1995) elaborated upon a knowledge conversion model which constitutes four stages: Socialization, Externalization, Combination and

Internalization. As knowledge passes through these stages, its state changes between implicit and explicit forms. A similar model was developed by Huysman (2002) that specifically illustrates the knowledge sharing cycle, as depicted below. The three processes – internalization, externalization, and objectification – make up the organization learning process (Huysman, 2002).

Internalization

Internalization is the process of acquiring knowledge through an individual member of the organization (Huysman, 2002). Tenkasi and Boland (1995) stated that organizations often try to use information technology to equip peers with best available knowledge, speed up processes, and reduce the cost of knowledge sharing or form the classes of networks (Yoo, et al., 2008). In knowledge creation and sharing through open innovation, organizations act in open systems (Thompson, 1967) while keeping the external environment in view (Lawraence and Lorsch, 1967). The notion is the same, but not in a broad sense, where the supplier also acts as a peer producer (Wikhamn et al., 2011). The active participation of peers is required in order to generate and transfer knowledge. The identities of the works themselves do not matter while interacting (Demil and Lecocq, 2006), but the reputation and status of persons may (Bergquist and Ljungberg, 2001).

Web 2.0 tools facilitate network workers and play vital roles as fundamental layers of digital information infrastructure. According to Huysman (2002), internalization is the only process that makes one an "insider." According to MaCafee (2006), the different ways to support the knowledge creation and transfer among peers might be knowledge systems, training sessions, manuals and others (Tapscott & Williams, 2006). There is huge amount of unrecorded knowledge (Huysman, 2002). Sharing stories and exchanging anecdotes could be useful methods for internalizing such knowledge.

Externalization

Externalization happens when workers share achieved knowledge with each other (Huysman, 2002). According to MaCafee (2009), this might take place in both formal and informal ways. The formal channels include meetings, project groups, and other similar gatherings. The informal channels, meanwhile, include conversation in the corridors and lunch-break chats (Huysman, 2002). Still, according to Huysman (2002), explicit knowledge can be formulated and facilitated using formal and systematic language. Nonanka and Takeuchi (1995) illustrate that implicit knowledge can obstruct the externalization process, thereby leading to substandard learning processes. The two reasons for externalizing knowledge, based on Huysman and de Wit (2002), are knowledge exchange for the sake of reuse and for benefit of developing knowledge. Knowledge development is an outcome of knowledge transfer (Huysman, 2002).

Objectification

Von Krogh et. al. (2000) defines objectification as the process of globalizing local knowledge. Exchanging knowledge does not always necessarily mean, however, that knowledge would be collectively accepted. Shared knowledge becomes organizational only when it is accepted by the members of an organization (Huysman and de Wit 2002; Von Krogh et al., 2000). The process of objectification is not always a conscious one and often takes a long time to occur (Von Krogh et al., 2000). Huysman and de Wit (2002) illustrate objectification with the example of a group of technicians who have learned a new way to fix a machine. Their operational knowledge remains local until it is accepted by the organization. For example, publishing manuals containing the operational knowledge in the training of newcomers would serve as a proof of acceptance. Of the three processes discussed, objectification takes the longest to happen. The table below shows the classification of the various processes involved in knowledge sharing and organizational learning.

Learning process	Learning from	Resulting in	Type of knowledge-sharing support
Internalization	Organizational Knowledge	Individual Knowledge	Knowledge Acquisition
Externalization	Individual Knowledge	Shared Knowledge	Knowledge exchange (for purpose of reuse or development)
Objectifying	Shared knowledge	Organizational Knowledge	All types of knowledge-sharing

TABLE 5 CLASSIFICATION OF VARIOUS PROCESSES HUYSMAN (2002)

Intermediation

The most important concept in the knowledge sharing cycle that does not exist as part of the aforementioned model is Intermediation, the process of connecting knowledge seekers with knowledge providers. According to Nonanka and Takeuchi (1995), who provided a model called the SECI model, its importance cannot be underestimated. Their model describes the various modes of knowledge as follows: 1) Socialization converts Tacit-to-Tacit knowledge; 2) Externalization or articulation converts Tacit to Explicit knowledge; 3) Combination converts Explicit-to-Explicit knowledge; and 4) Internalization converts Explicit to Tacit knowledge.

The figure above represents the relative volume of differing ties for a prototypical knowledge worker. According to McAfee (2009), interpersonal ties and structural holes provide a way to frame the benefits of Enterprise 2.0.

To explain the Bull's eye concept, we shall consider a prototypical knowledge worker in a large, geographically dispersed organization. This worker has a small

group of close collaborators, and these are the people with whom this worker has strong professional ties. This is represented by the innermost ring in the diagram.

The next layer beyond this group represents people with whom the prototypical worker has collaborated with on past projects. These are colleagues with whom he/she interacts with periodically and/or knows via professional acquaintances. The prototypical worker has weak ties with this category.

Beyond this layer the prototypical worker has only potential ties with the next category of employees. This layer represents employees within the organization who could potentially be valuable to the prototypical worker if he/she knew about them. These are people who could keep him/her from reinventing the wheel, answer pressing questions, and point her to the right direction (McAfee, 2009).

The author states that in like manner, the prototypical worker could help many other people in the company if their experience and abilities were widely known within the company. Unfortunately, because of structural holes between this worker and the rest of the organizational members, the interpersonal ties here are only potential, not actual. The outermost ring represents professional strangers (McAfee, 2009). The people in this category would probably never form any sort of valuable ties (either strong or weak) with the prototypical knowledge worker.

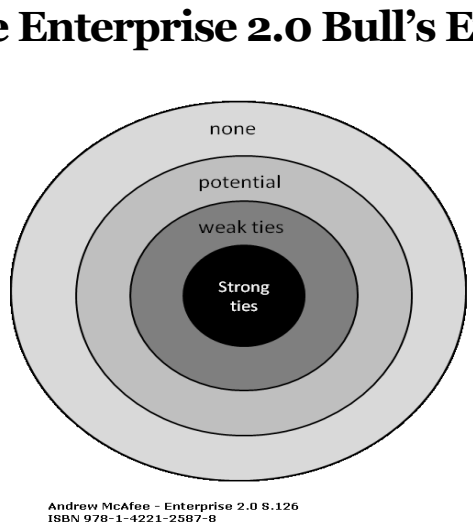

FIGURE 2 ENTRERPRISE 2.0 BULL'S EYE BY ANDREW MCAFEE (2009)

This model is relevant for organizations using social media for knowledge sharing and collaboration because it helps to define the existing ties within the company. When these ties are understood, the right tools can be applied in the right areas in order to strengthen them.

RESEARCH METHOD

Research Strategy – Case Study

The research strategy is dictated by the nature of the research questions. According to Yin (1994), if the research answers a "how" or "why" question, the best strategy could be a case study, which gives a rich and in-depth look at a particular phenomenon within the subject being studied. Yin (1994) also states that a single case study is suitable if the purpose is to examine established theories. Therefore, a case study was conducted at IBM. Using IBM's case, several social media theories were tested where the goal was to create a framework. This framework would illustrate how social media supports the knowledge sharing cycle in order to gain an objectified knowledge. To answer the "how" question without ambiguities, all possible data should be explored. After a careful study, International Business Machines (IBM) in Sweden was chosen as the most suitable choice for the case study. IBM has pioneered and set industrial standards using older systems, such as Lotus Notes, which the organization has grown and developed as new systems for collaboration and knowledge sharing. It not only uses use social media and ESSP's tools for its own purposes, but it also sells IT solutions for collaboration and knowledge sharing to external clients.

Data Collection and Analysis

Both primary and secondary data were used in this paper. The primary data collection includes detailed interviews and meetings. This process took over 7 months to complete, from December 2010 to July 2011. Details of the primary data collection are shown in the table below. Secondary data were also analyzed, which came from existing research works on the role of wikis for knowledge sharing. All data collected have been carefully and critically analyzed using a mixture of deductive and inductive methods. According to Ghauri and Gronhaug (2005), interviews can be categorized as structured, unstructured, and semi-structured. This research adopted a semi-structured interview because it best suits our purpose. The respondents were given liberty to discuss the questions, but some level of guidance and control were provided to help us get the answers we needed. Saunders et. al. (2007) proposes two methods of data collection, qualitative and quantitative.

In this work, the qualitative method using a case study has been chosen. One advantage of the qualitative approach is that it helps us collect data from people in real life settings, thereby granting us a deeper understanding about their experiences and local context (Creswell, 2003).

#	Managers' Name	Designation	Date, Time & Duration of Interview
1	James EK	Country Executive Manager Lotus Software and Collaboration	One hour seven minutes,
2	Karl Malmström	Manager for Sales Tax Collaboration	One hour
3	Christer Wikmark	Social Media Manager	One hour twenty minutes

TABLE 6 DETAILS OF INTERVIEWS AT IBM

Relevant and detailed articles from journals and books on the same topic were gathered. Most importantly, only updated and authentic materials were used in the literature review. Presentations, videos, scientific reports, blogs, and commercial articles were also explored. Most of the literature was retrieved from online journals and the library databases of Göteborg, Chalmers, and Jönköping universities.

IBM COMPANY PROFILE

IBM is an American Multi-National technology and consulting company that traces its roots to Herman Hollerith's Tabulating Machine Company started in 1896. On June 16, 1911, the merger of the Tabulating Machine Company, the International Time Recording Company and the Computing Scale Company of America, gave birth to Computing-Tabulating-Recording Company (CTR). The Company name was later changed to International Business Machines (IBM) in 1924.

IBM defined itself from the beginning by adopting a rather forward-thinking culture and implementing management practises that were grounded in core values. Since its inception, the company has grown and expanded tremendously through numerous acquisitions with Cognos being one of the biggest companies it acquired in 2007. IBM employs 400,000 workers (also referred to as IBMers) in 200 different countries. The company has a diversified workforce with a rich multicultural background, and it operates on a global scale and is listed among the fortune 500 companies in the USA.

Core Business Operations

IBM's core business is manufacturing and selling computer hardware and software. IBM also provides consultancy and hosting services to small and medium-sized (SME) companies. The company owns far more patents than any other technology company in the United States, as well as nine research laboratories in seven different countries in the world. Being a huge corporation, the company is divided into different business segments that specialise in different operations.

The Global Technology service segment provides business process services and IT infrastructure. It is also responsible for strategic outsourcing, integrated technology and technology-based support services. The Global Business service segment offers consulting services, application management services, and systems integration. The Software segment is responsible for developing middleware and operating systems software. Some examples of such software include WebSphere software, which is used to integrate and manage business processes. Other software packages include information management software for data warehousing, business analytics, business intelligence, performance management, predictive analytics etc. The Systems and technology segment caters to computing and storage solutions and needs. It is responsible for solutions in the area of servers, disk storage, microelectronics, and point-of-sale retail systems. The financing segment provides financial services such as providing leases and loans for the financing of internal clients and end-users.

The first Knowledge Management system in IBM was implemented in 1994, and Rob Lewis later disclosed the fact that super knowledge sharing within the organization (IBM) would be the key to survival and success. IBM has always focused on innovative tools and creative processes and was using the Lotus software, blue YouTube for IBMers, podcasts, blogs, wikis, and discussion forums. Recently, they have incorporated all these social tools into a single internal social software platform, which is called IBM Connections.

ESSP's Within IBM (IBM Connections)

At IBM, a set of ESSP's have been integrated into the Social Networking Site (SNS), IBM Connections. One of the principal roles of IBM Connections is to facilitate knowledge sharing between employees in the organization. It integrates several different platforms across the organization. The system is designed as such that integration with existing systems in the organization is made easy. In a typical intranet system, there are imposed structures that control the flow of information and knowledge. The managers and system administrators decide what data is accessible by whom and when.

IBM Connections allows users to decide for themselves. The type of information shared, how it is shared, and with whom, is totally left to the discretion of the employees. This point is reiterated by James Ek when he says that "employees decide what information is relevant for them through the help of social tools."

There are key "services" (as IBM calls them) in this SNS, which are all designed for the overall purpose of collaboration and knowledge-sharing within the organization. Karl (Technical sales manager) explains that "All of these services are based on rest API's. This is a standard which makes it possible to utilize these services somewhere else. All services can be integrated in other web-based systems such as SharePoint. All or some of the services can be used on existing platforms or systems." These services are divided into seven different categories, including profiles, communities, blogs, bookmarks, activities, files, and wikis. These various services

have specific functions that are described below. (Screenshots have been included for clarity.)

Profiles

This is a directory of each person in the organization. It includes information needed to form effective networks. The profiles service stores basic contact information, tags for expertise and interest, and also includes an "about me" section. This section gives a personal description for each employee. In the profiles service, there is the ability to define friends in the employee's network. It is also possible to synchronise personal profiles with corporate directories and human resource applications. Profiles can be used to search the organization for skills and expertise. It can be used to build up a social network of colleagues and track their latest posts. *(See appendix 1 for a screenshot of profiles.)*

Communities

Lotus Connections Communities is a website where people who share a common interest can interact with one another, share information, and exchange ideas. Community members can participate in community-specific activities. This service allows users to congregate around a subject of interest. It provides online forums, discussion boards, shared bookmarks, tags and news feeds. This service incorporates instant messaging (IM) capabilities.

Blogs

Lotus Connections Blog serves as an online journal that you can use to deliver timely information with a personal touch. These blogs can be used to present ideas and get feedback from others, or even learn from the expertise of others who blog.

Bookmarks

Social bookmarking is a tool for saving, organizing, and sharing Internet and intranet links. With this service, users can discover bookmarks that have been created by others with similar interests and expertises.

Activities

The activities service is a light-weight, web-based project management service that targets professional businesspeople. It provides a common online location, where important items, such as "to-do" lists and messages for team members ,can be stored. Activities act as a collaboration tool for collecting, organizing, sharing, and reusing work that is related to a project goal.

Files

This is a common repository in which you can upload files and share them with others. Store versions of a file, view who has downloaded a file or commented on it, and see highly recommended files.

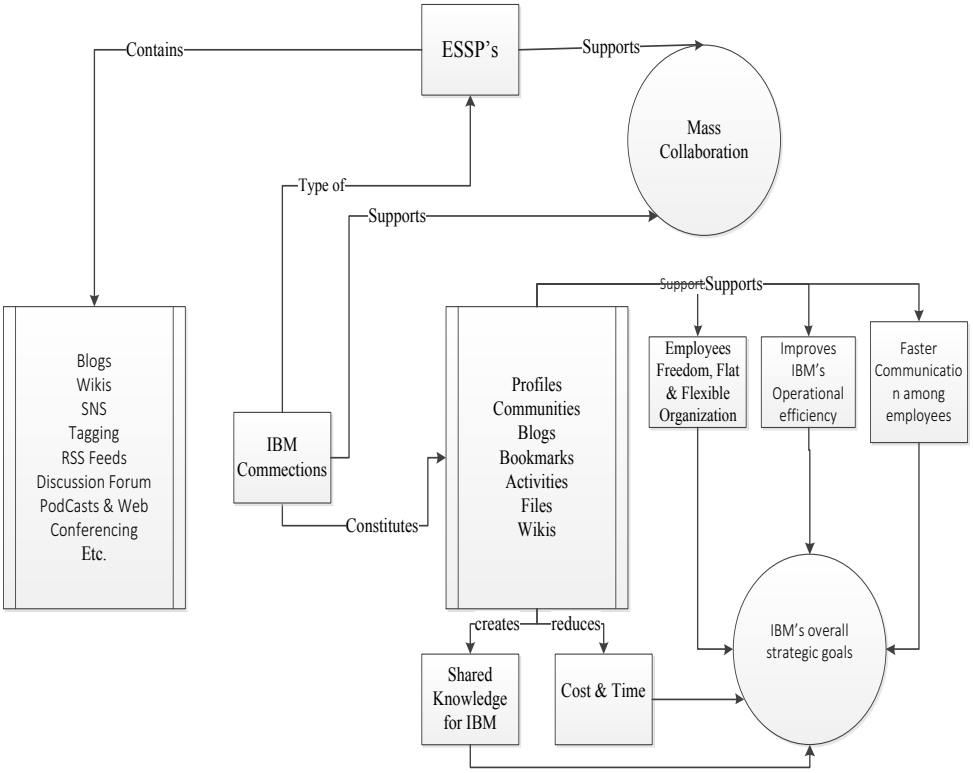

Figure 3 CONCEPTUAL MODEL OF SOCIAL MEDIA WITHIN IBM

Wikis

This is a tool for creating wikis that individuals, groups, and communities can use to capture, share, and co-author information/knowledge. View page changes, recommendations, and comments

CASE STUDY RESULTS

IBM Connections

At IBM, a set of ESSP's has been integrated into IBM Connections, which integrates various platforms across the organization. The system is designed to allow easy integration with existing systems. In a typical intranet system, there are structures imposed to control the flow of information and knowledge. The managers and system administrators decide what information is accessible, who can access them, and when to access. In contrast, IBM connections let users decide for themselves what type of information to share, how it is shared, and whom to share it with.

James Ek, the country executive of collaborative solutions, reiterates that "Employees decide what information is relevant for them through the help of social tools."

There are key services in this SNS, as IBM calls it, which are designed for collaboration and knowledge sharing within the organization. Karl, the Technical sales manager, explains that:

> *All of these services are based on rest API's. This is a standard, which makes it possible to utilize these services somewhere else. All services can be integrated in other web-based systems such as SharePoint. All or some of the services can be used on existing platforms or systems.*

These services are divided into seven categories: profiles, communities, blogs, bookmarks, activities, files, and wikis. These services have specific functions which are described below.

IBM Social Media Strategy and Vision

IBM is one of the few multi-national corporations that pioneered the adoption of social media. It has rich experience in the use of social media that dates as far back as 2002. IBM has embraced it, promoting its use throughout the organization. It has put this system to use since Lotus was first integrated into the organization.

The strategy adopted at IBM is a "social business," as stated by James Ek. He sees social media as the new way to communicate, and the strategy to achieve this is to make all applications in the organization social. According to him, the vision for Enterprise 2.0 within IBM is summarised in the following sentence:

> *Quickly spreading information to a lot of people in an effective way is the way forward. Social awareness in combination with a great need, for enabling companies to better communicates internally and externally.*

The company realizes that people are more socially aware today, but instead of regarding social media as a leisure tool to be used at home, IBM actively utilises it in the work place to increase productivity and efficiency. Collaboration is a key goal that is achieved by using social media within the organization. Therefore, the common slogan among IBMers is, "When team IBM comes together, we are unbeatable."

Social media form extensive networks throughout the organization, fostering even greater collaboration. In this way, IBM promotes an open information culture. Karl, the technical sales manager, states that "Open standards, open platforms is the general strategic direction we want to go. The connection platform is a social and open platform developed for internal use IBM."

Accesses to information and resources throughout the organization have been facilitated thanks to a flat organizational structure, made possible by social media. James EK states that "Social media flattens the organization and facilitates access to the right information and resources."

The company empowers employees to participate. Luis Suarez, a Knowledge Management Specialist at IBM Global Business Services, states that "Command and Control corporations will cease as people need to be freed to share what they know."

Through social media, IBM strives for a globally integrated company, one which increases the outreach to its employees. This vision prompted the CEO of the company, Sam Palmisano, to make the following statement:

> *A globally integrated company looks very different. This is an enterprise that shapes its strategy, management, and operations in a truly global way. It locates operations and functions anywhere in the world based on the right cost, the right skills, and the right business environment. And it integrates those operations horizontally and globally.*

Palmisano's vision is to provide the tools necessary to support collaboration. This set of tools is Lotus Connections. The system's main vision is to build a professional network for former and current IBMers to collaborate and leverage social computing both within and outside the corporation.

Another social media strategy at IBM is the use of open programming models (or the platform approach). Lotus Connections are designed using service-oriented architecture (SOA), which makes it easier to reuse services in the software.

Being both a user and vendor of social media, IBM talks the talk and walks the walk. The company leads by example, actively using its own products as proof of what can be achieved as just one strategy used. James EK, Country manager for portal and Lotus Collaboration solutions states that "We lead when we say collaboration solutions to our existing and new users. Internally we strive to do what we say, and social media is the natural way to communicate with peers for quick and effective spread of information."

RESULTS

The Knowledge Sharing Cycle

The knowledge sharing cycle has three dimensions: internalization, externalization, and objectification. A fourth one, intermediation, is introduced to this cycle. Intermediation connects knowledge seekers with the knowledge source. Sharing creates an environment for acting globally, but not all knowledge is objective knowledge. The process of externalization transitions into objectification, but there has to be universal acceptance of the new knowledge by the whole organization. Wikis, however, often consist of objective knowledge.

At IBM, the wikis created contain conventional and generally accepted knowledge. Wikis are, therefore, the most suitable platform for the process of objectification. Unlike blogs and communities, other users within the organization with the right permissions can edit wiki material if it is deemed necessary. Wikis keep track of changes, including those that made them and when the changes were made,

thereby resolving issues of objectivity. Through wikis, knowledge can turn into organizational knowledge, and the cycle starts all over again with internalization.

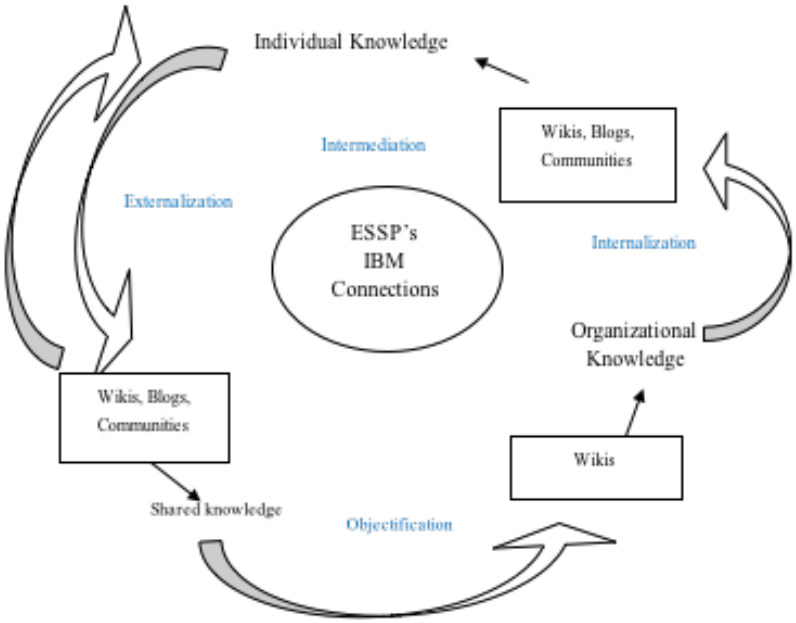

FIGURE 4PROPOSED OBJECTIFIED KNOWLEDGE SHARING CYCLE

Collaboration

Tapscott and William (2006) argue that wikinomics is changing the manner in which we conduct modern business. This new theory has four characteristics: being open, peering, sharing, and acting globally. These are clearly discernible within the IBM Corporation and are facilitated by the use of ESSP's. Unlike traditional intranets, platforms and Web 2.0 provide an open environment for collaboration. Being open refers to being transparent and having organizational boundaries that are porous to external ideas. IBM achieves openness through its social media usage and policies which also extensively promote peering. Through the use of communities, employees with similar interests form peer groups, and help each other with problems. Sharing is made easy through ESSP's. All applications and services operating on IBM Connections are heavily linked. Such links are crucial for accessing and quickly sharing the right resources. IBM Connections acts globally because the platform is deployed and used throughout the IBM Corporation. It is fully integrated in the web and can be accessed virtually from anywhere around the world through the Internet.

CONCLUSION

The purpose of this study was to examine the way ESSP's can be used for knowledge sharing and collaboration within organizations, while discussing the impacts of different forms of social media that can be used in different phases of the knowledge sharing cycle. Enterprise 2.0 platforms assist the process of knowledge sharing, converting knowledge from its various modes. The phases of the knowledge sharing cycle are internalization, externalization, and objectification. Knowledge can be

explicit or implicit. The model is central to this paper and illustrates the impact of various forms of social media in different stages of the knowledge sharing cycle. The role of social media in collaboration among employees within an organization has also been highlighted throughout the work.

The main Enterprise 2.0 platforms, which facilitate knowledge sharing, include blogs, wikis, and communities. These tools facilitate knowledge transfer by helping to convert knowledge from its different modes. ESSP's helps connect knowledge seekers to knowledge providers by way of extensive social networking. The various tools available on these platforms, such as profiles, internal search engines, communities, etc. make the tasks of searching and locating the right knowledge easier.

The various processes in the knowledge sharing cycle include internalization, externalization and objectification. As knowledge goes through these different stages, it is converted from implicit to explicit knowledge and vice versa. At the stage of internalization, knowledge is converted from explicit to implicit knowledge, which leads to individual knowledge. Blogs, wikis, and communities facilitate this process. In the process of externalization, knowledge is converted from implicit to explicit knowledge. In this stage, knowledge is transferred from individuals to the rest of the organization, therefore adding to its intellectual capital. At the level of objectification, shared knowledge is standardized and made acceptable throughout the whole organization. This is achieved with the aid of wikis.

Social media can be seen through the results of this work to foster and promote extensive collaboration throughout the organization. All seven services that are integrated within IBM Connections help to improve collaboration within the entire organization. The four main characteristics of Wikinomics, which are sharing, peering, being open, and acting globally are all attained by IBM through the use of IBM Connections. Through communities, wikis and blogs, employees have the opportunity to do a lot of peering by participating with their peers on subjects and topics of interest. Wikis are considered the most practically collaborative tool for incremental knowledge creation, value networks and supports multi-user participation as an open source technology.

The files service in IBM Connections facilitates sharing by eliminating emails and replacing them with links to files being shared. Other social media features, such as tagging and bookmarking, also help employees to quickly find and share resources with their fellow workers. The wiki platform is the greatest tool for sharing and collaborating, as makes it possible for multiple people to work on the same projects simultaneously, while making live edits and updates. IBM has an open-information culture, and access to resources is made easier through ESSP's.

Reflections and Future Recommendations

Research into interdisciplinary subjects can be very challenging. In this paper, we have had to simultaneously address knowledge sharing (which is a huge academic field of its own) and Enterprise 2.0. There is a tendency to lose sight of the main research purpose in such research. From start to finish, the authors of this paper have

been carefully guided by the research question, avoiding placing too much emphasis on knowledge sharing. Rather, knowledge sharing is only introduced very superficially to give the readers a basic understanding of this area. This helps to build a foundation that is vital for understanding the final model that is presented in the result section of the work. The case study method was applied in this work, and we believe this method has been helpful in arranging objective conclusions.

However, it is worth noting that multiple cases in different industries would produce more credible results. The interview questions on which our findings were based were carefully formulated to suit the purpose of the work. These questions were guided by the theoretical frame of reference. The answers given by the three interviewees within IBM are the basis for most of our findings and discussions. We have, however, also used other secondary sources, such as recorded interviews with employees within the organization. These interviews have helped in forming some arguments and discussions. While this paper does not necessarily add a new body of knowledge to the field of Enterprise 2.0 or knowledge management, we do believe that it sheds light on radical new way of doing business. It illustrates how social media can be integrated and used within a business organization and the benefits that can be reaped from doing so. This research therefore shows a new path, which companies can follow in order to improve collaboration and knowledge sharing within their organization.

The findings in this research could precede further work in the area of Enterprise 2.0. Future research directions might involve evaluation taxonomy for the ESSP's Tool. Secondly, the role of ESSP's in bridging the gap between business and IT strategy. Another interesting topic can be the development of a mechanism to integrate ESSP architecture with existing organizational IT architecture.

It is hoped that further research will continue in this exciting new field in order to help unleash and leverage the full power and capacity of Enterprise 2.0.

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PAPER 3

CONSULTANT STRATEGIES AND TECHNOLOGICAL AFFORDANCES: MANAGING ORGANIZATIONAL SOCIAL MEDIA

CONSULTANT STRATEGIES AND TECHNOLOGICAL AFFORDANCES: MANAGING ORGANIZATIONAL SOCIAL MEDIA

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ABSTRACT

Organizations increasingly seek to explore the new opportunities that social media offers in terms of engaging with customers, users, and partners. So far, academic research on organizational practice of social media is sporadic and corporate actors are thus left without level-headed advice as to how to best implement and use social media technologies. In this paper, we examine what sort of advice management consultants offer organizations looking to engage in social media. We use four affordances of social media – visibility, persistence, editability, and association – to analytically explore the fit between social media as a technology and the strategies offered by consultancy firms. We also look attitudes towards social media and information management, which contributes to practitioners' understanding of the intrinsic characteristics of social media. Our research concludes that affordances of the technology clashes with a centralised top-down approach to information management that dominates in consultants' strategy documents.

***Keywords**: Social media strategy, social media affordances, organizational use, information management*

[6] Authors listed alphabetically

INTRODUCTION

Organizations are increasingly adopting social media despite the fact that the implications of this new class of technology on organizational behaviour are yet unknown (Treem & Leonardi, 2012). Academic research on organizational use of social media is sporadic and corporate actors are therefore left without level-headed advice as to how to implement social media technologies. This situation has created a market for management consultants to provide corporate social media strategies for organizational stakeholders wanting to engage in social media. Some well-known practitioner organizations such as IBM, KPMG and Ernst & Young actively use social media technologies to share information, form a collective intelligence, and increase engagement amongst their employees (Faraj *et al.*, 2011; Majchrzak *et al.* 2013; Zaffar *et al.* 2013; Bergquist *et al.*, 2013). Loosely based on anecdotal data, strategy consultants claim that social media technologies are critical for organizations to connect with customers, users or partners, since these technologies create opportunities for peers to connect both within and outside the organization.

However, technology and organization affect one another (Howcroft & Trauth, 2005), and new technologies cannot be expected to work "as designed" when introduced in different contexts. In fact, the academic literature suggests that when it comes to management, social media requires a shift from a "traditional" centralised top-down strategy to a decentralised bottom-up strategy (Majchrzak *et al.*, 2000; Stenmark, 2008; Treem & Leonardi, 2012). At the same time, anecdotal evidence seems to indicate that management consultants continue to base their social media strategies on a traditional control-view on information management. This possible misalignment has not been thoroughly examined yet and hence this is the aim of this work. Our research question is therefore: How do social media consultants' strategies align with the affordances of the technology? Our research contributes to the academic literature on social media usage in organizations and to practitioners' understanding of the intrinsic characteristics of social media.

The paper is organized as follows: first we introduce information management academic literature in relation to management strategies for information management in social media. This is followed by a method section where the selection, collection and coding of the data is described. The result section then presents the constructed four categories (central/decentral, explicit/implicit) in a 2x2 matrix (see figure 1), which is then discussed and analyzed from an affordances perspective. The paper ends with the conclusion that there is indeed a misalignment between social media discourses.

INFORMATION MANAGEMENT IN ORGANIZATIONAL SOCIAL MEDIA USE

A thorough review of the academic knowledge management literature shows that these commentators unanimously and rather unreflectively speaks in favour of aligned, rigid, and highly standardized structures as far as organizational information

is concerned (Ciborra, 2000). Information is tightly administered by a small elite and information management is seen as a managerial responsibility, primarily. The centrality of control, Ciborra concludes, is one of the basic tenets in this discourse. More recent work has shown that this attitude has prevailed despite changes in technology. For example, intranets, i.e., internal organizational webs, have been managed in a highly centralised way, leaving ordinary employees out of the process and thus unable to share information even within the organization (Tredinnick, 2006, McAfee, 2006; Stenmark, 2006; 2008). These authors argue that organizational information on intranets comes from people who has little to do with the mundane work tasks of ordinary employees. Bennett *et al.* (2010) argue that in today's information society control of information should be handed over to those who actually do the work and are able to add information as soon as it becomes available, i.e., the employees. A decentralised view on information management is thus needed.

Recently, social media has emerged as a new class of technology. Despite the massive adoption of social media applications in society at large, organizations have remained sceptical about bringing it to the organizational domain (Deans 2011). It has been argued that this may stem from the fact that relatively little is known about social media usage within organizations (Treem & Leonardi, 2012). In the last few years organizational interest has risen dramatically (Faraj *et al.*, 2011), but the implications of social media use in organizations are still poorly understood and have not been explored succinctly (Treem & Leonardi, 2012; Bergquist *et al.*, 2013).

Although social media are easy to recognise they remain difficult to clearly define. Recent analysis of practitioner documents revealed that almost 80% of the examined texts on organizational social media strategies lacked a definition of what is social media (Bergquist *et al.*, 2013). Not only practitioners struggle; even academics find it difficult to exactly define this phenomenon, and Treem and Leonardi (2012) notice that most definitions typically conclude that social media is something that exists online, enables content creation, and visualises that content to others. To illustrate, Van Osch and Coursaris (2013), having synthesised over 600 research articles, arrive at the following definition:

> "*Social media are technology artefacts, both material and virtual, that support various actors in a multiplicity of communication activities for producing user-generated content, developing and maintaining social relationships, or enabling other computer mediated interactions and collaborations*" (p. 703).

Such a definition, argue Treem and Leonardi (2012), is too broad and general to be useful since it fails to clearly distinguish social media from other forms of communication applications, such as e.g. email. Instead, the authors argue, one should look at the features that are unique to this class of technology and they suggest that what separates social media from earlier organizational communication tools are that social media share four specific affordances; visibility, persistence, editability and association.

Visibility means that social media afford users the ability to make their behaviours, knowledge, preferences, and communication network connections that

were once invisible (or at least very hard to see) visible to others in the organization. Treem and Leonardi means that work behaviour, meta-knowledge and organizational activity streams are three types of actions that are made visible through the use of social media in organizations. *Persistence* refers to the fact that communication remains accessible in the same form as the original display after the actor logs out from Facebook or exits the blog application. The information provided by the actor remains available to other users and does not expire or disappear. Three ways in which the affordance of persistence affects organizations are sustaining knowledge over time, creating robust forms of communication, and growing content (Treem & Leonardi, 2012). *Editability* means that individuals can take their own time to carefully craft and edit a communicative act before it is made publicly available.

This way, these authors argue, the affordance of editability is used to shape organizational behaviour through regulating personal expressions, targeting content, and improving information quality. *Associations*, finally, denotes recognised and established connections. Associations in social media come in two forms; a person to another individual or an individual to a piece of information. When social media afford association with other individuals or content, it supports social connections, gives access to relevant information, and enables emergent connections (Treem & Leonardi, 2012).

RESEARCH METHOD

In this study, we wanted to learn to what extent social media strategy consultants' advice organizations to adopt an approach that is in line with the affordances of the features of social media as it is understood in academic literature. To understand the practitioner discourse, we used generally available whitepapers and reports on corporate social media strategies authored by consultancy firms as our empirical data. Based on Miles and Huberman's (1994) principles of data reduction, data display, and conclusion drawing, Romano *et al.* (2003) suggest a similar method when dealing with web-based qualitative data, which they refer to as elicitation, reduction and visualisation. In this work, we have followed this approach as described below and summarised in Table 7.

Elicitation		*Reduction*		*Visualization*
Collection	Top 500 PDFs reports were collected using Google search engine	Reduction Criteria	1. Documents should explicitly mention corporate social media strategy 2. Documents should target management and decision makers 3. Documents should be authored by management/strategy consultants portrayed as experts on social media	The 136 documents were placed in the 2x2 matrix
Search terms	Social media strategy corporate management			
Language	English	Selection	136 reports were selected based on the reduction criteria	
Region	All			
Time	Updated to anytime	Coding	Dimensions used: Centralised or Decentralised approach Explicit or Implicit arguments	
File Type	PDF			

TABLE 7 THE PROCESS OF ELICITATION, REDUCTION AND VISUALISATION

Elicitation means collecting the data. We decided to use Google search engine to retrieve our data for two reasons; Firstly, Google is reported to be the market leader in most Western countries (Beel *et al.*, 2010) and, secondly, Google uses a page rank algorithm that incorporate the judgment of other web commentators (Brin & Page, 1998). Using Google thus gave both the best coverage (i.e., finding most of the document related to the topic) and the best precision (i.e., ranking the most influential papers highest). We specifically searched for documents in the Portable Document Format (PDF), and this also for two reasons. Firstly, unlike a web page or a blog, which is constantly under construction, a PDF connotes stability and gives a more formal status to a text. A PDF document contains a finalised text that is ready for distribution. Secondly, the PDF format has become a de-facto standard for electronic document exchange that a large number of companies have adopted as a preferred format (Castiglione *et al.*, 2010).

The search terms 'social media', 'strategy' 'corporate' 'management' were used together with advanced features where language was set to 'English', regions to 'all regions', updated to 'anytime', and file type 'PDF files (.pdf)'. We ended the elicitation phase by selecting the top 500 reports for further manual investigation.

Reduction is an iterative process of selection, coding and clustering (Romano *et al.*, 2003). For the selection process, we used three different retention criteria; Documents should 1) explicitly talk about corporate social media strategy, 2) target management and decision makers, and 3) be written by social media management/strategy consultants. Having screened the 500 documents, 136 documents were found to fulfil all three criteria (a complete list can be provided by the authors upon request). Each document was thereafter categorised depending on whether a centralised (i.e., information should be managed by a small elite team) or a decentralised (i.e., individual employees are empowered to share information) approach to information ownership was advocated. Further, such attitudes towards information management could either be explicitly stated in the documents or tacitly implied, so these two aspects were also used to code the documents. These two coding dimensions (central/decentral, explicit/implicit) formed four categories in a 2x2 matrix (see Figure 1). In addition, we found that some of the document did not disclose any view on information management so we felt compelled to introduce a fifth category for the documents where this topic could not be detected.

Two independent reviewers coded the documents using the above five categories as our coding scheme, resulting in a raw interjudge agreement of 78%. The Perreault and Leigh (1989) interjudge reliability *Ir*, which take into consideration the number of different categories, was calculated to 85%, which is fully in line with what can be expected in these kinds of studies. The final coding of documents where there was disagreement was decided through discussions. The outcome of the coding process was visualised in a table so the distribution over the two dimensions became clear (see Figure 1). A qualitative analysis of the content of each cell was thereafter carried out by the two authors jointly.

EMPIRICAL RESULTS

The results of our elicitation, reduction and visualisation work can be seen in figure 1 below. Each document is symbolised by a circle with a number. The number is the rank order from Google when the first 500 documents were retrieved.

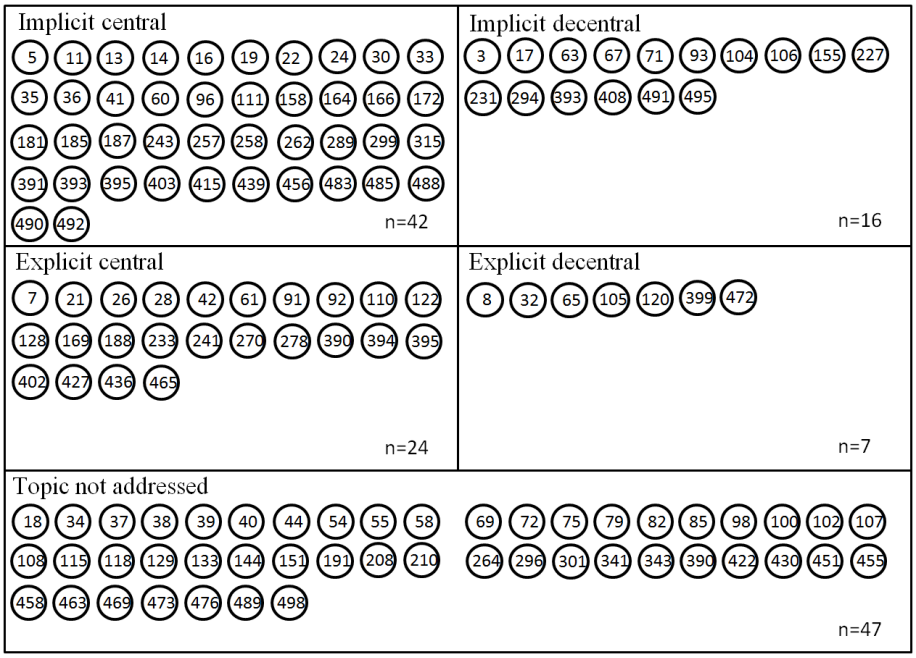

FIGURE 5 CATEGORIZATION AND MAPPING OF 136 DOCUMENTS FOR CENTRALIZED OR DECENTRALIZED INFORMATION MANAGEMENT PRACTICE

The centralised approach

A centralised approach to information management means that social media should be used and handled by a small staff of trained communication officers and that individual employees in general should not use social media during office hours. This approach "[...] is necessary to ensure consistent customer experiences, reliable content creation, data governance and regulatory compliance" (Ernst & Young, PDF #128)". With a total of 66 documents out of 136, the centralised approach, which is in line with traditional literature on information management, was dominating.

Going through these documents, we found that many of them did not include any motivations as to why a centralised approach was to prefer. In some of the documents, however, we could find such arguments and below we highlight a few examples of how the centralised information management approach was promoted both explicitly and implicitly.

Implicitly centralised

The largest group of the four was the group of documents where information management was tacitly suggested to be handled centrally. This group contained 42 documents which represents 31% of the total. As the documents in this group do not

explicitly suggest an information management strategy they largely lack arguments as to why organizations should adopt such an approach. Here, the centralised approach is only implied. However, documents in this category often mention risks associated with social media. In fact, quite a few of the documents are focusing on risk management.

One such example is a document by Osterman Research, Inc. (PDF #262), in which they show that most organizations participating in one of their surveys failed to archive their users' content posted to social media properties, a quarter of the organizations had had malware infiltrations through social media, and 13% had experienced the leakage of sensitive or confidential information through social media.

A very similar list of social media-related risks is presented by Ernst & Young (PDF #33):

- *Employees involved in social media inadvertently leaking sensitive company information*
- *Criminal hackers "re-engineering" confidential information — log-ins and passwords, for example — based on information obtained from employee posts*
- *Employee misuse of social applications while at work*
- *Hacked, faked or compromised corporate or executive Twitter or Facebook fan page or individual accounts*
- *More platforms create more access for viruses, malware, cross-site scripting and phishing*
- *Damage to a brand or company reputation from negative, embarrassing or even incriminating employee or customer posts, even those that are well-intended*
- *Failure to establish complete and fully compliant archiving and record-retention processes for corporate information shared on social media, especially in the health care, financial services and banking industries*

(Cited from Ernst & Young (PDF #33), page 5)

To summarise, the arguments presented in this category of "implicitly centralised" as to why organizations should go this way are thus also "*implicit", but "[…] the various risks that organizations face from unmanaged use of social media"* (PDF #262) are highlighted and exemplified in many of the documents in this category.

Explicitly Centralised

The second largest category with 24 documents (18%) was the one where the consultants explicitly argued for a centralised approach to information management. As a motivation, these commentators also primarily pointed to the risks associated with social media usage. Often, these risks were not specified but talked about as "risks" in general, as in the excerpt below.

"*Harnessing the power of social media can seem like a daunting task, one that presents unique risks to your organization.*" KPMG (PDF #7)

"*Social media is just the latest wakeup call to the risk management function. There is no turning back now. Being prepared is the only logical choice.*" Edward Moed, crisis management specialist at Peppercom (PDF #394)

In some documents, the authors are more specific about the risks, and productivity loss, information leakage, and reputation damage are amongst the most frequently mentioned threats. It is argued that a centrally controlled use of social media is thus needed in order to avoid the risk of disclosing confidential information or other material not suitable for public viewing.

"*Social media comes with several specific risks, including the potential for employees involved in social media to inadvertently leak sensitive company information.*" Ernst & Young (PDF #128)

"*This lack of social media governance exposes organizations to significant risks, including accidental or intentional release of confidential information or trade secrets, public embarrassment through employees commenting inappropriately online or engaging with inappropriate content*". UTS (PDF #21)

In addition to the above concerns, some consultants also point to the need to retain and archive material, which they argue risk being neglected unless management takes a firm grip of social media usage:

"*In short, although social media is a relatively new communication and information management channel relative to more traditional tools like email or instant messaging, the same fundamental management requirements apply: social media must be monitored for malware and inappropriate content, and relevant business records sent through social media must be retained and easily accessible for as long as necessary.*" Osterman Research, Inc. (PDF #92)

"*Have a senior level employee manage communications so that they can ensure the brand, values and overall strategy are represented correctly in your social media interactions*". Debbie Dimoff, VP consulting, PwC

The main motivating factor for the explicit centralised approach is thus to avoid the risks associated with social media.

The decentralised approach

A decentralised approach to information management when it comes to social media means that the individual employees are allowed - or even expected - to use social media, to share information, and to contribute to the shared pool of knowledge. As Web 2.0 consultancy firm Awareness, Inc. says

"*If you want to increase word of mouth and build good will, you'll also need to give up on the control and 'corporate speak' and give users and customers the tools to create their own stories—about their interests, and your market and even about you. If you want them to help one another (which is in your best interest)*

you need to empower them with tools and features that enrich the discussions they are having and connections they are making" (PDF #472).

With a total of only 23 documents out of 136, the decentralised approach, which is in line with the academic literature on this topic, was thus in a clear minority. We now provide some illustrations of how decentralised information management was advocated both explicitly and implicitly.

Implicitly decentralised

The group of documents were the consultants advocated a decentralised approach in an implicit way turned out to be the second smallest group with 16 documents, representing 12% of the total. Most documents in the decentralised category provided positive arguments highlighting the opportunities and benefits of such an approach. A few commentators, however, addressed also the concerns that some companies seem to have with a wide-spread use of social media amongst the employees, e.g., the risk of productivity loss. These risk, they argued were often unsubstantiated or over-exaggerated.

"*In reality, many of the worries about time wasting are no different from similar concerns when organizations adopted email or telephones: the potential for time wasting is certainly there, but generally it is only those that are determined to waste time that tend to abuse these privileges. […] Our research demonstrates that – once implemented – the benefits clearly outweigh the risks. So, for example, while only around a third of respondents cited time wasting as an expe*rienced risk, more than double that amount claimed to have witnessed productivity gains." KPMG (PDF #17)

The talk about risks is prominent also amongst the commentators who more implicitly are suggesting a decentralised approach to social media. Even though these authors advocate a decentralised approach, they caution organizations not to let go of control altogether but be aware of the risks that may be involved.

"*[Organizations] are concerned about controlling the flow of information internally and externally and about what could happen if that control is lost. While the use of social media is valuable and to be encouraged, it is important that we are fully aware of the risks involved*". Tatiana Baquero, Principal Knowledge Management Analyst (PDF #93)

These commentators do nonetheless agree that the potential risks are outweighed by the benefits. A basic assumption amongst these authors is that employees are professional and responsible people, capable of acting under freedom, so a minimum of restrictions should suffice.

"*No one wants to be told what to do, especially if it involves their personal life. You can't dictate how your employees participate in social media on their own time, and creating disgruntled employees by implementing a strict social media policy will only fuel the fire and create disgruntled workers. If you're going to initiate a social media policy, keep it simple, and use it to serve as a reminder that*

employees should use good discretion when engaging in social media. Your employees should have good common sense not to disclose confidential information on Facebook, but sometimes a reminder doesn't hurt" HubSpot (PDF #104).

In sum, the arguments for the decentralised approach are mostly implicit and seem to be that the risks are exaggerated and that the upside of allowing all employees to engage in social media outweighs any potential problems.

Explicitly decentralised

The documents explicitly suggesting a decentralised approach is the smallest of our four categories with only seven documents. This equal 5% of the total number of documents. In these documents, the authors explicitly spell out that all organizational members, and not just an information elite, should be given access to social media tools. Amongst the primary reasons they put forward is the larger pool of collective ideas that social media enables, the collaborative environment they create and the increase in information sharing that they result in.

"*Social media facilitates the interactive sharing of information and places increased emphasis on the creation and dissemination of content, ideas, opinions and experiences by all users. Used strategically, social media offers organizations an unprecedented opportunity to actively engage employees, customers, suppliers and other interested stakeholders and benefit from their collective ideas, knowledge and experiences*". Deloitte (PDF #8)

A related theme is increased collaboration both within the organization and between organizational members and external parties. IBM is put forward as an example to follow by some commentators:

"*[IBM's] decision to use a social platform to encourage collaboration affirmed a larger commitment to embracing innovation, dialogue, and the exchange of ideas*". Paul Argenti, professor and communication consultant (PDF #105)

Although a decentralised approach is advocated, it does not mean that anything goes. Several authors argue that guidelines and policies should be in place but primarily not to restrict the employees but to help them act with more confidence:

"*Companies need to support and empower employees by arming them with the information they need to successfully and appropriately engage on blogs, Facebook, Twitter, and other social media channels. Specifying rules and guidelines means staff can be confident about engaging without being afraid of doing lasting damage to your brand.*" Radian6 (PDF# 120)

Even used within the organizational borders, social media empowers employees to contribute to the development of the organization's operation.

"*Enable employees to make their company better by encouraging them to propose new programs and policies. Keep everyone in the loop by seeding groups*

with relevant information and documents, and allow employees to answer each other's questions. This helps make people more passionate about solving the problems important to them." Radian6 (PDF# 120)

Documents in this category argue that there are many benefits to be expected from adopting a decentralised approach to social media usage.

The absence of an information management discussion

Finally, a large number of documents did not touch upon the topic of information management - not even implicitly - and we were thus unable to place it within our two-by-two matrix. Seen as a category, this group was the largest group, with 47 of the documents, representing more than a third of total number of 136 documents. Twenty-one of these documents provided normative to-do lists for social media initiatives, predominantly for SMEs. Another ten documents focused on how social media can be used to respond to customers or the general public, particularly in times of crisis. Other documents very more targeted and addressed specific audiences, focusing on brand management or various marketing strategies. In general, many of these documents contained to-do lists or "top-10 tips" from which it was impossible to determine what take on information management the authors had.

DISCUSSION

Although Treem and Leonardi (2012) acknowledge that affordances may differ between actors, contexts and situations, Leonardi (2011; Leonardi & Barley, 2008) has found that a particular technology still has the same (or at least similar) affordances across organizational settings because of the manner in which the features limit the outcome space. Treem and Leonardi's (2012) conceptualisation of the social media features therefore resulted in a set of four distinct affordances that *commonly* emerge out of organizational use of social media; visibility, persistence, editability and association. In this paper, we use these four affordances as the yardstick against which we measure and valuate different organizational strategies.

Organizational behaviour is typically understood as the behaviour of both individuals and groups within an organization, but not so often the organization as a whole (Heath & Sitkin, 2001). Individual employees and groups alike benefit from *visibility* as it displays behaviours, knowledge, and communication networks that are otherwise invisible, allowing these actors to benefit from such resources. Although a centralised team of elite communicators can benefit from the visibility affordance, to really leverage from this affordance, participation should include the organization as a whole. Due to the network effects, the organizational gain from scaling up through a decentralised strategy would be multifold, and we therefore argue that a centralised approach to organizational use of social media limits the positive effects of the visibility affordance.

One aspect of *persistence* is the amount of information that is made available and searchable through social media. Although a central approach also leaves information available for the organization to view, the amount is much less than if a

decentralised strategy is adopted. Here, too, a centralised approach benefits less the persistence affordance. Content targeted for individual needs and improved information quality through repeated editing and updating are results of the *editability* affordance. However, both persistence and editability are based on the fact that those who provide information are also those who need information. As the centralised approach relies on an information elite who are separated from the operational work, such a strategy makes limited use of the editability affordance. The *association* affordance enables links between individuals and between individuals and relevant content. This is due to the fact that social media helps individuals make their associations more visible, and once these links are made public they recursively enable more associations. A centralised approach with only a few contributors does not seed off such a development. It would be a like a World Wide Web where only (a few) organizations provide information. What makes the Web a success is the information, links and associations between (a huge number of) individual contributors. In sum, the affordances of social media align best with a decentralised approach to information management.

Discussing Web 2.0, Stenmark (2008) has argued that the concept should be understood as a mix of technology and attitudes. Above, we have discussed the technology features and its affordances. Let us now look at attitudes towards social media and information management. In the absence of solid empirical research regarding organizational use of social media, managers have to turn to communication and media consultants to get advice on how to deal with these new information channels. Although growing rapidly, social media is still a new phenomenon in the corporate world and organizational actors are thus struggling with how to best use it, and it is understandable that organizations stick to traditional methods.

However, our results show that also most social media consultants subscribe to a traditional information management approach. As can be seen above, the centralised strategy outnumbers the decentralised approach almost 3 to 1. This may reflect the fact that most strategy consultants are fostered according to a “traditional” management approach where command and control are considered norm. It may also be so that the fact that they are targeting what they expect to be a “traditional” management audience makes them likely to propose a strategy that is in line with what they expect the audience wants to hear.

All technology use offers both risks and opportunities and social media are no more risky than telephones and email, as KPMG points out in Document #17. In fact, many of the risks mentioned by some consultants were at the same time dismissed as unsubstantiated or over-exaggerated by other commentators. It is still interesting to note that so many consultants chose to address risk issues, i.e., the negative aspects of the technology, and it is even more interesting to note that it is predominantly those in favour of a centralised approach who talk about potential risks. Correlation does not imply causation but it seems plausible to suggest that if you are more prone to see

risks you are more likely to subscribe to a centralised approach to organizational social media. This is a topic where more research is needed.

Finally, it may be surprising that not many commentators are explicit about information management. The number of documents being implicit about the information management strategy (58 PDFs) is approximately 80% higher than those that are explicit (31 PDFs). In addition, there is also a large group of documents (47 PDFs) not discussing information management at all. In other words, less than a quarter of the total number of strategy documents examined provides explicit advice to organization when it comes to social media information management. In other words, a vast majority of consultants' advice on social media strategy fails to address the issue of information management. A reason for this may again be that consultants tacitly see a centralised information management as taken-for-granted and fail to reflect upon the fact that new technology may require new attitudes and approaches.

CONCLUSIONS

The objective was to find out how consultants' social media strategies align with the affordances of the technology, and our overall answer is that the affordances of social media seem to align best with a decentralised approach to information management, whereas most consultants advocate a traditional and centralised strategy.

However, we have also noted that a vast majority of consultants' advice on social media strategy fails to address the issue of information management. We warn that the misalignment between affordances and strategy and the lack of explicit advice on information management, may stifle the potential of the technology and thus have a negative effect on organizations ability to implement and use social media.

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PAPER 4

SOCIAL NETWORKING SITES, INNOVATION AND THE PATIENT AS PEER - THE CASE OF PATIENTSLIKEME (PLM)

SOCIAL NETWORKING SITES, INNOVATION AND THE PATIENT AS PEER - THE CASE OF *PATIENTSLIKEME*

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ABSTRACT

Social Networking Sites (SNS) have started to shift from being used primarily for leisure and fun to have more serious purposes. One such more serious area is health and medicine, where lately several disease-specific communities of interest have established a presence on SNSs. In this exploratory paper, we study a health-related SNS called PatientsLikeMe, by using secondary, web-based qualitative data. By applying Benkler's notion of Commons-Based Peer Production (CBPP) we approach PatientsLikeMe as an online participatory innovation platform in the realm of community based, open, distributed and collaborative innovation. We discuss how the features of social networking sites interplay with peer production in order to facilitate innovation. The paper contributes to the theory of CBPP by analyzing the different characteristics of PatientsLikeMe in relation to other examples from the literature.

Keywords: *Social Media, Innovation*

[7] Authors listed alphabetically

INTRODUCTION

In this paper we set out to investigate two important contemporary phenomena, social networking sites (SNS) and open and distributed innovation, in order to gain insight in how SNS may support open and distributed innovation.

Social Networking Sites such as Facebook and Linkedin is a phenomenon that has gained a dramatic impact in society over the last decade (Hapton et al., 2011). An SNS is a platform building on web-based services targeting social interaction and user-generated content that allow individual users to build a public (or semi-public) digital profile, construct lists of other users they are connected to, and view these users lists of connections (boyd & Ellison, 2007; Kane et al., 2014; Kaplan & Haenlein, 2010; Treem & Leonardi, 2012). Activities typically featured in SNSs include self-presentation, sharing text, images, and photos, engaging in debates and dialogues, getting updates on activities and whereabouts of friends, and developing and maintaining relationships with others (Park et al., 2009).

From the SNS owner's point of view, the content and activities of the users is part of the business model in terms of information production (van Dijk, 2013; Tempini, 2015). Starting much as a phenomenon amongst adolescents, SNS memberships has recently taken off at an exponential rate and come to engage also a more mature audience (Hampton et al., 2011). Over half of all adult American SNS users are now over the age of 35 (Hampton et al., 2011). As SNS usage has become more established and mature, a shift in focus from purely leisure and entertainment to more “serious” matters can be detected (boyd and Ellison, 2013; van Dijck, 2013; Park et al., 2009; Mayer-Schönberger and Cukier, 2013; Kallinikos and Tempini, 2014).

There is a growing interest in collaborative organizing of innovation, further spurred by the increasingly digitalized and connected society. This ranges from firm controlled open innovation (Chesbrough, 2003) initiatives to a more fully distributed form of commons based peer production (Benkler, 2002). In this paper we are particularly interested in the latter. However, research on the potential for SNS in open and distributed innovation is still limited since most focus on social media research has been on the impact for marketing and business analytics (Mount & Garcia Martinez, 2014). Adding research to this gap is important since the increasing connectivity in society and social media in particular opens up for innovation models resembling commons based peer production in many new domains. One such domain is healthcare, where several disease-specific communities of interest now exist on social network sites (Hughes et al., 2008; Mayer-Schönberger and Cukier, 2013; Kallinikos and Tempini, 2014).

Patients, often with chronic diseases, seek to meet and interact online with other patients with similar problems, both to share clinical information and to provide and receive support, and SNSs provide them with an opportunity to build and benefit from a social network to learn about their illness (Kallinikos and Tempini, 2014), and to gain support from others with similar experiences (Hughes et al., 2008;

van Dijck, 2013). Sometimes also researchers and medical experts participate in these forums, as for example in TuDiabetes (www.tudiabetes.org) for diabetes mellitus and TheBody (www.thebody.org) for HIV.

One of the largest health-focused SNS is *PatientsLikeMe*, which is targeting improved health for patients with different chronic conditions by facilitating information sharing within disease-specific communities. The characteristics of *PatientsLikeMe* makes it an illustrative case of how social network sites may interplay with principal mechanisms of commons based peer production, and thus facilitate innovation. The research question of this paper is: In what ways do social networking platforms facilitate commons-based peer production?

The paper is organized as follows: Next, we position the paper in the open and distributed innovation literature, and give an overview of commons-based peer production as a theoretical foundation, as well as the features of social networking sites. This is followed by method where the selection, collection and coding of data is described. Results are then analyzed and discussed from the principal mechanisms of CBPP, and how SNS may facilitate CBPP.

RELATED RESEARCH AND THEORETICAL BACKGROUND

Related Research

There is a growing interest in collaborative organizing of innovation, manifested by a broad terminology directed towards an open and distributed mode of innovation, ranging from firm controlled open innovation initiatives to a more fully distributed form of commons based peer production. Chesbrough (2003) suggested that firms could accelerate innovation and expand market opportunities by using purposive inflow and outflow of knowledge across its boundaries in order to accelerate innovation and expand market opportunities. The openness here refers to a controlled exchange of ideas and intellectual property with external stakeholders such as customers, suppliers, partners or competing firms, often by the use of techniques such as innovation contests and crowd sourcing (Howe, 2008; Surowiecki, 2005) and exploitation of online communities (Dahlander et al., 2005; Rolandsson et al., 2011). One particular external source for innovation is the consumer or user of a product. In user-driven innovation, advanced users can develop solutions more close to their needs than a firms R&D department. Such lead users has been claimed to be the main external source for innovative and value-adding contributions in many industries (von Hippel, 2005; Franke and Shah, 2003; Lettl et al., 2006; Pillar and Walcher, 2006). Lead users engage in innovative tasks by their own initiative, and for firms the challenge is to take advantage of them.

An illustrative example of a voluntaristic and alternative model to organize innovation and production is open source (Lakhani & Panetta, 2007). The typical open source project is based on a loosely coupled community, where work is totally

delegated, relying on a high amount of voluntaristic contributions, coordinated by one or a few developers. Open source can in its purified form be described as a production mode where the outcomes as well as the required knowledge resources are considered as common resources, and where the aim of the process is to contribute to public good. Over the last decade open source has to a large extent has been intertwined with the commercial software market, leading to a plethora of new business models and new sorts of software suppliers. While individual developers contributing to communities do so by a complex set of social motivations, guided by the norms and values established in open source communities, firms engaged in open source tend to be driven by economical and technical motivations, trying to appropriate value from public good (Kogut and Metiu, 2001; Rolandsson et al., 2011).

One attempt to explain this development towards distributed innovation is Benkler's notion of commons-based peer production (Benkler, 2002). The predominant understanding of the organizing of economic production is that individuals engage in productive activities either as employees in firms, following the directions of managers, or as individuals in markets, following price signals (Coase, 1937; Williamson, 1975). Benkler (2002) describes commons-based peer production as a third mode of production, where large aggregations of individuals independently are searching for opportunities to be creative. Contrary to hierarchical authority in firms and the price signals of markets as coordination mechanisms, Benkler (2015) argues, that commons-based peer production is based on the coordination of a critical mass of voluntaristic independent contributors, that are self-allocated and engage in self-managed tasks.

This new mode of production may not conquer the old modes, but rather tend to co-exist and rely on firms and markets, resulting in blurred boundaries between value creation and value capture, in what could be described as a value ecosystem. Collaborating firms are enabled to capture, elaborate on and capitalize value created outside the company, but may also be obliged to contribute to value creation where the appropriation of invested resources are out of control (e.g., Chesbrough and Appleyard, 2007; Dahlander and Magnusson, 2005). This joint development of value creation is still an emerging phenomena where the borders between commons-based and proprietary; open and closed; firms and communities; peer production and market are not always clear cut.

Further more, the increasingly digitalized society opens up for innovation models resembling commons based peer production in many domains beyond software, such as 3d printers, biotech, and mobile phones (Cahalane et al., 2013; Hilgers et al., 2010; Remneland et al., 2011). One interesting domain is healthcare, where several disease-specific communities have emerged on social networking sites (Hughes et al., 2008; Mayer-Schönberger and Cukier, 2013, Kallinikos and Tempini, 2014). Patients, often with specific diseases, seek to meet and interact online with other patients with similar problems, both to share clinical information and to cope with their situation. SNSs This has led to specific SNSs that provide patients with an opportunity to share information about their own situation and to learn about their

illness together with other patients, but also together with researchers and medical experts that participate in these forums (Kallinikos and Tempini, 2014). In this paper we will focus on the health-focused SNS *PatientsLikeMe*, which is targeting improved health for patients with certain chronic conditions by facilitating information sharing within disease-specific communities.

PatientsLikeMe has been studied from a health information-sharing perspective (Frost & Massagli, 2008; Lustria et al., 2009; Wicks et al., 2012; Kallinikos and Tempini, 2014). However, *PatientsLikeMe* is a for-profit company that, in addition to facilitating patient networks for advice and comfort, also generates collects and sells aggregated patient data for instance longitudinal drug efficacy discovery through virtual clinical trials (Wicks et al., 2011), about the real-world nature of disease amongst its network of trusted partners (researchers, pharmaceutical companies, nonprofits developers) in order to invent new treatments and drugs (Wicks 2007; Wicks and Frost, 2008; Turner et al., 2011; Kallinikos and Tempini, 2014).

This means that each *PatientsLikeMe* tool offers research services through variety of tools that allow users to track, describe and share personal medical data in addition to symptoms and treatments. *PatientsLikeMe* is thus more than just a regular SNS (Tempini, 2015) and it has been described as a hybrid blend of pursuit of health care information in web-based context to innovative amalgamation of patients networking (Tempini, 2015; Kallinikos and Tempini, 2014).

Commons-Based Peer Production

In the following, we present the essential characteristics of CBPP (Benkler, 2002; 2015; Hilgers et al., 2010), in terms of three dimensions (decentralization, motivation, organization and social networking sites), that taken together enable knowledge production, learning and collaborative distributed innovation:

- Decentralization: Decentralized conception and/or execution of problems and/or solutions
- Motivation: Ability to motivate people to contribute, including a wide range of motivations
- Organization: Governance and management is separated from property and contract

Decentralization. The decentralized conceptualization and execution of both problems and solutions is crucial for pure CBPP. The process is dependent on a diversity of coordinated actions by different contributors. In open source anyone can find a bug and try to fix it, or develop a new functionality that they propose to be included (Fitzgerald, 2006). In Wikipedia anyone can start a new entry and add or rewrite the content of an existing article (Forte et al., 2009). In CBPP, tasks are broadcasted either by individual contributors or a focal coordinating organization (Hilgers et al., 2010). In firm-hosted CBPP the initiator would typically be a firm or other organization.

This is similar to other open innovation approaches such as crowdsourcing and innovation contests (Surowiecki, 2005), where the problem owning organization or a mediating broker designs the task (Feller et al., 2012). For decentralization to work, problems/tasks must be modular and possible to separate into parts that are possible to solve separately. The degree of granularity could vary, as the complexity of tasks. Tasks may range from highly specialized, requiring expertise and domain knowledge, to the sharing of personal information and experience. For example, NASA click workers contributed by providing physical resources in the form of unused CPU-time from a home pc. Key factors for decentralization are: What is a task (i.e. problem)? Who designs a task? What is a solution? What is execution of solutions? Who executes solutions?

Motivation. The ability to harness a wide range of intrinsic or extrinsic motivations in order to mobilise a critical mass of contributors, is crucial for successful CBPP projects. The motivations could be non-monetary as well as monetary. For example MTurk is a commonly known monetary crowdsourcing platform (Horton et al., 2010), and ReCAPTCHA is an example of non-monetary. A diverse set of motivations to contribute has been addressed in the open source literature, e.g. reputation, fun, ideological reasons, professional (see Von Krogh et al., 2012). Rewarding participants that contribute to innovation communities is an essential aspect of crowdsourcing literature (Feller et al., 2012), where rewards could be monetary or take other forms. In user driven innovation, the driving force is the need for a better version of a product you are using (von Hippel, 2005). Pure CBPP is typically assumed to rely on voluntaristic work, where other motivations than the economic are essential drivers. Key factors for motivation are: What motivations are different actors to contribute? What could spur or disturb motivation?

Organization. The third criterion, separation of governance and management with property and contract, is another important characteristic of CBPP. This is different from what could be regarded as firm centric open innovation (Chesbrough, 2003): “The use of purposive inflows and outflows of knowledge to accelerate internal innovation”. Here, contracts between different actors that provides inflow or outflow are important parts of a more controlled and purposive management of innovation. Similarly, in crowdsourcing the problem owning organization is designing the task, deciding on the rewards and largely orchestrating the process. For a firm that engages n CBPP the degree of control is generally much lesser. Governance could take different forms here, like owning the platform that people contribute to, or owning the tool kits or networking platforms essential to the CBPP community at hand.

To be pure CBPP, the governance mechanisms should be separated from ownership or proprietary claims. Inputs and outputs are governed as open commons or under common property regimes, as for example open source under a GPL license. Resource and task allocation are not based on proprietary or contractual models, but rather based on participatory, meritocratic or benevolent dictatorship/charismatic models. Essential factors for organization of CBPP are: What governance mechanisms are in place? How are decision procedures working? How is

coordination managed? What social sanctioning mechanisms are there? What intellectual property regimes are in place? What claims are made?

Social Networking Sites

For CBPP to work, digitally networked environments are essential. Typically this include the Internet and web based services. SNS has become a technology that is growing in importance for CBPP. In our study we consider SNS as a subgroup application under the umbrella of social media and refers to a group of web-based services that allows users to create, edit, share and commenting the content among participants (Kaplan & Haenlein 2010; boyd and Ellison 2007). SNSs such as Facebook, Linkedin, Flickr, Instagram and YouTube have, together with a plethora of other applications aiming at communication, collaboration and maintaining social relationships, become an important part of many people's everyday lives (Faraj et al., 2011; Faraj and Azad 2012; Treem and Leonardi, 2012; Bergquist et al., 2013).

SNS typically allows individuals to construct a public profile, articulate a list of other users with whom they are connected, and also view their list of connections (boyd & Ellison, 2007; Ellison et al., 2014). This possibility for users to explore other people's profiles, as well as their social networks, can create unexpected latent ties that facilitate rapid and spontaneous community building (Haythorntwaite, 2005; Haefliger, et al., 2011; Schau and Gilly, 2003).

SNSs are highly decentralized in the sense that anyone can create an account, set up a profile, and start expressing opinions. Although an SNS "user" is typically understood as an individual, groups and organizations can also be users. An SNS provides a plethora of features to make their users seen and heard; text, images and/or video clips can be uploaded and made visible to other community members typically through status updates. In 2011, Facebook introduced Timeline; a new kind of profile that would help the users tell their stories (Lessin, 2011). Telling one's story or sharing one's experiences are central SNS features, and since the user decides what to upload and share with the community, the users are empowered to profile themselves as they see fit.

SNS's self-expression features appeal to people's intrinsic motivation to communicate personal insights but studies have also revealed that (some) users may be more interested in belonging to a community or supporting a cause (e.g., Smith, 2010). Hence, SNSs have features to support the creation of sub-communities focusing on specific issues or interests, and by joining such groups, the user is immediately associated with that cause. Since all activities typically are visible to others, the joining of a group sends a signal to one's peers. Members can often see each others' profiles and learn what subgroups one belongs to. Other ways for SNSs to provide more extrinsic motivation is to provide mechanisms for feedback.

Entries made by users can be commented on by other users, and "Thumbs-up" or "Likes" may be offered to various sorts of posts. Such explicit feedback indicates to the user that his or her entry has been seen and (possibly) appreciated by others, and this is known to stimulate further participation. The fact that the number of "Likes" is

publicly made visible is another feature that increases peer pressure to compete for popularity and thus motivates people to share (interesting or "cool") stuff (Zhao et al., 2008).

The ability to create groups or sub-communities within an SNS gives the users a certain degree of governance power. As the creator of a group, you may decide as to whether the group should be visible or hidden and whether it should be open to everyone or only to selected invitees. However, the site owners may exercise overriding powers when so deemed appropriate, and - just as moderators in threaded discussion forums - shut down groups, ban users, or censor content. Such social sanctioning may also occur between members as many SNSs have features not only to link people together, but also to block, disconnect or "un-friend" members with whom a user no longer wants to be associated. Typical social networking site's features are summarized in table 8.

Typical SNS Features	Illustration in Scientific Literature
Status update List of friends and friends of friends profiles Like Comment	Boyd 2010; Treem & Leonardi 2012; Leonardi et al., 2013; Ellison et al., 2014; Farzan et al., 2008; Hotzblatt and Tierney, 2011; et al., 2011; Zhang et al., 2010; Muller, and Millen 2008
Catalogs of photos and entries Contributions are searchable History of activities and discussions recorded	Kane and Fichman, 2009; Poole and Grudin 2010, DiMicco et al., 2009, Mejova et al., 2011; Muller, 2007; Treem and Leonardi 2012; Leonardi et al., 2013
Revision of own content Contributions by others can be deleted Contribution on own site can be deleted	Dugan et al., 2008; Farzan et al., 2008; Yates et al., 2010; Thom-Santelli et al., 2008; Treem and Leonardi 2012
Relations to others displayed Following Subscriptions Tags (e.g. #) to show contributions to topic	Zhang et al., 2010; M. Muller, 2007; Farzan et al., 2009, Freyne et al., 2010, DiMicco et al., 2009; Treem and Leonardi 2012, Leonardi and Meyer, 2015; Lampe et al., 2007; Ellison et al., 2011; Gerlitz and Helmond, 2013
Alerts Votes Up	Menon and Phillips, 2011; DiMicoo et al., 2008; Koroleva et al., 2011; Gray, 2011; Janis 1972; Leonardi et al., 2013; Majchrzak et al., 2013
Re-visibility Activity Log	Faraj et al., 2011; Leonardi et al., 2013, Treem and Leonardi 2012; Majchrazk, et al, 2012; O'Mahony & Ferraro, 2007; Majchrazk et al., 2013; Leonardi, 2014

TABLE 8 TYPICAL SOCIAL NETWORKING SITE FEATURES

METHODOLOGY

Setting: The case of PatientsLikeMe

PatientsLikeMe, according to *PatientsLikeMe*' official web site, is a United States based social networking platform that allow patients to cope better with their health conditions, exchange personal health information and discuss common symptoms. *PatientsLikeMe* revolves around a three-dimensional data-sharing platform that contains sharing, support and research. Through its online community features, patients establish a network where they connect and collaborate with the people like themselves. In the end of 2014, *PatientsLikeMe* had more than 250,000 registered members.

PatientsLikeMe's members share their disease experiences on more than 2,000 different conditions, including ALS, diabetes, depression, fibromyalgia, multiple sclerosis, and psoriasis amongst other. Starting out as a collaboration between three MIT engineers with a sick brother and friend, *PatientsLikeMe* is today a for-profit company that considers it their mission to align patient and industry' interests through data-sharing partnerships. This means that data is voluntarily provided by the patients is aggregated and shared with trusted nonprofit, research and industry partners who use it to improve products, services and care for patients. *PatientsLikeMe* has a clear innovation focus as the management team believes that their site can improve patient care, transform the manner in which patients manage their own conditions, and ultimately change the way industry conducts research.

Data collection

In researching a semi-closed online phenomena like *PatientsLikeMe*, where first-hand observations can be difficult, secondary data becomes an important resource. Cowton defines secondary data as "data collected by others, not specifically for the research question at hand" (1998, p. 424). The primary advantage of secondary data is the low cost that comes from the fact that the data already exist. The trade-off is that the researcher does not have control over the data production (Cowton, 1998). Secondary data has also been used frequently in information systems research (cf. Freeman & Jarvenpaa, 2000; Romano et al., 2003). We have used six different sources of secondary data and complemented it with email questions (see Table 9).

TABLE 9 WEB-BASED QUALITATIVE DATA SOURCES

Sources	Descriptions
Recorded talks of *PatientsLikeMe* officials (TED, TEDx, TEDMED)	• Two talks by co-founder and President Benjamin Heywood (2011: 12 minutes and 2013: 16 minutes). • One talk by Co-founder Jamie Heywood (2014: 49 minutes). • One talk by R&D Director Paul Wicks (2015: 23 minutes). • Three talks by Health Data Integrity Manager, Sally Okun (2013: 7 minutes, 2012: 52 minutes and 2012: 3 minutes)
Testimonials collected from *PatientsLikeMe* website	• 37 formal statements by patients, partners, researchers, and physicians
Publically available interviews	• President Benjamin Heywood, Chairman Jamie Heywood, Chief Marketing Officer David S. Williams III and R&D Director Paul Wicks (2011: 15 minutes) • Co-founder, Jamie Heywood (2012: 13 minutes)
Published academic papers	• 38 peer-reviewed medical papers and book chapters using *PatientsLikeMe* as a research case
Blog posts and Press releases from the *PatientsLikeMe* website	• Blog posts from blogs.patientslikeme.com (total number of posts: 3001) • 69 press releases from November 30, 2006 to November 17, 2014
Blog posts and articles from independent websites	• 117 articles and blogs from multiple web-based sources: • Highly profiled group-edited blogs about science and technology's impact on health-care such as Scienceblogs.com, pmlive.com, ihealthbeat.org, rwjf.org, commonhealth.wbur.org, cbsnews.com, and thegovlab.org • Highly profiled tech news and analysis websites that covers ethical and privacy issues of data sharing and money making strategies by *PatientsLikeMe* in wired.com and fiercebiotechit.com • General magazines and newspapers including BusinessWeek.com, WSJ.com, NYTimes.com, sciencebasedmedicine.org, forbes.com, Foxbusinessnews.com, washingtonpost.com and theguardian.com
Personal email conversation with *PatientsLikeMe*	• Six email messages exchanged between *PatientsLikeMe*'s customer representative and one of the authors

Data analysis

Building on Miles and Huberman's (1994) principles of data reduction, data display, and conclusion drawing, we have used Romano et al.'s (2003) similar method of dealing with web-based qualitative data, referred to as elicitation, reduction and visualization. Elicitation, meaning collecting the data, has been reported above. Reduction is an iterative process of selection and coding (Romano et al., 2003). Having identified that *PatientsLikeMe* resembled many of the characteristics of commons-based peer production (Benkler, 2015), the first round of reduction took place during a coding process, where we went through the data and mapped it to the first three criteria of CBPP: task, motivation, and governance. While identifying these main categories, we also searched for sub themes.

In a second round of reduction/coding, we looked more exploratively for social networking features exploited by *PatientsLikeMe* and tried to relate them to CBPP theory. This was not a linear process was not linear, but instead we constantly and iteratively moved between what Strauss and Corbin (1998) refer to as axial and open coding. In the concluding visualisation phase, we arranged the data in tables and compared and contrasted the firm perspective with the peer perspective, and

PatientsLikeMe as CBPP with *PatientsLikeMe* as SNS, which lead us up to a discussion of the data from these two dimensions.

RESULTS

The result section is structured based on the three main dimensions in CBPP as described in the theory section.

Decentralization: Conceptualization of problems and solutions

The problem at heart of *PatientsLikeMe* is chronic diseases and serious health conditions. That was what first inspired the creation of the site, as expressed by the co-founders:

"Our brother Stephen was living with ALS and we thought, 'there has to be a better way.' There is. By sharing our experiences, we can all contribute new data that can accelerate research and help create better treatments. Our experiences can actually change medicine… for good". (Jamie & Ben Heywood Co-founders, PatientsLikeMe)

Patients and their families give and get support and share their experiences with other in similar situations. Much of what is done in *PatientsLikeMe* can be considered as subtasks to these overarching goals, and in that sense, the patients define what the important problems are.

"We can do much better fighting the disease as a group than we can as individuals. PatientsLikeMe has been extremely helpful in helping me understand I'm not alone". (Testimonial by Patient A, April 14, 2013)

As an SNS, *PatientsLikeMe* offers a platform for patients to engage in a community, which is considered valuable. The *PatientsLikeMe* site is constructed around two separate but interlinked features: the *PatientsLikeMe* dashboard and the Open Research Exchange (ORE) platform. The *PatientsLikeMe* dashboard hosts the traditional SNS features, plus a plethora of embedded specialized applications (e.g., Compare Treatment Report (CTR), and Clinical Trial Tool (CTT)). The dashboard is a tool which allows patients to share their medical experiences. In first generation of the dashboard, users were allowed to be anonymous, the shared information was not always very specific, and patients were not able to follow other similar patients. The dashboard merely supported patient members to offer empathic support in small sub-groups.

"When dealing with rare diseases, you learn so much more when you start connecting and you find that maybe a problem, like a fever, is a normal part of the illness and people just haven't gotten together to figure it out. Being able to share that information relieves a lot of stress for families". (Testimonial by Physician, Dr. Jim King, Children's Hospital Eastern Ontario August 20, 2012)

A challenge with the Compare Treatment Report (CTR) feature was lack of timeline or illness history displayed to patients and peers. Therefore, *PatientsLikeMe* started integrating SNS features, such as track, and learn for enhancing the

dashboard' overall functionality and include the ability for patients to find and follow peers with similar profiles. This transformation from first generation of *PatientsLikeMe*'s dashboard to first generation of *PatientsLikeMe*' social networking site helped overcome some of these challenges by introducing SNS features as an integral part to *PatientsLikeMe* dashboard. The combination of CTR and the Clinical Trial Tool (CTT) devise a strategy to chart patients' health to display and track the illness history over time. As an output, CTT enables "routine collection of structured disease, treatment, and lifestyle data, rather than just free text comments" (Weatherall and Wicks, 2013, p. 1).

The sharing of information and linking up with other patients create value for the *PatientsLikeMe* users themselves, and therefore provides an incentive for participation. The members (patients and their family members) thus execute the solution to the problem of feeling isolated and not knowing enough. Once they have found how shared information has helped them, they typically want to return the favour by exposing their own stories and data.

"As for donating data, I am happy to do it. The treatments and techniques that I am benefiting from today were developed with information from patients who came before. Sharing my information, is the best way I can think of to pay it forward". (Testimonial by Patient B, March 14, 2014)

The transformation from first generation of *PatientsLikeMe*'s dashboard to first generation of *PatientsLikeMe*' social networking site overcome the challenge that is to provide the solution to the problem, by introducing SNS features as an integral part to *PatientsLikeMe* dashboard. While posting and commenting on their medical experiences, patients collaboratively create an enormous amount of data about the nature of their disease, symptoms of their condition, and real-time effects of their treatments. This traditionally private and personal data is made available as shared data to allow for other patients to learn from peers with similar conditions.

"PatientsLikeMe may also periodically ask Members to complete short surveys about their experiences (including questions about products/tools and services). Survey responses are analyzed, combined with members' shared data and shared with and/or sold to partners. Member participation in these surveys is not required, and refusal to do so will not impact a member's experience on the site". (PatientsLikeMe website, privacy policy).

This voluntary exposure of patient data for research purposes has become a key feature of the *PatientsLikeMe* operation and makes a very valuable contribution to the research community. Collecting data through traditional means, i.e., having patients come to the physician to fill in a form or a questionnaire, is too slow and time consuming.

"The members of PatientsLikeMe don't just share their experiences; they quantify them, breaking down their symptoms and treatments into hard data. They note what hurts, where and for how long. They list their drugs and dosages and

score how well they alleviate their symptoms". (PatientsLikeMe website, privacy policy).

The patient information can be medical documents, lab results, and biometric or activity data from smart phones or wearable devices, but also be more subjective information, like health apps in which people report how they feel or social network conversations about health. The structured data goes directly into the ORE (Open Research Exchange) platform, and the unstructured data, i.e., anecdotes and stories, is visible for others to add to and react on. Patients do in some occasions also take the initiative to design tasks and contribute to solutions for more generic research missions.

"Meet Tam, a PatientsLikeMe member living with MS. She realized that the smiley face pain scale wasn't helping her communicate effectively with her doctor. So she decided to create a new measure that focuses on how pain affects daily functions". (PatientsLikeMe's ORE, web page)

Motivation

The motivation to participate in *PatientsLikeMe* spans a broad spectrum, and may differ among different stakeholders. For patients, the core motivation seems to be personal. They want to contribute to problem solving that may gain them or their relatives situation.

"Sharing my health information with the community is part of being an advocate. If I am willing to be transparent, hopefully others will be inspired to do the same. Together, we are soldiers in this battle against MS…". (Testimonial by Patient C, February 7, 2014)

A customized application named 'Light' motivates the patients though association feature with illness and encourages to share information about ongoing treatments' discussions. Associations improve the dashboard's ability to support patients with tied social connections.

"PatientsLikeMe is a great way to connect (linking) with others living with MS, to compare symptoms and offer suggestions. I use it as a helpful tool to track my disease progression, keep notes, and learn from others". (Testimonial by Patient E, April 29, 2013)

In addition, patients are also motivated to contribute to research that can gain many people. Such as the collected data is helping with research and for better understanding what the disease does, what works better for particular problems.

"I feel very excited that the information being used from my situation will contribute to research to help other people. Without that data, the research will not continue to grow". (Testimonial by Patient D, April 21, 2010)

PatientsLikeMe also provide several mechanisms to increase patients' motivation to contribute in new data, such as giving away t-shirts, and a rating system based on number of followers and contributions. One, two or three stars are

awarded to contributors but only a few top contributors get as many as three stars. *PatientsLikeMe* may also add enthusiastic comments to member with high activity.

"When you (patient) get all 3 stars, you'll (Patients) not only have the big picture of their (patients') own health, they will help others learn from peers' real-world experiences. Your (patients) voice will accelerate real-time research that can help everyone live better lives". (PatientsLikeMe, dashboard for patients engagement, side note beside patient profile on website)

In addition to this, in a survey (Grajales et al., 2014) explicates the most common motivations for patients to join was to compare own experiences with others (93 %), share experiences in order to help others (92 %), and get support from others (84 %), as well as track their health over time (82 %). Most patients kept their data within *PatientsLikeMe*. Some shared their profiles with spouses (29 %), health care providers (19 %), friends (23 %), or patients outside *PatientsLikeMe* (16 %).

There are also built-in features to search for matching profiles with various filters than can be applied to taylor the results to one's desires. Should there be no patient in the system matching certain conditions, alerts can be set up to notify the user when such new patients join the site.

"On the Patients tab, you can search for patients just like you using filters such as condition, gender, age, treatment and more. Now, you can also save your searches and get an email notification anytime someone who meets your search criteria joins. Simply click the yellow bell icon to turn on these alerts". (Value of Openness blog, Posted August 3rd, 2011, by *PatientsLikeMe)*

For scientists, motivation to take part of *PatientsLikeMe* seems partly to get access to patient centric data and to spur and elicit patients in research projects for multiple contributions. Such contributions span from earn and deal with serious illness to considering patients' insights for developing better services and medication together with patient centric devices.

"At Genentech (a biotech company), we come to work every day with the goal of transforming patients' lives. The collaboration with PatientsLikeMe will allow us to learn more from patients with serious diseases, and better integrate their insights into our decision-making". (Testimonial by Partner and Physician, Bruce Cooper, M.D. senior vice president, Medical Affairs, Genentech April 7, 2014)

For pharmaceutical companies the motivation could be both goodwill and the access to patient data. During the research process of developing new medicines and new treatments these motivations are important for pharmaceutical industry, for instance how the treatments are used in the real world, and simultaneously facilitates the patients to have personalized medicine.

"By understanding how patients are using and faring on their products, life sciences companies can truly become patient centric". (Jamie Heywood, Chairman and co-Founder, *PatientsLikeMe)*

Another motivation from pharmaceutical perspective is that they may engage patients through better understanding of what patients are going through and what they value in a treatment being transparent: *"...the key lesson is that if a pharmaceutical company is transparent, it can engage patients"*. (Deloitte, Social_networks_for_life_sciences)

Organization and Governance

Organizational and governance issues are essential for CBPP to work, such as coordination, decision making, and intellectual property regimes.

The organizational form of *PatientsLikeMe* is a firm linked to a network of partners, and a large patient community. *PatientsLikeMe* describes itself as "a for-profit company with a 'not just for profit' attitude" (*PatientsLikeMe* corporate FAQ). It is owned by four investors - *CommerceNet, Omidyar Network, Collaborative Seed and Growth Partners LLC, Invus, LP*. It does not allow advertising on its site. The company has based its business model around aligning patient interests with industry interests. *PatientsLikeMe* scrapes its communities' data, and sell to corporate partners. This business model is not allowed to deviate from the purpose of *PatientsLikeMe*.

"PatientsLikeMe provides Shared Data in individual and aggregate format, to Partners and other third parties for use in scientific research and market research. When selling this information, PatientsLikeMe removes Members' Restricted Data to reduce the likelihood of re-identification prior to sharing information with Partners". (PatientsLikeMe website, privacy policy)

PatientsLikeMe is professionally organized in five sections that collaborate: management, research, patient experience, technology and marketing. The research team consists of 20 research scientists that codes and analyzes the patient-reported information. The patient experience team maintain the user interface, and also include consists of community moderators that facilitate interaction among members. Technology support site functionality, and marketing engage and support members and partners. *PatientsLikeMe* has more than 50 partners coming from nonprofit organizations, academia and pharmaceutical/health industry. The overall mission of *PatientsLikeMe* is to provide more efficient development of healthcare and pharmaceuticals, by adopting an open data and patient centric approach.

"Open data helps us accelerate the pace of research, and it's crucial we do everything possible to match patients to trials that might advance treatment and help them live better with their condition". (Paul Wicks, R&D Director at *PatientsLikeMe*)

To some extent one can say that the patient community is self organizing. However, it is the *PatientsLikeMe* site that supports the organization into specific disease oriented communities like HIV, ALS and MS. Patients can influence which disease communities should be included, but *PatientsLikeMe* that has final say. Coordination and decision making is essentially performed by *PatientsLikeMe* as firm rather than distributed among peers in the community.

PatientsLikeMe has an openness philosophy. However, the data of *PatientsLikeMe* is not public to anyone, it is only accessible to participants and partner organizations, and protected by a firewall. It is thus not fully open as in open access or in GPL based open source. Just like with many other SNS the user cease to have exclusive right to her own content, by agreeing to the terms of use. When people register to *PatientsLikeMe*, they agree that the personal information they share, could be used for multiple purposes by the *PatientsLikeMe* team, like be sold to shared to partners.

"To become a member and access the area on this Site reserved for members [...] PatientsLikeMe requires that you are either a (a) diagnosed patient of the particular community you are joining or a parent or legal guardian acting for such a patient who is under 18 years of age or incapacitated; (b) caregiver for a patient eligible to join such community; (c) healthcare professional (e.g. doctor, nurse, health researcher, etc.); (d) guest with legitimate, non-commercial reasons to participate in the community and who agrees to respect the privacy and preserve the dignity of all community participants or (e) guest as authorized by a PatientsLikeMe member or employee". (Terms and Conditions of Use Effective July 26, 2011)

This means that members should not have any commercial interest in taking part in *PatientsLikeMe*. That is exclusively for partners.

Data is either shared data which typically is anonymous medical data or restricted data such as name and email. As shared data could be considered the main asset for value capture for *PatientsLikeMe*, it is clearly stated that members should expect these to be traded, and that *PatientsLikeMe* has full control over them. Both shared and restricted data are properties of *PatientsLikeMe*, and could thus be assets that is transferred in a merger or acquisition of *PatientsLikeMe*.

"Members should expect that every piece of information they submit (even if it is not currently displayed), except for Restricted Data, may be shared with the community, other patients, and Partners". (PatientsLikeMe website, privacy policy)

The propriety of selling sensitive information is not uncontroversial, as was showed in a lively debate at the *PatientsLikeMe* website sparked by a blog post where president Ben Heywood reminded that *PatientsLikeMe* sells data. The company says most of the 350 responses to the blog post were supportive, but a total of 218 members quit.

"It was very disturbing to know that your information is being sold," (Patient F, who felt totally violated)

However, data is not sold for marketing purposes, as is a common case for casual social networking sites. In order to make patient experience more structured and simple to share, additional various generic SNS features, such as 'join forum discussions' and 'find patients like me' were developed and integrated into *PatientsLikeMe*'s dashboard. By joining forum discussions patients learn and comment their opinions and experiences on the forums' posts and these comments are also visible to their healthcare teams. Patients may follow other similar patients to

stay up to date around the topics they are interested in. Patients can build their own list by clicking the follow button as they find patients, topics or organizations that interest them. Patients may see all their updates in MY feed page. With the usage of SNS feature find patients like me, patients find other similar patients with the same disease and symptoms and learn what options are visualized and packaged for better treatment.

"When you find a site like PatientsLikeMe and you realize that there are literally tens of thousands of people that share your condition and your struggle. They are there to reach out, share a laugh, share fun, talk politics, whatever it is, answer a question about medication, you realize you really aren't in this fight alone. You're not the only one that has these symptoms. It opens up a whole new world for you and it takes an awful lot of the fear away from what you're going through". (Testimonial by Patient G, November 15, 2013)

The second part of the PatientsLikeMe site is their integrated research platform; the Open Research Exchange (ORE). ORE is an integrated collaborative platform for hosting research projects in health and medicine. Patients could be engaged in developing new tools to measure diseases and for researchers to enhance the medical research. A Patient Reported Outcome (PRO) is a way to report patients' experiences:

"…PRO is an example of a tool that allow patients to gain increased knowledge about conditions, (activity log) symptoms, treatment options and side effects". (Banerjee et al., 2013).

Another related issue is the means by which *PatientsLikeMe* can protect privacy of member data. *PatientsLikeMe* communities are closed, and the *PatientsLikeMe* site is protected by firewalls, preventing search engines to index the content.

"Members should know that PatientsLikeMe takes commercially reasonable technical precautions to help keep Member data secure". (PatientsLikeMe website, privacy policy*)*

An incident that has been called the scraping controversy illustrates the challenges in protecting privacy.

"Recently, we suspended a user who registered as a patient in the Mood community. This user was not a patient, but rather a computer program that scrapes forum information. Our system, which alerts us when an account has looked at too many posts or too many patient profiles within a specified time interval, detected the user. We have verified the account was linked to a major media monitoring company, and we have since sent a cease and desist letter to its executives. […] While this was not a security breach, it was a clear violation of our User Agreement (which expressly forbids this type of activity) and, more significantly, a violation of the community's trust". (Ben Heywood's blog, *PatientsLikeMe'* website)

PatientsLikeMe claimed that restricted data (that is. account information such as names and emails) was not threatened. Rather, it was described as a violation of the user agreement, and of the communities' trust, and that the information that was "scraped" probably was to be sold as part of the scraping company's Internet monitoring product.

DISCUSSION

PatientLikeMe as Commons Based Peer Production

Problems and solutions can be considered at different levels in *PatientLikeMe*. Patients decide what they perceive as individual problems, and reach out for help. They are engaged with managing their own illness, both in terms of coping supported by the social network consisting of a community of patient peers with similar problems. 'Solutions' here could be advice and the sharing of experiences concerning certain drugs and treatment shared via status updates or patient-added files and data. The *PatientLikeMe* site is explicit in saying that information on the website is reported by members and should not be considered as professional medical advice. This means that the conceptualization of problems and solutions at this level could be considered as a pure peer process among patients, supported by the social networking features incorporated in the *PatientLikeMe* site design.

Patients can also contribute at a higher level of research and development. They can find out about clinical trials going on anywhere in the world and participate online or even sometimes initiate their own research programs, or take on core roles in research projects. Partners to *PatientLikeMe* can also gain access to the *PatientLikeMe* community to recruit members to research projects. At this level problems and solutions concerns the development of new drugs and treatments, or the evaluation of different measures. Task design and conceptualization of problems are rarely designed by patients, but rather by the researchers that design a study, or by the *PatientLikeMe* team itself in designing the routine collection of structured disease, treatment and lifestyle data. Here the peer process is more firm centric, with the *PatientLikeMe* team as the ultimate task designer. Still the patients can contribute both with personal data that goes into specific research projects or *PatientLikeMe*'s large database of structured data, as well with suggestions for improvement of different treatments and measures ranging to fully patient initiated innovations.

The *motivations* to participate in *PatientLikeMe* span broad spectra, and differ among different stakeholders. For patients, the core motivation seems to revolve around personal motivation. They want to contribute to problem solving that may gain their or their relatives' situation, but also contribute research that can gain many people. For scientists, motivation to take part of *PatientLikeMe* seems partly to get access to patient centric data and to mobilize and elicit patients in research projects for multiple contributions. For the *PatientLikeMe* team there is also commercial motivation. However, all stakeholders align to a higher, civic cause of providing

better healthcare and treatments, guided by the belief of patient centric research, were the patients' experiences are highly valued.

In all open and distributed innovation efforts motivation is crucial. In user driven innovation (von Hippel, 2006) it is associated with personal needs to adapt or add functionality to a product. In crowdsourcing and innovation contests there is often an element of extrinsic reward, such as money, a prize or other benefits. In open source, a wide set of motivations to contribute has been reported such as ideological, gain from reputation, fun and economic (von Krogh et al., 2013). Here, legitimacy seems to play an important role. For example, open source software under the GNU General Public License are claimed to increase motivations to contribute since it ensures that the software is kept open and that your contribution will benefit many.

In the case of *PatientLikeMe*, legitimacy is crucial, since no one wants to share sensitive data without a belief that privacy is protected and that it is for a good cause. Contributing with a piece of code to an open source project, a design idea for cars, or an innovative application is different from sharing information about painful experiences and worries for one's health. While motivational aspects of open source software is well researched (von Krogh et al., 2012), the kind of motivations that are central to *PatientLikeMe* has rarely been addressed in research.

Regarding *governance*, *PatientLikeMe* is a professional organization. A management team take strategic decisions, a research team coordinates research projects, and a patient experience team acts as facilitators for the community. While the patient community has a good portion of self-organizing, Consequently, *PatientLikeMe* is firm centric when it comes to governance. However, it is not uncommon that open source projects implements forms of diversified roles in terms of small core development teams, separated mailing lists and forums for different groups, and restricted access to members, in order to achieve more efficient coordination mechanisms (Feller et al., 2008).

One essential governance dimension in all open and distributed innovation is the degree of proprietary/privacy versus openness. Closely linked to this is the intellectual property regime. When registering as member to *PatientLikeMe* one signs a terms of use agreement, giving *PatientLikeMe* right to trade the shared data on their terms. However, openness is only valid within the closed community, and the aggregated data is mainly open to paying partners. Thus, the shared data could rarely be claimed to be a commons. The business model for *PatientLikeMe* requires such an arrangement. Data is the main asset here, but also the patient community is an asset, as it gives fast access to potential participants in research studies and clinical trials. This also relates back to question of *PatientLikeMe*'s legitimacy and patient's motivation to share data.

PatientsLikeMe's use of social networking features

The central task for the *PatientLikeMe* web site is to accelerate research and improve treatments for chronic diseases by harnessing the experiences from actual patients all

over the world. This overarching and long-term goal can only be achieved if patients also receive short-term benefits. *PatientLikeMe* quickly realized that this required social networking features that allowed members to link up in communities, express their stories, make these stories publicly displayable and store these testimonies for future reference. These are all activities afforded by social media. At the individual level, association, editability, visibility and persistence (Treem and Leonardi, 2012) enable member patients and their families to conceptualize both problems and solutions, albeit within the frames defined by the structure of the site and the overall agenda set by *PatientLikeMe*.

PatientLikeMe exploits several ways to motivate people to contribute. As with most SNSs, *PatientLikeMe* facilitates the creation of rich user profiles. These may contain the usual demographics, photos and images, but also more domain specific information such as medical journals, evaluations and biometrics. The members' self-expressional urges are thus catered for. However, unlike users of more leisure-oriented SNS, *PatientLikeMe* members have a thirst for disease related knowledge that can be obtained from other members with similar conditions. It is therefore important that as many as possible contributes. The perhaps most obvious feature to facilitate contributions is the status update function that allows patients to directly share what is on their minds. However, closely linked to this are features such as comment, like and share, which offer peers the ability to align with the status updater by showing support for a particular concern. Many likes for a particular issue shows that this attracts the attention of many members and thus promotes the issue as a task to be prioritized.

Being helped by others motivates individual patients to help in return, as testified in the result section. Also learning that you are not the only one in the world with your particular disease offers a distinct sense of comfort, and is thus a motivating factor. When it comes to specific SNS features, feedback mechanisms are known to have a positive effect on contributions. Feedback in terms of likes and (positive) comments has shown to be a particularly important means to encourage newcomers to start contributing (Burke et al., 2009).

In addition, explicit feedback icons in forms of stars are awarded to contributing members and added to their profile as visible status tokens. The *PatientLikeMe* site offers search features that allow users to search explicitly for information provided by "starred" members. SNS features like these allow contributing users to rise above the crowd and receive respect and gain followers, whih provides social gratification.

PatientLikeMe as a company has also a financial motivation to encourage patients to enroll since more members generates more data, which in turn is aggregated and sold to partners. Although *PatientLikeMe* started with, and still has, a strong civic and empathic cause, it is also a for-profit company. An SNS can also be understood as an information infrastructure, and as such, a large user base offers more value to each member and creates a network effect that is self-reinforcing, as it

is attracting more users that creates even more value. This added individual value transfers also to the company as it increases its attractiveness as a business partner.

PatientLikeMe membership is free (of charge) but not free (to everyone). Only people with chronic diseases (or care-takers or family members) are accepted. The fact that *PatientLikeMe* offers a gated community actually not only promotes sharing but is essentially a prerequisite for sharing. *PatientLikeMe* users display their disease history and reveal their medical records knowing that only those who are considered 'authorized' are allowed access. New presumptive users are screened before given member status and this way of organizing and governing provides a trusted environment where patients and their friends and families feel safe to expose themselves. This makes *PatientLikeMe* somewhat different from traditional SNS.

It is common for SNS to allow users to create subgroups or sub-communities within the larger site. *PatientLikeMe* offers a variety of disease-specific sub-communities but these groups are created by the *PatientLikeMe* organization and not by the users themselves. This governance policy stems from the central task of providing data for research. Thus, although there are over 2400 conditions registered in *PatientLikeMe*, only diseases for which there is ongoing research are of interest, and *PatientLikeMe* makes those decisions.

Ways in which SNS features facilitate CBPP

Above, we have discussed *PatientsLikeMe* from both a CBPP perspective and from an SNS standpoint. The purpose of this paper, however, has been to study *PatientsLikeMe* in order to investigate in what ways SNS features can facilitate commons-based peer production. We therefore now broaden the analysis and discuss how where and how specific SNS features align positively with the pillars of commons based peer production, summarized in table 10 below.

Focusing first on the CBPP pillars, we notice that it is primarily *Decentralized conception and/or execution of problems and/or solutions* and *Ability to motivate people to contribute* that benefit from SNS features. Motivation is enhanced by many different SNS features whereas decentralization is supported by fewer features but in in more ways. Organization, i.e., *Separation of governance from property*, is also supported but not quite as pronounced. The finding that task decentralization is supported is fully in line with previous academic findings suggesting that social media seem to align best with a decentralized approach to information management (Stenmark & Zaffar, 2014).

The affordances of social media – association, editability, visibility and persistence (Treem & Leonardi, 2012) – all promote a bottom-up perspective that empowers the individual. This may also explain why there are fewer features supporting governance issues. The human needs for social ties are since long well established, as are the benefits that people derive from these ties (cf. Eisenberger & Cole, 2012). Since social networking sites exploit such social ties, it seems plausible that this technology motivates people to engage, and this motivation is thereafter further propelled in self-reinforcing loops. The more users who join, the stronger the

TABLE 10 PAIRING SNS FEATURES WITH CBPP PILLARS

SNS features	Pillars of Commons-Based Peer Production		
	Decentralization	Motivation	Organiztion
Profiles Status updating	Users write in the status field what is important to them.	Being able to see what and how friends post motivates users to add content themselves.	
Adding/revising/deleting own content	By adding content, each user can influence the direction the SNS site is taking. A task or problem can be reformulated by the contributor as his/her knowledge increases.	Knowing that items can later be edited, corrected or removed lowers the barriers for posting.	
Subscribing Follow		To have 'followers' is known to be a highly motivating factor.	Subscribing to, linking to or following other users form a user-centric network.
Comment Sharing Liking	Others can endorse specific tasks by liking, sharing or adding smileys to certain status updates. Liking or voting for a user-added suggestion helps promote a bottom-up approach to task conceptualization.	Liking or voting for a user-added suggestion also encourages the contributor to continue.	Users who share or like a status update form an implicit, self-organized sub-group.
Social gratification Voting	Voting allows for bottom-up decision making.	Obtaining official promotion insignia such as 'stars' gives recognition and status.	Allowing users to vote for or like things gives them the power to state what is important and what is not.

motivational effect will be. When turning to the SNS features, we note that the class of features that seem to be most useful from a CBPP perspective is *Comment, Sharing & Liking*, along with *Social gratification* and *Voting*.

Although not all SNS features explicitly facilitates the separation of governance and property, this is implicitly supported through the strong decentralizing affordances of the technology. Because of these features, strong governance is difficult to achieve. Obviously, the SNS owners can exercise certain amount of governance by mandating what not to do by having policies regarding content and tonality, and enforce such policies by deleting inappropriate content and banning disobedient users. However, the SNS owner can typically not control what the users can do; what topics they engage in, or what ideas they express. Hence, we argue that SNS features do actually support also the third pillar of CBPP.

CONCLUSION

PatientsLikeMe resembles features from several phenomena from the open and distributed innovation arena. Patients are mobilized to fulfill certain tasks in research projects, just like in citizen science (Silvertown, 2009). However, they also act at least partly as peers. They base their contributions on their own experiences of diseases; treatments and drugs, just like users in user-driven innovation base their contributions on experiences with products they use (von Hippel, 2005). The patients can suggest improvements of treatment and innovate new methods to measure their experience, but they are also part of a more complex process, and cannot tinker with drugs. In a way *PatientsLikeMe* act as a mediator as in the case of crowd sourcing brokers (Feller, et al., 2012), but in *PatientsLikeMe* task conception could be both designed by the *PatientsLikeMe* - team and partner organizations, and more decentralized.

Rather *PatientsLikeMe* could be considered as a hybrid form of commons based peer production, fulfilling at least partially the criteria in relation to Benkler's theory of CBPP. It would be closer to what Benkler calls firm hosted CBPP, but at the same time it has a civic goal, and one can discuss whether or not the outcome of the R&D *PatientsLikeMe* contributes to could be considered a commons. Looking deeper into *PatientsLikeMe* as a case contributes to the knowledge of open and distributed innovation in general, and to commons-based peer production in particular.

Recruiting participants to commons based peer production processes is a classical problem. In *PatientsLikeMe* a successful combination of direct individual benefits, and a will to contribute to innovation in medicine and health is the basic driving forces. Features to monitor and visualize a members own health, and the possibility for members to view other members' progress in health and lifestyle is an example of the direct personal benefits, while access to research publications and transparency around research projects makes members also engaged in the long term serious work for better health. The features of the SNS together with the specific tools are crucial to facilitate coordination and spur motivation. The lessons from *PatientsLikeMe* are not easily transferred to other areas, due to the specific

characteristics regarding motivation. For areas such as development of health care and treatments, *PatientsLikeMe* illustrates a promising approach. The combination of peer-production and social networking sites has also a potential to increase efficiency and transparency in other important areas of societal development, where only market or state initiatives are not enough.

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PAPER 5

LIKE, SHARE AND FOLLOW: A CONCEPTUALISATION OF SOCIAL BUTTONS ON THE WEB

LIKE, SHARE AND FOLLOW: A CONCEPTUALISATION OF SOCIAL BUTTONS ON THE WEB

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ABSTRACT

In this theoretical and argumentative paper we analyze the implications of social buttons as used on social networking sites (SNSs). Although social buttons have been around for many years, there is still a scarcity of research on their effects despite their pivotal functions for the success of SNSs. We conceptualise these buttons as Like buttons, Share buttons and Follow buttons and analyze them and their associated actions through the lens of social capital theory. Our analysis shows how the clicker and the clickee are affected differently through these social buttons, and in the process, we also propose seven concepts to describe the social implications of these buttons. Having discussed these concepts, we conclude the paper by offering three contributions; a) the distinguishing between the clicker and the clickee; b) the subtle but yet distinct differences between buttons, and; c) a set of ways through which social buttons become productive.

Keywords: *Social Buttons, Social Capital Theory, Social Networking Sites, Clicker, Clickee*

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THE SOCIAL TURN OF THE WEB

Social Media platforms and Social Networking Sites (SNSs) such as Facebook, Twitter, LinkedIn and Google Plus, have transformed the Web from 'the informational web' into 'the social web' [11], [12]. This transformation has been achieved by facilitating the creation of public or semi-public profiles, the exchange of user generated content, and the articulation of friend lists [6]. The social web can be understood as a digital environment that supports "collaborative development of content, cross-syndication and relations created between users and multiple web objects—pictures, status updates or pages" [12]: 1351].

As a result of this transformation, the hits and links counters that were common in the informational web have largely been replaced by Like and Share dittos, whose numbers are generated through what might be referred to as 'buttonised' actions. These actions are made possible by the introduction of particular buttons, whose main objective is to allow interactivity between users and the content through a single mouse click. These features are referred to as 'social buttons' [11].

Social buttons allow individuals to share, endorse, or appreciate users or their content within and across various social media platforms. Unlike other SNS mechanisms such as updating a status, posting a blog entry or writing a tweet, social buttons support a set of pre-defined, single-click tasks. In addition, social buttons also provide means to visualise certain actions and turn them into tangible measurements that can be harvested, repurposed and sold. This can be illustrated by Facebook's *Like button* introduced in 2009, which has the capacity to instantly metrify and intensify users' affects, i.e. materialising emotions into numbers on the like counter [12].

Although social buttons have been around for ten or so years, there is scarcity of research that specifically study and analyze social buttons [3]. In addition, most research on clicking behaviour so far has focused on the person who clicks – the clicker – and tried to understand when and why people click on things. The clicker is obviously important since it is this actor who initiates the interaction by clicking the button. However, if the clicker would be the only actor involved it would make little sense talking about social buttons or social media. There is obviously also an actor behind the object being clicked; the person who posted the message, uploaded the photo, or shared the object. This actor – the clickee – is affected socially by being clicked, but this aspect of social button usage has thus far largely been overlooked.

In this theoretical and argumentative paper, we contribute to existing research on social media platforms as we conceptualise the social buttons and their capabilities through the lens of social capital theory. In addition, we pay attention to both involved main actors – the clicker and the clickee. Our main research question is: *What social implications do social buttons have for those who click them and for those who become clicked upon?*

SOCIAL CAPITAL THEORY

Social capital plays a central role in society through the various types of relations that bind together the members of social networks and communities [8], [18], [20]. Like financial capital, using social capital creates more of it, but what is used and created here is social relationships and the benefits that come with them [21]. Social capital was first defined by Bourdieu as: "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance and recognition" [5]: 248]. In line with this, Putnam defines social capital as social networks and their associated norms of reciprocity [18].

Thus, social capital is embedded into relationships among individuals and can be measured both at individual or group level [8]. It is embedded in the structure of social networks and location of individuals within such structures. Social capital has been considered as individual benefit, a network and its effects, as well as a process [21]. While we acknowledge Nahapiet and Ghoshal's [17] reminder that no single individual can monopolise social capital since it is always owned collectively, this paper focuses on the benefits individuals derive from interacting socially through these specific social media buttons.

For our analysis of the social buttons, we apply the three dimensions of social capital originally proposed by Nahapiet and Ghoshal [17] and later frequently used in research in a variety of fields, including IS (cf. [23]). The three dimensions are structural social capital, cognitive social capital and relational social capital, and although we shall below describe them separately and later use them separately to analyze social buttons, the boundaries between them are in reality blurred and interrelated.

Structural Capital refers to the connections between various actors in the network, be they individuals or organizations. Actors create and maintain relationships with or links between each other in their communities, and such ties are necessary for the development and utilisation of social capital [20] and provide the most fundamental form of social capital. Social networking sites offer a plenitude of opportunities for actors to create structural links by clicking and commenting on each other's posts and profiles. The more actors that are connected via these links, the higher density the network has, and the more likely it is that the actors act in compliance with the norms that are collectively established. In particular, centrally embedded actors, i.e., those with many ties to others, are expected to lead in such collective actions [23]. The frequency and the duration of the interactions between the actors reflect the level of structural capital build [24] and the number of ties can thus be used as a proxy for the structural capital an actor possesses [2]. Individual click actions are typically made visible on many social media platforms through the use of various counters.

Cognitive Capital means resources that enable shared interpretations and meanings among members of a network [17]. One important such resource is a

common language since it provides a frame of reference for understanding the environment [23]. A shared language lessens the risk of misunderstandings [24] and facilitates knowledge sharing, behaviour regulation and conflict management among other things [20]. As an actor interacts with others, sharing the same practice and developing norms related to that practice, the actor learns the particular jargon, terms and words that are part of the discourse, and this develops the cognitive capital for that actor.

The sharing of narratives or "war stories" are particularly useful in order to develop cognitive capital [17], [23]. On social networking sites, an actor may either be a resource by sharing of expertise and knowledge, or find resources by reading and interacting with others in the network. The more interaction, the better, since it has been argued that networks characterised by high density and frequent interactions are particularly likely to be beneficial to the development of cognitive capital (cf. [17]).

Relational capital relates more to the personal relationships amongst the individual actors, according to Nahapiet and Ghoshal [17]. In contrast to structural capital that primarily concerns the properties of the network as a whole, relational capital deals with the expectations and obligations felt by the actors in the network [20] and is developed when actors identify strongly with the collective and perceive an obligation to participate and contribute to the network [23]. Trust thus becomes an important element since it affects the level of social exchange that may occur between actors. The amount of personal information an actor discloses affects the amount of trust the actor receives from the community, but the willingness of an actor to share personal information also depends on the level of trust he or she has in the community. Reciprocity in terms of sharing information in order to receiving information is vital to the development and maintenance of relational capital [24]. Related to trust is the degree of social closure to the community [20]. A higher degree of closure enacts more observable norms and allows more efficient sanctions. When there is relational capital, actors perceive an obligation towards the collective, for example by helping other members, even if they are strangers.

RESEARCH DESIGN

We departed with an understanding that *Like*, *Share* and *Follow button*s may create social capital in different ways. Herein lies an implicit assumption that these buttons are used predominantly in a positive way. We acknowledge that you can *Like* a racist comment, *Share* false information and *Follow* someone in order to troll them, but we have chosen to reflect upon the constructive use of these buttons. We have hence also excluded buttons such as Sad, Angry, Dislike and Thumbs-down from our analysis. SNSs and the potential social capital that is more generally generated by people have been addressed by several scholars, often in a quantitative fashion (e.g., [9], [23]). We add to the understanding by providing a previously missing qualitative view on the conceptualisation of social buttons by applying social capital theory as an analytic instrument.

Gerlitz and Helmond define social buttons as features that allows individuals to "share, recommend, like or bookmark content, posts and pages across various social media platforms" [11]: 1351]. Halupka [14] has a slightly narrow definition where he suggests that the main task of a social buttons is to allow interactivity between users and the content through a single mouse click. In this study, we join Halupka and focus only on such one-click buttons, thus eliminating status updates, tweets, commenting and other actions that require typing.

Social Buttons / SNSs	Like	Share	Follow
Facebook	Like Love Haha Wow	Share	Follow Add friend
Google Plus	+1	Share	Follow
Instagram	Heart	Send	Follow
LinkedIn	Like Love Endorsement	Share	Follow Connect
Pinterest	Love Loved it Pin (save)	Share	Follow
Tumblr	Love	Share Reblog Send	Follow
Twitter	Love	Retweet	Follow
YouTube	Like	Share	Subscribe

TABLE 11 LIST OF (CATEGORISED) SOCIAL BUTTONS FOUND ON DIFFERENT SNSS.

In order to identify various types of social buttons, we visited some of the biggest and most popular SNSs. There is no exact way to measure size or popularity of an SNS and there is an abundance of lists available on the Web ranking SNS according to various variables such as e.g. number of accounts, number of active users, or degree of activity. Although there are some differences between these lists, there is also much overlap, and we selected the eight SNS that consistently scored high on the four ranking lists that we examined. These sites include (in alphabetical order) Facebook, Google+, Instagram, LinkedIn, Pinterest, Tumblr, Twitter, and YouTube. Browsing each of these sites systematically, we identified and collected 73 different social buttons.

Next, we organized these buttons in groups based on similarities in function and purpose, thereby creating more general categories of social buttons. Many of the buttons were unique to a particular SNS but three distinct categories emerged as being common to all of these eight sites. Since these three types of buttons are the most common and cover the bulk of the activities supported by social buttons, we chose to focus solely on these three.

The first category contained buttons that allowed the user to show appreciation of or express sympathies for an object. This included the 'Thumbs up' in Facebook, the 'Heart' in Twitter and the '+1' in Google+. The vocabulary differed between sites, but we chose to refer to this category as the Like button. The second category of buttons enabled users to redistribute content in a simple manner. In Twitter, this is known as 'retweet' whereas most other sites called it 'share' and hence we chose to refer to this as the Share button. Finally, our third category consisted of buttons that made it possible to monitor an account over time. YouTube call this feature 'subscribe' but we followed the majority of the sites and chose to label it the Follow button. The result of this process is shown in Table 11.

CONCEPTUALISING SOCIAL BUTTONS

In the following section, we conceptualise the three main categories of social button identified above, and what these buttons imply for the clicker and the clickee, respectively.

The Like Button

The most obvious reason for a person to click on a *Like button* is that he or she actually likes the object in question; it could be a witty statement or an uploaded picture of a cute baby or someone having checked in at the theatre or at a restaurant. This would typically be the case when the object belongs to family members, friends or colleagues with whom the clicker has an established personal relationship. In these cases, liking would be a way of showing these individuals that the clicker has noticed and appreciates their posts. Clicking the *Like button* is thus a way to maintain an ongoing relationship. As these individuals, typically do not get thousands of likes, they would be able to see from the list of likers that the clicker has liked their posts. The clicker and the clickee would in this case be aware of one another.

However, the clicked object might also belong to an organization issuing a call for action or promoting a new product or service. In this case, 'the organization' is typically a nameless account who the clicker does not know personally. Even if the clicker probably do like the organization or the object in question, clicking the *Like button* for that object would serve two other purposes; to actually support the organization and to show the community that the clicker is a kind of person who *Likes* this sort of organizations. For example, liking the Red Cross is a way to support their cause but perhaps even more so a way to promote oneself as a responsible and caring person. As a clickee, an organization or a celebrity would receive thousands of *Like*s and would probably not go through the list of likers, and even if they did, they would

not recognise the clicker's name. The relationship, in this case, only goes one way. Nonetheless, the click would increment the clickee's *Like* counter.

Structural social capital amounts to having a large number of links within the community. Clicking frequently on *Like button*s, the clicker would establish links to other users. When these users are known friends the links would be kind of bi-directional whereas when the clickee represents a more abstract entity (e.g. a celebrity or charity organization), the link would tend to be uni-directional. In either case, the community would identify the clicker as liking very frequently and thereby creating many connections which would translate into structural social capital. On the receiving end, a clickee with a high *Like* counter would also be recognised as having structural social capital, regardless of who has generated the *Like*s.

Cognitive social capital means having many resources to tap into and to be such a resource to others, but it is also about having shared norms and a common understanding. Clicking the *Like button* is a way to endorse certain individuals or opinions, thereby fostering a network of people who reciprocally *Like* one another or one another's posts. In such communities, actors may develop shared habits or ideas that increase their cognitive capital but also risk making the community rather introvert. Within such networks, the clickee who receives many *Like*s earns cognitive social capital as being a resource of knowledge, but also the clicker benefits from having endorsed the clickee. Sometimes, liking can be a deliberate strategy for the clicker in order to build an identity and thus become a resource to the community.

Relational social capital is more personal in nature and does therefore primarily develop amongst actors who know and trust one another. The bi-directional nature of *Like* links between friends, and the fact that expectations, obligations and reciprocity are likely to exist, suggest that the clicker and the clickee both would increase their relational capital when the *Like button* is clicked. This situation may also apply to organizations if the clicker is personally involved, say as a paying member of a club or as an active volunteer for an organization. The clicker would benefit from the future return *Like*s that can be expected due to the reciprocal nature of the relationship, whereas the clickee benefits from the increased *Like* counter.

The Share Button

To share experiences is a fundamental social aspect of human life which the *Share button* affords in an efficient way. One of the primary reasons to use the *Share button* is to forward content between sub-communities, when the clicker believes that the content is somehow meaningful for that other sub-community. A funny cat video or a useful piece of information posted by a friend or family member is typically *Liked rather than Shared*, since friends and family in the clicker's own community would most likely already have seen the original post. Sharing is thus not so much done amongst close friends, although friends and colleagues often belong to different sub-communities. Here, the clicker Shares an object just because of its content and do not care who the original contributor is; it may be a totally unknown actor but with a worthwhile post.

However, the opposite may also be true. The clicker may *Share* an object in order to endorse or acknowledge the authority of the object owner. The clicker *Share*s the "Save the Earth" call from Greenpeace in support of the organization, wanting it to receive more attention from the community. Here, the identity of the clickee is important since what matters to the clicker is who the clickee *is* rather than what the message says. This sort of action also adds to the clicker's image.

The *Share button* builds structural capital primarily for the clickee, since a frequently shared object indicates some sort of popularity (either for the content *per se* or for its provider). However, it is not only the number of *Shares* that are displayed to the community; every time someone *Shares* something, a new entry is created, adding structural capital also to the clicker. Although these activities are spread out and not aggregated in a counter as for the object owner, they are still visible and implicitly adds up - especially if they are frequent.

By providing resources across communities, it is the clicker who adds to the cognitive capital of his or her sub-community despite not being the original source. The receiving community, who may not know the original source, relies on the judgement or expertise of the clicker who *Shared* the content. It is more important that the clicker is known and/or trusted, than is the clickee, and it is thus the clicker rather than the clickee who benefits from the *Share button* in terms of cognitive capital.

If the initiative to *Share* something with one's community is based on a perceived obligation to contribute to the network, relational capital is said to exist. The use of the *Share button* presupposes something worth of sharing and is thus not as casual as the *Like button*. Almost anything can be *Liked* whereas *Share* is done much more selectively. The *Share button* is therefore also not as bi-directional as the *Like button*; the clickee cannot immediately share back unless there is something to share. Whereas *Like* is directed towards the clickee, *Share* is directed towards the community, and thus builds very little relational capital for the clicker and the clickee.

The Follow Button

Unlike the *Like* and *Share buttons*, which are more instantaneous in their nature, the *Follow button* enables users to initiate more long-term relationships. Clicking the *Follow button* means that the clicker wants to receive continuous updates from the clickee, and this seems to be the case for friends and family as well as for organizations and other impersonal accounts. Being followed does typically not result in a follow back action and *Follow* is therefore in nature a uni-directional relationship, although there are exceptions as discussed below.

Following a friend or family member would strengthen the ties between the clicker and the clickee but does not add much to the greater community, since the clickee might be totally unknown. However, the clickee can also be a celebrity or an organization in which case the act of following tells the community something about the clicker. In addition, the reasons for following a celebrity or an organization could be either personal or professional. To illustrate, a supporter of President Trump can

decide to *Follow* Trump for personal reasons, i.e., to support Trump and show this support to the community. Professionally, a journalist may choose to *Follow* the President in order to receive tweets to analyze without sympathising with or endorsing the President's views. Regardless of the reasons, though, each follower adds to the clickee's counter and thus to the clickee's popularity.

The *Follow button* creates more structural capital for the clickee, since it is obviously more important to have many followers than to follow many. The fact that a clicker frequently *Follows* others is less visible to the community and thus less likely to be recognised. In contrast, for a clickee who has millions of followers, the large number of connections is shown and thus helps build structural capital for the clickee.

Neither in terms of cognitive social capital does the clicker gain much from the *Follow button*. It is only the clicker, not the community, who receives notifications about the clickee's whereabouts, and the number of people the clicker is following is not clearly exposed. However, if many people in the community are following the same clickee(s) this may be seen as adding to the cognitive capital, since it helps communicate a common interest and may facilitate shared norms.

Following a public figure or an organization with which the clicker has no existing relationship would not result in any relational capital gain, since relational capital is tightly linked to personal relationships. However, between family members and close friends the *Follow button* can be used to strengthen existing bonds. The clicker receives updates about the clickee's activities, thereby getting to know him or her better. The clickee, in turn, would be aware of being followed, and therefore feel obligated to somehow reciprocate or contribute to the shared agenda. Both can therefore be said to contribute relational capital from the *Follow button*.

THE SOCIAL IMPLICATIONS OF LIKE, SHARE AND FOLLOW

As described in the theory section, social capital is productive in the sense that it facilitates certain kind of actions [8]. In social capital theory, either organizations or persons can perform these actions, but in this paper, we stick mainly to how social capital can be resources for individuals. In the following, we will discuss how the *Like*, *Share* and *Follow buttons* draw on social capital, either by using it or contribute to creating it. When a button is clicked, an action is performed with implications for the clicker as well as for the clickee. To describe these actions and their implications we will introduce a set of concepts: identity building, bridging, bonding, popularising, acknowledging, creating awareness, and recognising.

Structural social capital

Structural social capital is constituted by the connections between individuals in a network [17], [23], in the form of strong or weak ties [13]. SNS are particularly well suited to the maintenance of weak ties, but also offers ways to manage different types of connections [22]. An SNS user would typically have a list of connections that

includes both strong and weak ties, but also implicitly have access to a large number of latent ties (i.e., friends-of-friends). For an individual, the amount of structural capital is dependent on the position in the network in terms of the nature and number of connections. In an SNS, an individual can generate structural social capital relevant for a variety of contexts, ranging from strong ties among close friends, and in closed communities, over weak ties in different networks, to the huge number of latent ties constituted by the whole user base of an SNS. Similarly, an individual can draw on structural social capital as resource from these diverse contexts.

When the clicker hits the *Like*, *Share* and *Follow buttons*, it is a way to show appreciation, but also to show preferences and thus a way to build identity in relation to the wider network that constitute the base for the clicker's structural capital. We refer to this process as identity building. In order to gain structural capital, the network need to be dense enough for the clicks to be observed by the others; otherwise no structural capital will be generated.

For a person with a large amount of structural capital, this identity building will be efficient and wide spread, and further nurture the position in the network. For the clickee, it depends whether there already exists a strong or weak tie to the clicker, or no tie at all. The *Like button* favours instant, gut-fired, emotional, positive evaluations. This could be directed towards strong ties as friend and family, but also towards weak ties or total strangers. In the first case, it is the relations to family and close friends, i.e. strong ties that constitute the arena for structural capital. Being *Liked* implies an *acknowledgement*, it is something good, and it generates structural capital for the clickee.

In the case where the clickee is a weak tie or stranger, the network that constitute structural capital could be viewed as the whole SNS community, e.g. the community of all Facebook or YouTube users. Drawing on this very large base of potential clickers, gives a great potential to achieve large amounts structural capital for certain individuals. Thus, clicking the *Like* button may bring popularity to certain persons. Van Dijck [19] argues that the popularity principle is one of the core dimensions of SNS-platforms: Given the visibility featured by SNSs, and the algorithmic capability to further boost popular persons or topics, popularity generates even more popularity [12].

The very concept popular is not about being renowned or recognised, it is about fame [4]. In the context of SNS, it is all about numbers. Popularity is a quantifiable measure, which makes it manipulable since boosting popularity rankings is an important mechanism built into SNS [19]. Potential popularity for a clickee is generated by all the buttons - *Like*, *Share* and *Follow* - even if it might have strongest implications in the case of *Like*. The social buttons ability to accumulate mass attention, and making certain persons famous, draws on the large amount of structural capital that is generated. In some cases, this can translate into monetary capital, as for example in the case of YouTube star *PewDiePie*, who gains structural capital from all the YouTubers that *Like*, *Share* and *Follow* him. This structural capital in turn can be converted to economic capital [1], i.e., in form of sponsor deals.

Cognitive social capital

Cognitive social capital refers to the common ground of a community, in the form of language, norms and culture [17], [23]. From an individual's perspective, cognitive capital is related to how well the individual masters these common resources. An individual that is at the core of a community (i.e. having plenty of structural capital) is likely to master the resources well, and therefore also have plenty of cognitive capital. What happens when the Like or Share button is clicked is that an act of bridging occurs. The concept of bridging was introduced by Putnam [18] to describe the impact of weak ties. The connections to a diverse set of people in different contexts, lead to exposure to a broad set of information and opportunities that strong ties would not provide. Hence, weak-tie networks are better suited for linking to external ideas and for dissemination of information and knowledge [21], [24].

When bridging, an item originating from outside the clicker's network is put forward to the network's attention. In the case of liking, this is an indirect effect, since the *Like* will be visible for the network, as part of the SNS's way to steer the flow of information. In the case of sharing, this a conscious act of bridging, were an item from outside is brought into the common resources of the network, adding to the cognitive capital. The more structural capital the clicker has, the more efficient the sharing will be, due to many connections. A clicker with plenty of cognitive capital would be able to assess if the item about to be *Shared* is relevant and compatible with the norms for the community, and hence, would be considered trustworthy.

A certain dilemma here is the diversity among connections. A friend list could connote a mixture of people that represents a range of different contexts: family, close friends, colleagues, communities and even total strangers. This mixture creates a great generative potential of latent ties that could generate structural capital. However, this could also cause problems in terms of items introduced that are incompatible with the common ground of the network. This 'context collapse' occurs when people from different social contexts come together in uncomfortable ways [15].

The *Follow button* creates mainly awareness for the clicker. For the clickee, all three buttons create recognition of the clickee as a provider of relevant content. This is different from popularity, because it draws on compatibility with the cognitive capital (especially in the case of sharing), rather than on structural capital. A person whose items often get *Shared* becomes recognised as a person whose contributions are worthy to pass on to others. Thus, a person with many followers receives recognition as a person worthy to *Follow*.

Relational social capital

Relational social capital is related to expectations and obligations as central to social capital in terms of trust, identity and system closure [8], [20]. This could concern the identification with the collective, the trust of others, and loyalty in terms of perceived obligation to participate [17]. Networks with plenty of relational capital tend to consist of dense, close and intimate connections, i.e. strong ties. Thus, it is not the

accumulative number of (weak) connections in an SNS that provide relational capital (as in the case of structural capital), but the strong ties in terms of 'actual friends' [10].

When the clicker presses the *Like button* targeting a tightly coupled connection (e.g., friends and family members) an act of bonding occurs with the clickee. The concept of bonding was introduced by Putnam [18] to describe the impact of social capital for strong ties. The act of bonding relies on emotional support, access to scarce resources, and the ability to mobilise solidarity [18], [21]. In the context of an SNS, liking an object among close friends gives an impression of presence of strong ties between the actors. It is an act of the clicker expressing sympathy and emotional support for the clickee, but bonding brings relational social capital to both the clicker and the clickee.

As the bonding act is visible also to other strong ties, it may generate further emotional support for the clickee. One example of this is the way creators of memorial pages on Facebook perceive *Likes* as a direct and personal support [16]. The visibility of the bonding act among strong ties will also frame the clicker as an emotional and supportive person, generating relational social capital [7], [10]. Clicking the *Follow button* has similar implications for relational social capital as pushing the *Like* button. In contrast, the *Share button* does in essence not contribute any relational social capital; neither for the clicker, nor for the clickee.

Summarizing the implications of social buttons

Social buttons and social networking sites (SNSs) have an increasing impact on our everyday practices. In this paper, we set out to identify what the social implications of such social buttons are for those who click them and for those who become clicked upon. Such findings contribute to our understanding of social networking sites and may also have implications for the design of such platforms. We conclude that social buttons facilitate relationship maintenance with low transaction costs, both in relation to strong and weak ties.

We have in this paper conceptualised what social buttons are, and how users can generate and draw on social capital from different contexts ranging from strong ties, over weak ties to the whole range of latent ties constituted by an SNS-network as a whole. We have contributed to a deepened understanding of the role of social buttons in the transformation of the web. Firstly, we acknowledged the different nature o f being a *clicker* and a *clickee*. Secondly, we identified three main categories of social buttons, and the subtle but yet distinct differences among them. Thirdly, we found a set of ways that the *Like*, *Share* and *Follow buttons* become productive in relation to social capital, with implications for the clicker and the clickee such as building identity, bridging, bonding, popularising, acknowledging, creating awareness, and recognising, as summarised in Table 12.

Social buttons / Actors	Like	Share	Follow	
Clicker	Identity building	Identity building	Identity building	Structural
Clickee	Popularising Acknowledging	Popularising	Popularising Acknowledging	
Clicker	Bridging	Bridging	Creating awareness	Cognitive
Clickee	Recognising	Recognising	Recognising	
Clicker	Bonding (amongst friends)	n/a	Bonding (amongst friends)	Relational
Clickee	Bonding (amongst friends)	n/a	Bonding (amongst friends)	

TABLE 12 SUMMARY OF THE SOCIAL IMPLICATIONS OF THE LIKE, SHARE AND FOLLOW BUTTONS

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PAPER 6

SOCIAL MEDIA LOGICS AND PERCEIVED BUSINESS VALUE

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ABSTRACT

Organizations seeking to improve interactions, collaborations and engagement with users, continue to invest in social media anticipating that in progressive global marketplace users will utilize social media platforms, to gain business benefits. Since, organizations are using social media but yet not clear that how can they gain business benefits with the use of social media? This paper approaches this gap by analyzing organizational social media experts' roles and views on social media utilization for business value. In doing so, we mainly use the pillars of social media logic theory in combination with scholarly views on value and affordances. By applying these pillars first, the case shows that although value creation takes different forms for different stakeholders, there is strong and aligned focus on value creation from programmability as compared to popularity, however connectivity is also seen as important ability of social media. Nevertheless, the datafication mostly functions as a help to organizations to capture value. Second, the users' participation for information dissemination is enhanced through social media features. Finally, our results show our case does thus meet some but not all of the criteria for pillars of social media logic. Yet, using Dijck & Poell's theory regarding social media logic has turned out to be a useful analytic tool when trying to understand the case of business value of social media.

Keywords: *Social Media Logic, Organizational Use of Social Media, Business Value*

INTRODUCTION

The various converging technologies and cultural trends that constitutes social media have had a significant effect on the way we communicate and interact socially. According to van Dijck and Poell (2013), these changes are so profound that they have brought about “a new set technological, economic, and socio-cultural mechanisms” (p. 5). They refer to these mechanisms as *social media logic*, i.e. the processes, principles, and practices through which social media process information, communication, news and steers and organizes social interactions.

In this new landscape, organizations’ increasing use of and exposure to social media and social networking sites (SNS) are tightly coupled to the ways social media may gain business benefits. More and more organizations use social media for information dissemination, interaction with users, and for engagement purposes, and there is an extensive research on various organizational aspects of social media (e.g., Boyd, 2009; boyd & Ellison, 2007; Ellison et al., 2011; Kane et al., 2012; Vitak et al., 2011; Ellison & boyd 2013; Treem and Leonardi, 2012; Leonardi, 2014; Majchrzak et al., 2013). However, there is still a lack of understanding how to utilize social media for business value.

This paper contributes to the understanding of business value in relation to organizational use of social media by providing empirical insights into how organizations use social media for value creation and value capture. This study approach the topic by analyzing organizational social media experts’ views on social media utilization for organizations. We do so by applying the theory of social media logic and its four pillars: programmability, popularity, connectivity, and datafication (van Dijck and Poell 2013). The research question that guides this paper is: *how do organizations perceive business value utilize from a social media logic perspective?*

The remainder of the paper is structured as follows: the next section presents social media and the logic of social media. Then methodology describes the case setting, data collection and data analysis. The result section presents the main issues raised by social media experts, which are then discussed from the perspective of the social media logic and its four pillars. The paper ends with implications and a conclusion.

SOCIAL MEDIA LOGICS

Social media is a fluid concept, including social networking services (e.g. Facebook), blogs, microblogs (e.g. Twitter), user-generated content sites (e.g., YouTube) and collaborative editing tools (e.g. Wikis) (Bergquist et al., 2013). Treem and Leonardi (2012) notice that most definitions typically conclude that social media is something that exists online, enables content creation, and visualizes that content to others. Many definitions draw on the ideological and technological foundations of the Web 2.0, as a "group of Internet-based applications that build on and that allow the creation and exchange of user-generated content" (Kaplan and Haenlein, 2011, p. 60). Such a definition, argue Treem and Leonardi (2012), is too broad and general to be

useful since it fails to clearly distinguish social media from other forms of communication applications, such as e.g. email.

Increasingly, the notion of social networking sites (SNSs) are being used, with examples such as Facebook, Twitter, LinkedIn and Instagram. The purpose of these SNSs are to support collaboration, communication and maintenance of social relationships (Faraj et al., 2011; Faraj & Azad 2012; Treem & Leonardi, 2012; Ljungberg et al., 2017). One development of technological features connected to SNSs is social buttons. Social buttons allow individuals to share, recommend, like or bookmark content across various social media platforms (Gerlitz & Helmond, 2013, Ljungberg et al., 2017). Further, social buttons transform the clicks from users on SNSs into numbers on button counters (Gerlitz & Helmond, 2013). The notion of Social Media Site, is however a bit too narrow, as it excludes the fact that many SNS are available as apps through different platforms. Thus, a notion of social media platform has emerged (Helmond, 1015). This notion indicates that social media platforms follows the same rules as other platforms, e.g. in terms of competition and network effects (Cusumano, 2011).

Many scholars have studied social media from an affordances perspective, i.e. basically the possibilities and constraints social media offers in terms of possibilities for action (Treem & Leonardi, 2012; Majchrzak et al., 2013). For example, the like button provides different action possibilities for end-users, that may express appreciation and to advertisers that may measure engagement (Helmond, 2017). The approach to affordances ranges from focusing primarily on the features of the technology, to the social structures that are shaped (Helmond, 2017).

The different kinds of social media can be viewed as an expansive ecosystem of connective media (Van Dijck, 2013). Van Dijck and Poell developed a framework that articulate the underlying pillars of this ecosystem, i.e. what they call a social media logic. The social media logic refers to the processes, principles, and practices through which social media process information, communication, news and channelize social traffic.

The social media logic is explained in terms of four mechanisms or elements; *programmability*, *popularity*, *connectivity*, and *datafication*. These four pillars serve not only as an analytical tool of social media logic, but also facilitate to identify the contrivances (core features of social media) and illustrate such features and affordances of social media as systematic interdependence. These four pillars play a central role in the syntax of social media logic. The intrinsic properties of the artefacts are the affordances, which are subtle but share similar ability in a way that pillars of social media logic offer. For example, one could relate Treem and Leonardi affordance "visibility", with van Dijck and Poell's pillar popularity. Pillars can be seen as enablers and affordances can be considered as an output. Next, we describe how these four pillars are explained with regard to the ability of social media.

The first pillar of the social media logic is Programmability, it is the ability of the platform owner (and sometimes other actors) to program the social media platform to schedule and steer content on the web in a way that can help

organizations to glue their users to the screen from one segment to the next. As social media heavily relies on users' contributions, the creative content by users becomes crucial to the success of programmability, as both users and platform owners mutually shape the environment (van Dijck & Poell, 2013).

However, in response to actual usage, a platform requires to align strategies in order to keep users pleased who are capable to influence the flow of information in this process. In other words, they argue, programmability transforms content and audience to code and users. The power of algorithms lies in their programmability: programmers steer users' experiences, content, creativity and relations through the platforms (Beer, 2009). For example, users post content, but ultimately the platform owner may tweak platform's algorithm to influence relational activities, such as liking, sharing, following, friending, and profiling. These underlying mechanisms are invisible and the algorithms are kept secret and are constantly being adapted to evolving practices (Ellison et al., 2011; Bucher, 2012).

Popularity is the second pillar. Each platform has its unique mechanisms for boosting popularity. For example, popularity can be measured in quantified terms. Inscribed in Facebook's EdgeRank and Twitter's Trending Topics are algorithms that make some issues or topics more valuable and devalue others. Facebook's Like Button counter automatically select emotive and positive evaluations of a content. And the Like mechanism claims to promote a social experience but the Like button simultaneously figures in an automated "like-economy" (Gerlitz & Helmond, 2013).

Popularity is conditioned by both the features of programmability - algorithms, and socio-economic components. In the early years of social media, an egalitarian and democratic view was dominating, where all users were supposed to equally participate and contribute content. However, eventually platforms such as Facebook, LinkedIn and Twitter matured, "their techniques for filtering out popular items and influential people became gradually more sophisticated" (van Dijck & Poell, 2013). In spite of the platform's egalitarian image, some users on the platforms are more influential and visible than others.

One explanation to this is the popularity boosting: algorithms holds power to automatically assign differentiated value, at same time users themselves may also engage in planned activities to make their visibility higher. Basically, the logic of online popularity resides in banners for "most viewed" videos or follower counter on YouTube, friend stats or following counter on Facebook, and follower counter on Twitter and LinkedIn. For instance, users such as PewDiePie on YouTube has more visibility and carry more weight than others, also President. Trump on Twitter gets more visibility than other politicians and similarly the soccer star Cristiano Ronaldo on Facebook carry more weight than others. Platform metrics are increasingly accepted as legitimate standards to measure and rank people and ideas; these rankings are then amplified by community through social buttons such as Like, Share and Follow Buttons.

The third pillar of social media logic is connectivity. This is considered to be the heart of sharing, interacting, and communicating actions. It can be seen as the feature

that affords the connection of content to users' activities and organizations. This helps users to connect with other users based on their common interests and also support people to have customized connections, whom they want to communicate to develop a personal relationship or the communities of interest. The mechanisms of automated personalization and networked customization are new in the context of social media logic.

Connectivity should thus be seen as an advanced strategy of algorithmically connecting users to content, users to users, platforms to users, users to advertisers, and platforms to platforms. For instance, automated links between users and products via Facebook Likes help advertisers utilize recommendation tactics for promoting products to "friends"—even if users are unaware of their being used for these purposes. Ultimately, connectivity means that group ties are being replaced by large-scale, fluid social networks, that do not require collective identity or organizational control, instead, social media function as organizing agents in these contexts (van Dijk & Poell, 2013).

Datafication is the fourth pillar of social media logic and the most crucial among all pillars. It is the ability of social media platforms to render all sorts of aspects of the world into data. Such massive quantities and so many different aspects have never been quantified before. Each type of content in social media is treated as data: demographics, profiles, friends, followers, likes, shares, endorsements etc. To this all sorts of metadata based on timestamps or GPS-inferred locations may be added. Above all, the success of first three pillars - programmability, popularity, and connectivity - are conditioned with datafication. Further, it enables social media with the ability and potential to develop techniques for predictive and real-time analytics. In the business world, social media platform owners are massively mining online social traffic for a variety of purposes - indicators of trending topics, keywords, sentiments, public viewpoints, or frequently shared and liked items. For instance, Twitter, promotes itself as an echo chamber of people's opinions.

However, while processing data, a platform owner does not merely "measure" certain expressions or opinions, but also helps to shape them during the activity or process of developing issues. Opinions and sentiments expressed via Twitter are extremely vulnerable to manipulation (van Dijck & Poell, 2013). Similarly, Facebook insights processes enormous quantities of user content every second. Through datafication, organizations can analyze it and subsequently turn this aggregated raw data into meaningful piece of information to shape business decisions regarding individuals, communities and society at large. Knowing more about users' profiles and interests not only help fine-tune programming decisions but also support advertisers with numbers to make investments in paid targeted ads. For example, the same information can be used to send targeted ads for product promotion, events or talent hunting.

METHOD

In this section, we describe the research setting, and how the data are collected and analyzed. The primary objective was to explore what business value organizations managed to create and capture using social media. The main author used his personal contacts as well as LinkedIn connections then identified and contacted 63 organizations within a wide variety of industries. Twenty-six of these responded positively to the request for an interview and after further negotiations eventually managed to secure interviews with 20 social media executives from 18 different organizations (see Table 13).

The main author performed all interviews between June and November 2017 and were carried out face to face whenever feasible. In cases when the geographical distance or other circumstances hindered physical meetings, interviews were conducted over Skype. All interviews were semi-structured departing from an interview guide based upon social media logic theory. Interview questions (except introductory questions) focused on the executives' experiences with and strategies regarding social media and how to gain organizational benefits out of these technologies. The aggregated time spent with all 20 executives amounted to 10+ hours. In addition, in some cases, the main author asked further follow-up questions via LinkedIn, so in this way 42 messages were exchanged between author and the executives. All interviews were recorded and transcribed verbatim resulting in a total of 109 pages.

Type of Industry	Interviewee role	No. of interviewees
Engineering and Manufacturing	- Director, Public Relations & Social Media - Director, Corporate Comm. & Media Relations - Director, Digital Solutions - Manager, Talent Hunt & Training - Manager, Public Relations & Social Media - Communication & Content Specialist - Head of Social Media & Corporate Comm.	7
Marketing and HR	- Manager, Social Media and Content Strategy - Manager, Social Media and Content Strategy - Senior Recruitment Consultant - Manager, Social Media and Content Strategy - Manager, Social Media and Content Strategy	5
Software and IT	- Manager, Digital Marketing & Social Media - Social Media Account Specialist - Senior Information Strategist	3
Other industries and Public Organizations	- Head of Social & Innovation - Head of Social Media & Content Strategy - Head of Digital Strategy - Social Media Content Specialist	5

TABLE 13 CATEGORIES OF INFORMANTS

Inspired by Charmaz (2006), we first applied an inductive approach to our data, where codes were derived and themes from the data in a Grounded Theory-like fashion. Using the qualitative data analysis tool Nvivo Professional 11, the main author went through an initial, iterative phase of open coding whereafter the thematic coding was applied to organize the codes into categories. As in a proper Grounded Theory approach, this work was characterized by a constant comparison between data, codes and categories. During this process, used extensive memo-writing as an analytical aid that smoothed the transition from transcribed text to a manuscript draft (Charmaz, 2006).

Though this process, emerging patterns could be identified across different organizations in terms of how respondents described their organizations' strategies to use social media for business purposes, how they manage relationships, and what type of information they share and with whom. Once the inductive categories had been established, we switched to a more deductive phase where van Dijck and Poell's pillars

of social media logic were brought back in, and the categories were examined and organized based on their relationship to programmability, popularity, connectivity and datafication, respectively. We have therefore also chosen to present our results according to the theory's four pillars.

RESULTS

The results are structured according to the themes that emerged during inductive data analysis.

Understanding Business Value in Social Media

Exactly how social media is perceived to generate value depends much on who you ask, particularly so since value itself is an elusive concept that many respondents struggle to clearly define. In addition, the understanding of social media also varies between respondents. Although all interviewees were social media managers it became clear that they not always had top management onboard when it came to the importance of social media. They reported that some top executives still though of social media as something primarily for youngster, and did not fully appreciate the potentials of building relationships, creating users experience, and disseminating more targeted information through these channels. When top management lacks a clear understanding of what is potential value social media holds, it may be difficult to get the financial support needed. One of the respondent says:

…it can sometimes be quite tricky [to convince executives to invest in social media] since they don't understand the value [from social media utilization]. (Social Media Specialist)

Even when top management do agree to invest efforts in social media, it may not be because they see the potential but rather because they see what their competitors are doing with such platforms and feel the pressure not to be left behind. This can result in half-hearted initiatives without a clear purpose or goal. Many such organizations do not use different platforms to address different stakeholders, which is something that needs to be done, according to one of the respondents.

…Why can't we as an organization do social media like other large companies are doing… people want different kind of content on different platforms…we need clarity in purpose and strategy. (Head of Social Media & Corporate Communication)

Other companies do have selective and focused policies for different social media platform. A publishing strategy for social media should be customized for the intended customers and where they are likely to be, since each social media platform needs its own type of content. You can't simply expect something that works on Instagram to work on Facebook too, as one respondent put it. Many respondents agree that organizations need to understand people's behaviours because by knowing why people behave and interact in certain ways, organizations can respond proactively and provide content with those behaviours in mind.

Snapchat is a very popular social media channel among women… They (young women) are not on twitter very much. If we as organization of public health like to address vaccination for young women, we need to address that in social media channels that they are using. (Director, Communications & Public Affairs)

A large number of the organizations present in this study do consider the content and relations generated through social media to be valuable. Content and relationships are quite interconnected, the respondents argue – both the content that the organization shares with its customers and the content the customers share in return. The content itself and the interactions it initiates is valuable to the organizations. Many respondents thus believe content generated for and by social media usage to be very important.

For the first time in history, technology (social media) has reached a point where everyone has a voice – where content is everything and everything is content, and where the conversation is everywhere. (Head of Social Media & Content Strategy)

The fact that social media allows both the organizations and their customers to add content is a novel addition. Traditionally, organizations have used web sites mainly to reach *out* with their information – now they can also start to *receive* ideas from outside. This is a new experience to many, and something the respondents considered valuable. Many of them still regard this exchange as an 'experiment' for generating creative ideas and open discussions, increasing viewership, and reaching other audiences. One of the directors says:

…back in 2013, it was a test to upload a video on YouTube, when the new truck was released. At the time it was the most innovative truck on the market and it had unique features which no other truck brand had […] and it turned out to be very successful in terms of viewership and reach. (Director, Public Relations & Social Media)

Many respondents report that they gain business benefits through interactions with users and by connecting users with content. In fact, the majority of the organizations in this study claim to achieve benefits, in terms of increased sales and market size, improved customer satisfaction and relationships, improved employee relationships, better technical support, reduced marketing expenses, winning B2B accounts, and improved search engine rankings. Most of these perceived values, however, are yet difficult to measure or express explicitly in monetary terms though the methodologies and analytical tools are available that can support tracking and measurement. Hence, many of the respondents still had to rely on their gut feeling that being prepared and responsive on social media and staying connected with customers create opportunities that must not be ignored.

I firmly believe this [social media] has supported sales, definitely. Plus, it also puts pressure on the sales people as they have to be aware of what's going on and they better be prepared… (Manager, Social Media & Content Strategy)

The Importance of User Engagement

Keeping users engaged with content and entertaining them when needed help organizations to connect with users and their concerns to make continuous improvements in services with little efforts. However, some organizations believe that it is not only about entertaining users online but worth interaction and collaboration experience as well that end users have and cherish afterwards. By sharing informing and entertaining, organizations may potentially receive notable attention and a good response that is perhaps the most rewarding experience that organizations have experienced in the last five years when it comes to social media. Many respondents think that they have made a relatively small investment in social media activities and got decent returns against those efforts.

Organizations are no longer only managing relationships with customers, but instead facilitating collaborative experiences and active dialogue that customers value… Social media plays key role here, where customers, stakeholders, and employees are all engaged into conversations through relevant content. (Head of Social Media & Content Strategy)

Some of the respondents say people do share because they want to build their own personal brand. They want to look smart and that's why they are sharing stuff. The process of communication will keep the relations between company and people. Perhaps social media needs to go back to what it has always been about, the people. Organizations are in the midst of this digital transformation now and the respondents say that the more they digitalize, the more they automate, and the more important communication becomes.

One way to engage users and have them interact with you in a non-intrusive way is via the use of social buttons provided by most social media platforms, i.e., buttons such as the Heart button in Instagram or the Share button on Facebook. The respondents in this study deems these social buttons important because they set up a stage for organizations' brand ambassadors. Organizations have to be careful and listen to users and see if they like and share the content the organizations provide. Organizations have since long kept track of how many visitors their webpages have had, but these social buttons are more than just counters, according to respondents. Managers are now actually putting these numbers in context to make sense of them in order to understand better users' preferences. In addition, the visibility of these click counters help attract more visitors.

Likes are a fantastic way to see how many people react positively to your picture – they took a split second out of endlessly scrolling to "like" your picture when they could have continued. "Shares" are fantastic because it means people that follow you love your content enough to promote you themselves, exposing you to their entire network. "Follows" are what help grow your network – when someone looks at your account and sees a lot of people already follow you and then on top of that, they like what you post, they are naturally going to follow as well. (Manager, Social Media & Content Strategy)

Tracking and Measuring for Success

Almost all organizations in this study are analyzing their social media data, either using the tools that are provided in many social media platforms or via third-party tools and services available to track and measure the activities and behaviours occurring on these platforms. Most of the organizations do social media for awareness and lead generation, and they check their analytics multiple times throughout the day. Organizations toggle between boosted posts on e.g. Facebook and how their consumers are responding to content and then comparing content on different platforms to quantify the total outreach and level of engagement by users.

Customer engagement seem to be particularly important, and some of the respondents explain that reaching out to a broader audience is just a half job done. That is knowing that people have visited and seen the content in their news feed. It does not reveal whether they have actually taken advantage of that content. Visibility is good but if they just browse without clicking there is not much data for the back office team to work with, e.g. for banners and IP targeting.

The thing that I want to measure is engagement. That's like the primary KPI that you need to measure. How do people actually interact with your content, then you have to monitorize the reach but the reach do not actually say anything. (Manager, Digital Marketing & Social Media)

Engagement, however, can come in many shapes and respondents in this case value them differently. Some of the respondents express that Sharing and Linking has more value in their businesses, whereas Liking or adding comments are of less value. Other respondents rank them in a different way, claiming that comments show a higher degree of engagement that just clicking a button. User comments also provide very tangible input that some respondents value. However, to a number of organizations, there are even more important input than free-text comments, and that is contact information. These organizations offer digital assets such as whitepapers, e-books, or webinars, where the customer has to fill out a form to be able to access the resources. This way, the organizations can harvest verified user information and convert this into monetary value by selling it to other agencies.

…it's crucial for us that that people read and see our content, we have to make sure. If they share and like, that's amazing but it's not the most important. For most important for us is that they download the assets that we are providing them. They have to provide the data and that is crucial to us. We sell it! (Manager, Digital Marketing & Social Media)

Often when organizations do big campaigning, the monitoring is outsourced to external agencies that are hired for this specific task. Usually organizational representatives hold weekly meetings with agency personal about what is not going right e.g. on Facebook, that is something organizations willing to change regarding content and segment or the strategy for triggering and spreading information or may change the budget for managing relations and pad marketing etc.

My job is to get the names and positions of people who download our assets on social media so I can give the names to our sales team. We use Sprinklr, a paid tool for advanced analytics of data in our company. (Manager, Digital Marketing & Social Media)

Mostly large organizations are buying services from agencies to help them with more spread and targeted marketing to make the efforts and investments more meaningful and useful. Organizations pay in order to reach the target audience they want to talk to. Organizations are using tools e.g. 'PointDrive'. This is a new sales tool developed by LinkedIn and this tool helps in creating an easy presentation using blogs, sales presentations, videos, website links and you share the link of the presentation with further users.

We use [a particular product]. It's an online platform that integrates all kinds of conversation with the customers and it's also possible to connect with [various social media platforms]. If you like to have customer service on Facebook, you can incorporate all you e-mails, all your messages everything in the very same online platform. That's what is offered through [a particular product]. (Head of Digital Strategy)

Transparency generates Trust

To build and promote their brand, organizations need to be seen and for this to happen, they need to be transparent to gain their customers' and followers' trust. Being respectful and transparent are seen as sources to gain an increased and loyal user base, according to respondents. The thing with social media is that it is social and organizations need understand the implications of this. When organizations show that they trust their employees, their customers, and people in general, they get more fans and a more loyal customer and follower base. When organizations show distrust to their users, they simply build a corporate culture of distrust, and they will not get the spread of interesting posts over social media. However, if representatives from organizations become angry or act in a non-professional way then it can be a damaging situation for any brand or a business.

But if I start to get angry, my clients won't understands this, as you have to build trust. Social media is all about having a trustworthy platform. If that breaks it goes goddamn worse. (Senior Information Strategist)

Some organizations think, that they over a period of time have established so strong relations and interactions with the users that they do not need to invest any money for paid content. They may have influencers, and a very broad fan base with an extreme reach whenever. When they post something, it really flies off.

…for our virals [videos], one of them is the most viewed in the entire automotive industry – and beyond. (Director, Public Relations & Social Media)

However, some executives believe this to be one of the fundamental reasons why organizations are not doing well with the use of social media. It should not only

be what you are looking to gain, but more what can you give and provide to the people.

Businesses need to be better about providing value to their customers, not just asking them to buy their products. Naturally, we hope to gain followers and eventually sales, but we want to provide real value to those that chose to "like," "follow," and give us their business. (Manager, Social Media & Content Strategy)

Some respondents mention that their organizations encourage employees to be active on social media regarding work related issues since it is a good way to keep an ear to the ground. The organization will have a very broad picture of both the positive and the negative sides of what is being said. And should your organization do something wrong, it is better to be honest about it and apologize right away. You are not just responding to that one happy or angry person, rather you respond to the entire community since your post will be seen by everyone, as one respondent explained.

Different publishing strategies

According to respondents, there basically are two ways for organizations to publish content on social media platforms; the organic way (free media) or paid media (digital marketing). It varies from organization to organization which strategy to use, based on that what sort of business value executives aim to gain from content sharing. Nonetheless, most organizations manage their content and their channels themselves and only a few respondents outsource these responsibilities to professional services. Posting content and managing online conversations and dialogues are sensitive operation and care must be taken not to damage the brand or the organizations' reputation. It is therefore important that the material is correct in all aspects. The respondents explain that customers are also sensitive to nonsense and do easily spot a post that only consists of empty buzzwords. They go to a particular company's social media channels in order to get something useful and do not want to have their precious time wasted.

Customers want brands to be relevant, not opportunistic. (Manager, Social Media & Content Strategy)

It is evident that much can be done with social media relying only on organic methods. Some respondents had been very successful in terms of attracting viewers without having to pay. One manager illustrated it like this:

For a test purpose, we made a short four-minute documentary about Truck safety design and innovative features. We decided to put it on our Facebook and YouTube channel, but we did not want to put any distribution money on it. We just wanted to check what it reaches. And without spending a cent, the post has now reached over 300,000 views [on YouTube]. That depicts how strong effect it [social media] has now that we have established that brand and the contacts with certain influencers. (Director, Public Relations & Social Media)

However, the paid media strategy is also successfully used by many of the respondents. For example, the multinational software service firm that was interviewed had as their primary objective to win and secure accounts with respect to business-to-business deals. Such accounts could generate vast amounts of money is landed, and it therefore makes sense for organizations to invest in digital marketing.

If an organization wants its client to read a post on a social media channel, they would normally engage in multiple strategies, where IP targeting is one such strategy. For example, there are 'banners' that follow users on the web and they track users' activities from one social media channel to another. Many managers claim to use these programmability features to make sure that people see their content by steering them right.

[...] it's crucial for our organization that that people read and see our content, we have to make sure...you always put a client or a person through a funnel of communications, with awareness you do what you want him or her to do on social media, I want you to behave in certain way. (Manager, Digital Marketing & Social Media)

The respondents explain that their teams decide in advance what topics that they are going to post online. Adding content is not something that just happens and it does not happen in one single way. Depending on whether the audience is customers, citizens, media or some other business, organizations use different applications and programs for scheduling and steering their content. Some organizations even use several different programs to manage their content scheduling.

We use different social media scheduling programs, for example, Buffer is one of them. We prepare the content and we plan them for the social media. (Manager, Digital Marketing & Social Media)

Discussion

By using the theory of social media logic, now the results will be discussed in relation to perceived business value, value creation and value capture. Mainly the first three pillars i.e. programmability, popularity and connectivity are functioning mostly as an enabler for value creation and that the fourth pillar i.e. datafication mostly functions as a help to organizations to capture value.

Value Creation and the Logic of Social Media

There are many things that the organizations claim to value, including content, information, relations and money as ingredients for enabling insights from past to present and for future predictions. As discussed in the theory section, the process of value creation is often confounded with the process of value capture. Scholars argue that value creation and value capture should be viewed as distinct processes. The challenge is that the source that creates the value, be it an individual, an organization, or a society, may or may not be able to capture or retain the value in the long run (Bowman & Ambrosini, 2000; Lepak et al., 2007).

Programmability is a key to understand the social media logic. Programmability serves as an underlying mechanism to dictate and trigger desired actions from users (Chun, 2011; Manovich, 2001). The code influences the ways in which people can move about and navigate on the web, affecting what can be said and done being online. For example Facebook, Youtube and LinkedIn are widely used platforms by many organizations for scheduling and steering information in a strategic fashion, e.g. through IP targeting, banners and being relevant with interesting content. In this sense, organizations utilize the programmability pillar as an ability to glue their users to the screen from one segment to the other (van Dijck & Poell, 2013). The success of social media heavily relies on users' contributions of creative and relevant content in order to receive more likes, shares and followers. According to van Dijck and Poell (2013) both platform owners, organizations and its users mutually shape the environment. However, the power of the algorithms belong to the organizations that control the programmability, and thus may steer users' experience, creativity and relations through the chosen strategy by the selected SNS.

To gain anticipated value with the utilization of programmability, the SNSs requires to align strategies in order to keep the users pleased, since they also are capable to influence the flow of information (van Dijck, 2013). The programmed code regulates the structures through which things can emerge (Lessig, 2006), and thus what can be turned into valuable actions. The underlying mechanisms and strategies to create value from programmability are basically invisible and kept secret and therefore not possible for users to inspect (Ellison et al., 2011). In this sense the creative content has little use value for organizations, but great exchange value for keeping users engaged.

Popularity, means that social media has the ability to boost popularity of issues, ideas or people, and thus will influence other people and will be considered as value for organizations. More and more organizations spend considerable investments on SNSs to gain anticipated value i.e. winner takes most (Cusumano 2011) by utilizing the logic of popularity. Each platform has its unique mechanisms for boosting popularity. For instance, the YouTube video experiment made by a global automotive industry was rewarding in a way that it became viral just in little time with no monetary costs made on the upload. This pillar is another ability of social media logic that can be quantified and tracked with the use of built-in social media tools e.g., Facebook EdgeRank or Twitter's Trending. These tools help making some issues more valuable and devalue others. It is also dependent on the relevance of content itself, if it is going to mobilize the crowd and gain attention, increased viewership and reach that is considered as value for organizations. The popularity logic of social media attests organizational ability to connect people across time and space). This relates to social media's ability to afford associations (Treem & Leonardi 2012). For example through public friend lists, or the use social buttons to establish and recognize connections. It also relates to the visibility that social media affords, e.g. organizations are always striving to be visible and have global footprints so they can engage more people to sell their offerings.

However, the logic popularity is not that commonly utilized pillar among organizations as compared to programmability. Some of the organizations opt metrics to measure and rank issues and ideas; these metrics are ranked and then amplified by the society through the use of social buttons. Mostly organizations are facing hard times while utilizing the popularity logic, and the main reason is a lack of clarity in strategy to open up the organizational processes (Chesbrough & Appleyard 2007). An open strategy is most effective, since users will attract more users (i.e. network effects) which helps organizations to create more value (Chesbrough & Appleyard 2007).

C*onnectivity*, is the ability of social media to enable users to connect with content or people, e.g. through sharing and interacting. We have noticed that organizations devise different strategies to connect with users. They try to be responsive, relevant, transparent and try to build a trust based relationship. In a way social media platforms do not afford collective identity or organizational control, instead they function as intermediaries and organizing agents. These mechanisms of automated personalization, and network building and customization (e.g. automated friend suggestions) are key to the social media logic. Therefore, organizations see connectivity as an advanced strategy of algorithmically connected users to content, users to users, platforms to users and users to advertisers as well as platforms to platforms. Crawford (2009) argued that the concept of listening could be used in a productive way to analyze the forms of online engagement and deeper consideration of online attention.

For instance, listening on fan pages in a highly responsive and attentive way requires firms to be vigilant with rapid and targeted feedbacks to the followers (Crawford, 2009). The results show in this study that by large all the organizations are making efforts in establishing direct connections with users. Their strategies may cause failure or success but the significance of connectivity is realized among all the respondents. In this sense, connectivity serves as an enabler to initiate communication and interactions with users to develop long lasting and trustful relations. This also relates to the ability to support new associations that is afforded by social media. The association could be between different users and or a user and her connection with the content (Treem & Leonardi, 2012).

Capturing Value from Social Media Logic

Datafication is probably the most valuable pillar by and large for all organizations, since the value created through the other three pillars are largely captured with the use of the fourth pillar, datafication. In this sense, the value created e.g. through programmability is rewarded and captured when datafication logic by organizations is applied. It means that the value created by an organization at one level of analysis may be captured at another; such a process is called ‘value slippage’ (Lepak et al., 2007). Most importantly, from the ability perspective of the datafication pillar, the success of doing social media for organizations depend on the ability to render user and customer behavior into data so it can be quantified, in order to predict for future investments and so that tasks can be shaped in optimized manner.

Contrary to the classic conceptions of business strategy, organizations need to have an open strategy to balance between value creation and value capture (Chesbrough & Appleyard 2007). To gain business value, for organizations there is no longer a question of whether to incorporate social media in the overall business strategy, although for some there are questions of how and when (Lepak et al., 2007). Many organizations, perceived new profit opportunities as a source of capturing value with the utilization of datafication.

Executives understood the significance of capturing more value from social media data. The importance to create it, store it, and analyze it, could substantially affect both the created value and its capture. In its purest form, the value created through an open process would be 'non-rival' in that when someone 'consumed' it, it would help to develop a good experience of both current and subsequent users (Chesbrough & Appleyard 2007). As we noticed, global software solutions and services firms' capabilities in this arena developed and attracted historic levels of profit, but a large portion of other bigger organizations are seriously ambitious to produce successive practices that utilize the datafication pillar successfully; to visualize from past user experience to actual and future behaviour.

Henceforth, modern and evolving monetization opportunities are thus associated with advanced analytical measurement and tracking tools. These strategies, in which content, information, relationships and engagement are analyzed, hold the capability to make returns on investment. Above all, according to van Dijck and Poell (2013), success of first three pillars are conditioned with datafication because it enables social media with the ability and potential to develop techniques for predictive and real-time analytics.

CONCLUSION

The development of social media is constituted on the pillars of an emerging social media logic, but the uptake and expression of this development are also shaped by organizational strategies. For practice, social media has led to a shift in accountability of organizations toward consumers and has created new threats to the reputation of organizations. Organizations are yet struggling to make best use of social media for customers, employees and involved stakeholders but the obstacles in deployment are insidious i.e., lack of tuned policies, standards mechanisms and strategies by executives.

There are very few organization equipped with the required advanced analytical tools and workforce to track and measure returns on investments made on social media. This paper problematized value creation and value capture from social media. We found that using van Dijck & Poell's theory regarding social media logic was a useful analytic tool when trying to understand the business value of social media. Further this work identifies that the first three pillars, programmability, popularity and connectivity functioned mostly as an enabler for value creation while the fourth pillar, datafication mostly enabled the capture of the created value.

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APPENDIX

Interview Guide

A. Background Information

Name, Role, experiences with Social Media

B. The Interview Questions

1. How does your company work with Social Media?
   - On what platforms are you active?
   - Why are you engaged?
   - What do you expect to gain?
   - Is it worth it?
2. How do you make use of all the interesting data that social media usage generates? (Datafication)
   - How is data collected and analyzed? (extraction strategy)
   - What do you do with the data?
   - What do you measure more specifically? (likes, comments, sentiments)
   - What business advantages do you get from the data?
3. How do you exploit Social media features such as Like, HashTag or Follow? (Popularity)
   - What benefits do you get from these features?
   - How is that collected?
   - Which Social buttons are more important and why is it so?
4. Explain to what extent and how you use social media to connect users to particular content? (Connectivity)
   - What ways do you use to analyze or follow up on this?
   - How does your business benefit from this?
   - How do you link between different (social) media platforms?
5. How do you manage to control or influence the users' interaction with you via social media? (Programmability)
   - Why is this important?
   - What do you gain from it?
   - Who posts on behalf of the company?
   - What is your policy for posting?

C. Final Thoughts

- Do you have some fun story to share with me?

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