

**Social Media Use in Organizations:**  
**Exploring the Affordances of Visibility, Editability, Persistence, and Association**

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## **Abstract**

The use of social media technologies - such as blogs, wikis, social networking sites, social tagging, and microblogging - is proliferating at an incredible pace. One area of increasing adoption is organizational settings where managers hope that these new technologies will help improve important organizational processes. However, scholarship has largely failed to explain if and how uses of social media in organizations differ from existing forms of computer-mediated communication. In this chapter, we argue that social media are of important consequence to organizational communication processes because they afford behaviors that were difficult or impossible to achieve in combination before these new technologies entered the workplace. Our review of previous studies of social media use in organizations uncovered four relatively consistent affordances enabled by these new technologies: Visibility, persistence, editability, and association. We suggest that the activation of some combination of these affordances could influence many of the processes commonly studied by organizational communication theorists. To illustrate this point, we theorize several ways through which these four social media affordances may alter socialization, information sharing, and power processes in organizations.

## Introduction

Recently, numerous commentators have suggested that social media technologies – like blogs, wikis, social networking sites (SNS), microblogs, or social tagging<sup>1</sup> tools – may facilitate communication practices in organizations that differ from those associated with traditional computer-mediated communication (CMC) technologies like email, teleconferencing, intranets, decision-support systems, and instant messaging (Grudin, 2006; McAfee, 2006; Steinhuser, Smolnik, & Hoppe, 2011). In addition to the scholarly literature on the role of social media use in organizations, the business press has issued a number of bold proclamations such as: “Social media will change your business” (Baker & Green, 2008) and asked such daring questions as: “Can social apps kill enterprise software?” (DuBois, 2010). Whether or not one believes or discounts such statements, social media adoption within organizations is occurring at a rapid pace. According to a recent survey by global consulting firm McKinsey & Company, 65% of companies reported the use of “Web 2.0” technologies inside of their organizations – with video sharing, blogs, wikis, and SNS among the most heavily used applications (though no single technology was used internally by more than 38% of companies) (Bughin & Chui, 2010). Forrester Research predicts that corporate spending on enterprise social media will reach more than \$4.6 billion annually by 2013 (Young et al., 2008).

Yet despite the increased adoption of social media by firms, the implications of these new technologies for organizational processes are not yet well understood by communication researchers. Scholars have suggested that social media adoption *in organizations*<sup>2</sup> seems to be outpacing empirical understanding of the actual use of these technologies and our theories about why they may bring changes to various organizational processes (Raeth, Smolnik, Urbach, & Zimmer, 2009). Because the implications of social media use in organizations are not well

understood, we use this chapter to accomplish three primary tasks. First, we explore the emerging body of research on the use of social media use in organizations in search of evidence that social media constitute a set of communication technologies that are distinct in their implications for organizational processes from traditional CMC technologies. We find that scholars treat social media as a new class of technologies that have the potential to alter organizational dynamics in profound ways. Given this finding, our second task is to explicate the distinct ways that social media merge with the ongoing communicative processes that occur within and constitute organizations. To accomplish this task, we employ an “affordance approach” that allows us to organize findings reported in heretofore disparate empirical studies into four categories that describe consistent ways that organizational members use the material features of social media technologies to accomplish their work. Using this categorization we then commence our third task, which is to draw implications for how the use of social media within organizations may affect particular organizational processes that are of great interest to communication researchers.

### **Defining Social Media: Toward an Affordance Approach**

#### **What Are Social Media?<sup>3</sup>**

To address the question of whether social media technologies are distinct from other forms of CMC commonly used in today’s organizations it is helpful to briefly trace the history of social media technologies. The first known use of the term “social media” in print is believed to have occurred in 1997, when then-AOL executive Ted Leonsis commented that organizations needed to provide consumers, “social media, places where they can be entertained, communicate, and participate in a social environment” (Bercovici, 2010). The first publically popular SNS,

SixDegrees.com, which let users create online personal profiles and lists of friends, was launched that same year (boyd & Ellison, 2007). During the following decade, a number of other popular social media technologies such as the blogging platforms LiveJournal and Blogger (both in 1999), the wiki-based encyclopedia Wikipedia (2001), the social bookmarking service Delicious (2003, formerly del.icio.us), the SNSs MySpace (2003) and Facebook (2004), and the microblogging service Twitter (2004) made their debuts. As adoption of these technologies grew, social media moved quickly from the domain of the tech-savvy to the mainstream (Shirky, 2008). Recently, the Pew Internet and American Life Project recently reported that 61% of adults (18 years and older) have used SNSs and 32% have read a blog (Zickuhr, 2010).

As social media have begun to enter popular consciousness, some scholars have treated them as just another genre of CMC (Herring, 2004), while others have attempted to define social media, broadly, as a distinct category of technologies. Following the latter strategy, Kaplan and Haenlein (2010), for example, refer to social media as “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” (p. 62). This focus on content creation by users is also reflected in the Merriam-Webster definition of social media as “forms of electronic communication (as Web sites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (as videos).” Each of these definitions establishes social media, at a minimum, as: (a) existing online, (b) featuring content creation (or appropriation), and (c) displaying that content to others. Such broad characterizations of social media fail to provide criteria that allow one to distinguish these technologies from the myriad other forms of CMC.

In lieu of providing a clear definition of social media, the default approach in many

academic writings has been to define the term “social media” by pointing toward the types of technologies that people recognize, implicitly, as social media (e.g. blogs, wikis, SNSs, social tagging, etc.). However, this referential approach to a definition of social media focuses people’s attention on what the technology itself does (or does not do) instead of the ways the technology become mutually constituted with the organizational context in which it is embedded (Leonardi, 2009). Moreover, studies that focus on the features of specific technologies in organizations provide limited insight into why use of a technology produced particular effects (Nass & Mason, 1990). In sum, many studies of social media use provide insights about a specific tool, in a particular organizational context, but they do not develop theory about the consequences of social media use for organizing. It appears that current definitions of social media are either too application-focused – preventing generalization across contexts – or too broad obscuring the ways the technology may influence behaviors – to aid in theory building. To aid theory development around social media use in organizations this paper eschews a definition of social media based on features, and considers the *affordances* they offer users.

### **An Affordance Approach**

In an effort to explain how animals perceive their environments, James Gibson (1986), a perceptual psychologist, argued that an object like a rock could be used very differently by distinct animals because each animal perceived a particular set of activities for which the rock would be useful. He suggested that animals perceived not what an object is, but rather what kinds of uses it affords and called such perceptions of an object’s utility an “affordance.” In Gibson’s formulation, people do not interact with an object prior to or without perceiving what the object is good for. As he suggests, the physical features of an object exist apart from the people who use

them, but those features are infused with meaning “relative to the posture and behavior of the animal being considered” (pp. 127-128). Although the features of an object are common to each person who encounters them, the affordances of that artifact are not. Affordances are unique to the particular ways in which an actor, or a set of actors, perceives and uses the object. To this end, Gibson (1986, p. 134) offers an explanation of the relationship between materiality and affordances:

The psychologists assume that objects are composed of their qualities... color, texture, composition, size shape and features of shape, mass, elasticity, rigidity, and mobility... But I now suggest that what we perceive when we look at objects are their affordances, not their qualities. We can discriminate the dimensions of difference if required to do so in an experiment, but what the object affords us is what we normally pay attention to.

Because the material out of which an object is made can provide multiple affordances, it is possible that one object can produce multiple outcomes.

Scholars who study the relationship between new technologies and social practices have found great utility in the affordance concept because it helps to explain why, in some cases, people use the same technology differently and why, in other cases, people put the same technology to similar uses and change their communication and work practices in equivalent ways. Since Gibson’s formulation of the notion of affordance, some scholars have used the concept to explore the ways in which new technologies can be better designed (Norman, 1990; Gaver, 1991), while others have used it to explore the dynamics of technologically occasioned social change (Orlikowski & Barley, 2001; Zammuto, Griffith, Majchrzak, Dougherty, & Faraj, 2007).

Today, the most nuanced writings on the relationship between technology and organizational change emphasize the relational character of affordances. In this view, affordances are not exclusively properties of people or of artifacts – they are constituted in

relationships between people and the materiality of the things with which they come in contact. “Materiality” here refers to the features of a technological artifact – whether that artifact is a piece of hardware or software. In this formulation, materiality exists independent of people, but affordances do not. Because people come to materiality with diverse goals, they perceive a technology as affording distinct possibilities for action. In the relational view, affordances of an artifact can change across different contexts even though its materiality does not. Similarly, people may perceive that an artifact offers no affordances for action, perceiving instead that it constrains their ability to carry out their goals. Building on this relational approach, Leonardi and Barley (2008) and Leonardi (2011) argued that the affordances of one technology are often the same or similar across diverse organizational settings because the material features of the technology place limits on the kinds of interpretations people can form of it and the uses to which it can be put.

As several recent studies of technology use in organizations have noted, (Hutchby, 2001; Leonardi, 2010; Markus & Silver, 2008), using a relational approach to affordances to explain how a new technology merges with an existing organizational system is useful for theory in at least four ways. First, by focusing on the affordances that arise as individuals begin to use the features of a new technology, researchers can explain consistency of effects within and across organizations without resorting to deterministic images of technologically induced organizational change. Second, by focusing on the relationship between a user and a technology’s material features, researchers avoid swinging the pendulum in the direction of social determinism to explaining organizational changes without giving any recognition to the properties of the technology itself. Third, by focusing on affordances, rather than exclusively on either material features or social practice, researchers can develop theories of sociomaterial dynamics, as



opposed to theories of specific technologies (which may soon become obsolete anyway) or theories of organizations that ignore the empirical reality that most all practice is bound up with the use of particular technologies (Orlikowski, 2007). Finally, an affordance approach encourages the researcher to look at the communicative actions that the relationship between an organizational context and a technology's functionality enables. In other words, it is agnostic to particular features of a technology and, instead, asks what combinations of material features allow people to do things they could not do before, or to do things that were previously difficult to do without the technology (Leonardi, 2011). For example, IBM's SNS Social Blue (formerly Beehive) has an "About You" feature through which individuals can decide to enter information that will be displayed to other users as part of the employee's profile on the site (DiMicco et al., 2008). Following an affordance approach, the existence of the "About You" feature is not important in and of itself. Rather, it is only important inasmuch as that it affords people the ability to communicate in new ways. From an affordance approach, the researcher would ask, "what does the 'About You' feature afford people the opportunity to do?" and then he or she would examine the features of other social media to discover whether those other technologies have a feature (that is perhaps different from the "About You" feature in Social Blue) that affords the same type of communicative behavior.

We argue that defining social media by describing what kinds of behaviors they typically afford across various organizations is one way in which researchers can transcend the particularities of any technology or its features, and focus on communicative outcomes that are important to organizational researchers. Moreover, defining social media by enumerating its affordances may allow for a nuanced understanding of when, why, and how social media occasion change in organizational practice.

### **Organizational Affordances of Social Media Use**

To explore the affordances of social media use for organizational communication we reviewed the literature for any studies that mentioned “social media,” “Web 2.0,” “enterprise 2.0,” or “social software” *in organizations*.<sup>1</sup> Our decision to focus on social media use in organizations – as opposed to social media use generally - was informed by research suggesting that peoples’ perception of the utility of a technology is formed differently when that technology is used in the workplace rather than outside of it (O’Mahony & Barley, 1999; Wellman et al., 1996). Consequently, our goal was to assemble a wide array of studies that examined use of social media within organizations. We believed that this strategy would highlight affordances of social media use in organizations, as opposed to social media use elsewhere, and enable some tentative generalizations about the effects of social media on core organizational communication processes.

Not surprisingly, given that these technologies are only just beginning to proliferate throughout organizations, we found few articles in communication journals that addressed our issue of interest. To expand the pool of empirical studies, we cast our net wider to include work from the areas of Human-Computer Interaction (HCI), Computer-Supported Cooperative Work (CSCW), and System Sciences. All of these disciplines explicitly address issues of organizational communication, though often from the standpoint of designing (as opposed to using) technology to facilitate particular outcomes. We restricted our review to papers that focused on one or more of the following five technologies that are commonly classified as “social media:” wikis, SNSs, blogs, social tagging applications, and mircoblogs. Once a relevant article was identified, we reviewed the articles cited by that work to identify additional material.

This process was repeated until no new literature was revealed. In total, we assembled 75 papers that presented empirical data on the use of one or more of these five types of social media in organizational settings.

We reviewed this set of studies with two specific questions in mind: (1) What affordances commonly emerged from social media use in organizations? and (2) How did these social media affordances differ from those enabled by other forms of organizational CMC technologies? To answer the first question, we used a two-stage inductive coding scheme. In the first stage, we examined each paper to determine what new affordances the technology enabled that users did not experience before its introduction. We sorted papers with similar affordances into categories and revised those categories as we read more papers. Categorization was not mutually exclusive in that papers could be placed in multiple categories. Four distinct affordances emerged from this stage of analysis: visibility, persistence, editability, and association. In the second stage, we examined all papers within each category of affordances to enumerate a list of the specific technology features that interacted with the organizational context to produce that affordance. We followed the same process of comparison and re-categorization that we conducted in the first stage. The resulting lists of features for the four affordances can be found in Tables 2-5.

To answer the second question, we created Table 1, which lists the five types of social media that were the focus of our analysis as well as a list of traditional (non-social media) CMC technologies (this list of non-social Media CMC was compiled using examples taken from Culnan and Markus [1987] and Rice and Gattiker [2001]). In this table we also provide examples of types of popular forms of social media and traditional CMC applications used outside of and within (enterprise applications) organizations. We then ranked each of these types of technologies based on the degree (high to low) to which they enable each of the four affordances

uncovered in our review. As the table shows, more traditional forms of organizational CMC enable some of these affordances, but lack a consistent high distribution of these affordances across the four categories. For example, email certainly affords editability as users can carefully craft messages prior to sending, and the medium has high persistence for individual users who can save, store, and search through their own messages. However, email does not afford much visibility into other's communications, as the messages a person receives are limited to those addresses indicated by the message's sender. The limited visibility of email, then, has implications for the antecedents and consequences of communication from the perspective of both the sender and the (known or unknown) audience. Social media, by contrast, rate uniformly high on their ability to foster these four affordances. We argue that in combination, visibility, persistence, editability, and association are four affordances that help to characterize what is new and, quite possibly, consequential about social media for organizational communication processes.

In the following sections we review each of these affordances individually. For each affordance we first briefly discuss how the concept has been addressed in communication technology scholarship (not solely in regards to organizational social media). We then review the literature to exhibit how use of the features of social media create these specific affordances in organizational contexts.

[INSERT TABLE 1 HERE]

### **Visibility**

The first affordance that we uncovered in our review was the affordance of visibility. The papers in our sample suggested that social media afford users the ability to make their behaviors, knowledge, preferences, and communication network connections that were once invisible (or at

least very hard to see) visible to others in the organization. This visible information can exist as knowledge one can use directly in work, or as meta-knowledge regarding who knows what or where knowledge resides (Child & Shumate, 2007). Our notion of visibility is tied to the amount of effort people must expend to locate information. As research shows, if people perceive that information is difficult to access, or they do not know what information exists for them to access, they will likely not seek it out (Brown & Duguid, 2001). In this regard, information about people's work behaviors, tasks, knowledge, or whatever else, though it may be theoretically available for people to uncover, may be, for all intents and purposes, invisible. A worker could use email or instant messaging to ask everyone in their office if they had experience with computer programming, but that might require a great deal of time and effort. Instead, a SNS site that lists the interests and hobbies of other workers, or a review of who has bookmarked programming-related material on a social tagging tool, provides an easy way for an individual to see who knows what in an organization.

If a social media technologies enable people to easily and effortlessly *see* information about someone else, we say that the technology was used to make that person's knowledge visible. Bregman and Haythornthwaite (2001) note that visibility "refers to the means, methods, and opportunities for presentation; in our usage it primarily addresses the speakers' concerns with the presentation of self" (p. 5). Whether through posts, comments, status updates, votes, friending, revisions, or pictures, contributions to social media are visible to all who have access to the system. Other forms of CMC common in organizations such as email, or instant messaging, make information visible, but not in the communal manner afforded by social media. Table 2 provides an overview of which features of various social media were found by authors to afford, when the organizational need arose, visibility.

[INSERT TABLE 2 HERE]

Scholars have noted that social media's ability to provide increased visibility into both behaviors and information separates them from other technologies and creates unique consequences (boyd, 2010; Grudin, 2006). It is not uncommon for individuals to sit side-by-side in cubicles, no more than five feet away from each other, and have only work related interactions through email or social media contributions. The specialization of work common in contemporary organizations encourages a situation in which the work practices of individuals are largely *invisible* to others because people who are proximately located may not have domain knowledge to understand the work practice of someone from a different specialty (Cross, Borgatti, & Parker, 2003; Efimova, 2004; Nardi & Engestrom, 1999). If an organization is using email to exchange client reports, aside from occasional status updates coworkers are not likely to see the individual's work until the product is complete. However, if the organization used a wiki to share reports from coworkers, the record of edits and drafts listed by the tool might increase visibility of the process used to complete the assigned task. Social media, by offering a fast and lightweight means for individuals to publish information, provide an easy way for employees to make their work behaviors, the information they possess, and the activities they conduct visible to others in an organization (Grudin, 2006).

Below, we outline three types of information or actions that are made visible through the use of social media in organizations: (1) work behavior, (2) meta-knowledge, and (3) organizational activity streams.

**Work behavior.** One of the most common and basic features of social media is that they present content communally, which means contributions can be easily located and viewed by other employees. Efimova and Grudin (2008) interviewed 34 employee bloggers at Microsoft

regarding the reasons individuals maintained organizational blogs and how they perceived readership. Bloggers interviewed felt the ability to self-publish content through blogs meant employees could more easily communicate directly to others about work. The authors concluded that, “In employee weblogs, ideas that were previously unarticulated or hidden in personal archives become visible, interlinked, and searchable” (p. 11). Farrell, Kellogg and Thomas (2008) reviewed studies on the use of internal blogs, wikis, social tagging and SNS at IBM<sup>4</sup> and also concluded that social media were used by individuals to help communicate and share work across organizational boundaries. Specifically, they note how the ability for any employee to comment on blogs can result in far-reaching organizational conversations and that the iterative nature of wiki contributions can help sustain and share communication that formerly might have been dependent on an individual.

The affordance of visibility is also found in organizational microblog use. Zhang, Qu, Cody, and Wu (2010) studied use of the microblogging tool Yammer by 458 employees inside a Fortune 500 company. The researchers manually coded 300 Yammer messages and found that the most commonly shared material was internal company news. They commented that the communal nature of the tool afforded employees “a place to publish their local news at the corporate level, which was close to impossible to do previously” (p. 126). Social tagging applications serve a similar function of publicizing behavioral information to the organization. Pan and Millen (2008) conducted a year-long field study of social tagging at a large, multinational company to help understand how the tool was used by different work groups. Results suggested that bookmarks reflected the respective goals of business units. The research-focused group tagged more external, trend-focused bookmarks while headquarters and software development employees tagged more internal material. The researchers noted that “the very act

of creating a bookmark is an explicit indicator of the utility or value of the internet and intranet information resource” (p. 9).

Users of social media in organizations sometimes recognize the visibility of their work behavior afforded by the use of the technology, and are strategic in how they present themselves to others. For example, in their analysis of wiki use over 20 months at an industrial research organization, Danis and Singer (2008) found that workers recognized that posting information to a wiki might provide stakeholders (such as funders) access to works-in-progress. Because employees wanted to be seen as competent, and viewed wiki contributions as “official” communication, workers often documented with other less visible media – like access-controlled project repositories – that did not permit outsiders to see content (Danis & Singer, 2008, p. 7). Similarly, Holtzblatt, Damianos, and Weiss (2010) interviewed 26 wiki users at The MITRE Corporation, a technology research organization, and found that individuals were, “uncomfortable sharing documents that were still in a draft state” and instead kept unfinished content in personal repositories such as hard drives and email systems (p. 4667). These examples of wiki use and non-use indicate that the features of the technology, in this case the communal publication of material, afford workers a variety of ways to make communication more or less visible.

The visibility of communication made possible through social media use can make the technology a valuable tool for employees. Thom-Santelli and Muller (2007) interviewed 40 users of IBM’s dogear social tagging tool regarding the motivations behind the tags chosen. The researchers found that individuals recognized that social media allowed them to make their communications visible and found this visibility useful for attracting the attention of specific organizational audiences. In another study conducted at a large at a large communication



technology company, Kosonen and Kianto (2009) held two group interviews to examine how employees were using wikis to manage information. Employees in this study noted that the open nature of social media encouraged informal collaboration in the organization and supported knowledge sharing among workers. Many employees liked that the “open-source ideology” afforded by social media provided a means to communicate more freely and avoid decisions regarding whom to include, a choice workers faced when using other CMC (p. 27). Work by Damianos et al. (2007), who studied the introduction of a social tagging system at MITRE, and research by Millen and Feinberg (2006), which examined eight months of the dogear tool at IBM, revealed that despite options to keep tags private, the overwhelming majority users chose to make information publically available to others. Public tags could be used by coworkers to more easily find desired information held within the organization, and by contributors to direct attention to specific content.

**Meta-knowledge.** Not only can organizational actors use social media to purposefully make their own work behaviors visible, organizational audience members (the actor’s coworkers or managers) can read meta-knowledge out of those visible postings about the type of people in the organization and what they may know. As one example, DiMicco, Geyer, Millen, Dugan, and Brownholtz (2009) reviewed three months of activity by 285 IBM employees on a internal SNS named Beehive and interviewed nine participants to determine how individuals used the tool. Beehive provided employees with the opportunity to create profile pages that contained photos, corporate directory information, and a summary of content contributed by the individual. The researchers found that employees used the visible information individuals contributed to learn more about the backgrounds, interests, and activities of coworkers (DiMicco, et al, 2009). In another instance, Muller, Ehrlich, and Farrell (2006) investigated user behaviors at IBM

following the implementation of a prototype technology that allowed workers to supplement corporate directory information with tags that would be visible to others. Usage data found that 79% of users tagged content about themselves and for more than half (51%) of users this constituted their only tagging activity. The authors noted that although this form of overt self-presentation can be seen as a selfish act, it might also play a key role in informing others of the skills available for potential collaborations (Muller, et al., 2006).

Shami, Ehrlich, Gay and Hancock (2009) surveyed 67 users of an expertise locator system in a global technology company and found that employees were more likely to contact users of social media for information. Analysis revealed that employees not only felt social media users may be more knowledgeable in particular domains but that those contributing to social media may be more likely to respond to inquiries. John and Seligman (2006) discussed how collaborative tags may be used to identify experts in an organization and demonstrated how this information could be integrated into a communication system at the business communication company Avaya. The researchers noted that an underlying premise of their approach to expertise identification was that tags “may be presumed to be representative of user interests and expertise” (p. 1). The ability to advertise one’s areas of knowledge may be attractive to social media users in organizations. Schondienst, Krasnova, Gunther, and Riehle (2011) asked survey respondents familiar with microblogging to imagine a “Twitter-like” tool was in use at their place of work, and collected responses regarding expected behaviors and outcomes. Data from 82 individuals found that workers who believed microblogging use could increase one’s reputation were the most likely to post material or follow others’ contributions.

**Organizational activity streams.** Social media afford individuals the ability to see information related to the status of ongoing activities in the organization. Zhao and Rosen (2009)

interviewed 11 Twitter users at a large IT company and asked how microblogging might influence organizational communication. Respondents found that microblogging could help them in “keeping a pulse on what is going on in others’ minds” by providing access to streams of comments from individuals across the organization (p. 249). In another study, Brzozowski (2009) reviewed the use of social media tools at HP and described the design of a tool that used contributions to blogs, wikis and social tagging tools to help identify novel and popular organizational content. He commented that social media content in the company was viewed by employees as “a way to orient themselves in the organization” (p. 7).

In addition to identifying trends in organizations, social media can also increase the visibility of task-related activities. Holtzblatt and Tierney (2011) studied the use of a social media tool at The MITRE Corporation that allowed employees to submit research and development proposals as part of a competitive selection process. After submission, employees could view and comment on the ideas. Findings from an annual survey of those who used the social media tool found that, over two cycles of proposals, participants perceived the process as more transparent than the previous closed system and they indicated that a more diverse set of employees commented on submissions.

The ability to see coworker activity through social media use can also influence a person’s decisions to participate. To examine what influences blog adoption in organizations Wattal, Racherla, and Mandviwalla (2009) examined log data from 2,667 employees at a multinational electronics corporation. The study found that blog use by one’s manager and others in one’s office was associated with a greater likelihood of individual blog use. Blog participation can also be influenced by the knowledge one has about the extent to which his or her contributions are seen by others. Yardi, Golder, and Brzozowski (2009) analyzed a year of log

data on an internal blog server at a global technology company and interviewed 96 employee bloggers of various activity levels. Interviews revealed that workers expected posting visible information with a social media tool to provide increased social recognition in the organization, and lack of recognition deterred continued participation. In a related study conducted at the same organization, analysis of log data revealed that blog authors published more frequently if they saw they received many comments on prior posts (a visible form of information), but the number of actual clicks on one's blog (not visible) had no effect (Brzozowski, Sandholm, & Hogg, 2009).

Farzan et al. (2008) studied the implementation of an incentive system in IBM's Beehive SNS that was designed to motivate contributions of photographs, lists, comments, and profile updates by providing points and labels to users for adding information. An experiment comparing employee SNS use in the incentive condition against that of those in a non-incentive condition found the visible incentives increased contributions. Additionally, interviews with six employees in the incentive condition found that users monitored and compared their standing relative to coworkers.

### **Persistence**

Communication is persistent if it remains accessible in the same form as the original display after the actor has finished his or her presentation (Bregman & Haythornthwaite, 2001; Donath, Karahalios, & Viegas, 1999). This affordance of persistence has also been referred to as "reviewability" (Clark & Brennan, 1991), "recordability" (Hancock, Toma, & Ellison, 2007) or "permanence" (Whittaker, 2003). When a person posts to a blog or SNS, that information remains available to users and does not expire or disappear when the poster logs out. In technologies such as instant messaging or video-conferencing, the conversation is normally

bound in time and a record of the interaction does not exist beyond what participants remember or copy and paste to another application. Because social media enable conversations that persist past the time of their initial posts, communicative acts can have consequences long past the initial point of presentation (Binder, Howes, & Sutcliffe, 2009). For example, an individual who is given an assignment during a teleconference or over an instant message conversation may later find another coworker claims responsibility for the task, and have few means by which to clarify the dispute. However, if tasks are assigned via a team wiki, a communal record persists that is difficult to discount. As Erickson and Kellogg (2000) noted, “persistence opens the door to a variety of new uses and practices: persistent conversations may be searched, browsed, replayed, annotated, visualized, restructured, and recontextualized, with what are likely to be profound impacts on personal, social, and institutional practices” (p. 68). Table 3 provides an overview of which material features of various social media were shown to afford persistence.

[INSERT TABLE 3 HERE]

Persistence can aid in the development of common ground in communicative settings. Common ground has been shown to make the transmission of complex ideas successful (Clark & Brennan, 1991). Having a record of previous communication can allow presentations of information to be properly contextualized and provide people with the time to better understand conversations (Gergle, Millen, Kraut, & Fussell, 2004; McCarthy, Miles, & Monk, 1991). If a worker is confused about the directions a manager gives over an instant messaging system he or she has little recourse except to ask the manager to clarify. Alternatively, if a manager gives directions using a microblog tool the individual could review the original communication in hopes of gaining understanding. Or, because the information remains over time, another user could later see the original communication and contribute with further useful information.

In what follows, we summarize three ways in which the literature shows how the affordance of persistence affects organizational action: (1) sustaining knowledge over time, (2) creating robust forms of communication, and (3) growing content.

**Sustaining knowledge over time.** The persistence of content created and stored in social media allows the knowledge individuals contribute to the technology to develop and remain available over time. Majchrzak, Wagner, and Yates (2006) conducted a survey of 168 corporate wiki users to investigate if wikis are sustainable in organizations, what benefits the tool might provide, and if there were different types of content contributors. Respondents reported that wikis could remain active over the course of months, and wikis that persisted saw increased participation over time. Other organizational CMC tools, such as email, afford aspects of persistence, but it is persistence that merely retains the communication in its original form such as in a document. Social media afford both persistence of content in its original form, such as an initial contribution to a blog or wiki, as well as communal persistence through ongoing conversations, such as additions to a wiki or comments on a blog.

Kolari et al. (2007) examined internal blogs at IBM over a three-year period to explore the network structure of blog communication that developed inside the organization. Analysis of the degree distribution of blog users and their respective posts showed that participation created a scale-free network in which a minority of contributors garnered the majority of attention. One implication of this network formation is that even if a moderate number of blogs or bloggers ceased activity in the network it would not significantly affect the ability of users to connect to information of interest on others blogs. In other words, conversations and activity on the blogs could persist absent all original contributors. Jackson, Yates, and Orlikowski (2007) also studied internal blog use by exploring participation in a global IT company. The authors analyzed usage

statistics, interviewing heavy and non blog-users, and conducted a web-based survey of different types of blog users identified through use (heavy, medium, and low). Survey results indicated that high blog use was not required in order for organizational members to perceive value from the information available (Jackson, Yates, & Orlikowski, 2007). Rather, the use of blogs afforded individuals the opportunity to access information over time regardless of continued use. The persistence of social media means that workers can access information during a period when that information is needed, or it is convenient, and do not need to be actively engaged in conversations to access contributed content. In another example of how social media provides persistent knowledge over time, DiMicco et al. (2009) noted that IBM's SNS Beehive was designed to provide an ongoing stream of individuals' communications and contributions on the site such that users did not have to be continuously logged on in order to monitor information.

Research indicates that wikis, even more so than other social media tools, have afforded individuals the opportunity to work over long stretches of time in an asynchronous, collaborative, and distributed manner. In their case study of wiki use at The MITRE Corporation Holtzblatt et al., (2010) noted that wikis afforded individuals the means to independently add to tables and lists over time, providing a distinct advantage to the existing document-based method where workers must often modify the content of previous contributors. Additionally, Kane and Fichman (2009) reviewed attempts to utilize wikis in different academic settings and found individuals were willing to use the technology to share and reuse current materials but were reluctant to engage in discussion about content. White and Lutters (2007) conducted phone interviews with seven individuals regarded as champions of wiki use at their respective organizations and concluded that wikis are effective as "a flexible knowledge repository" (p 2). Similarly, in tracing the role of wikis relative to other knowledge management technologies,

Wagner (2004) noted wikis can be particularly effective in ad-hoc work – like addressing an organizational crisis – because they can generate information incrementally, and in a centralized form that is historically indexed. For example Majchrzak, Jarvenpaa, and Hollingshead (2007) documented how the use of a wiki in the wake of Hurricane Katrina allowed individuals across the world to quickly contribute and coordinate information regarding rescue and recovery efforts. Only four days after the hurricane the wiki was being accessed more than one million times a day and hosted information related to finding missing people, assisting relocation efforts, and locating government assistance.

**Creating robust forms of communication.** When information and communications are persistent, content can be reused and reanalyzed, over time, to help refine it and make it more useful and robust. By “robust” we mean how difficult it is to destroy, compromise, or abandon content. In their review of social media use at IBM Farrell et al. (2008), noted that the technologies can create a more “socially resilient enterprise” because “tracking and recording various interactions allows the possibility of *analyzing* interactions over time to improve their effectiveness and efficiency” (p. 3). In a specific example, Millen and Feinberg (2006) conducted an eight-month field study at IBM of how workers searched for information on the dogear social bookmarking tool. Usage data indicated that when conducting searches for information nearly all users viewed existing tags at some point, and workers commonly reused social tags already in the system and consulted other individuals’ lists of tags. Keeping existing tags and lists available to subsequent users of the social media made reuse easier and increased the likelihood certain labels would be popularized through ongoing use.

Social media also afford reuse of organizational content. Mejova, Schepper, Bergman, and Lu (2011) examined instances of presentation reuse in an internal file repository at IBM to



explore why people would choose to reuse an existing file. Results indicated that workers were significantly more likely to reuse a presentation created by an employee that they had friended on the internal SNS tool. The reuse of content in social media may also support the formation of tighter relationships within organizations. In a set of related studies at IBM, researchers concluded that the use of social tags in the company's social bookmarking system, over time, coincided with the formation of communities of practice (Muller, 2007a, 2007b). These emergent communities of practices aided organizational learning by creating pools of knowledge that could be held and displayed in social media to serve as a guide for others. Similarly, in an investigation of the use of lists on a SNS inside of IBM, users interviewed by Geyer et al. (2008) indicated that the lists served as a structured form of content and were used as a template for other workers looking to contribute information to the site.

Further, unlike other technologies used for organizational knowledge management, social media often do not require tremendous investment or maintenance by officially sanctioned content producers within the organization. Rober and Cooper (2011) presented a case study of the development of JPL Wired, a Wikipedia-like resource inside NASA's Jet Propulsion Laboratory (JPL). After tracing the genesis and evolution of the tool, the authors asserted that the wikis were a "bottom-up" form of media that was heavily sustained by lower-level employees. Additionally, the researchers noted that the ability to easily capture and keep employee-contributed information in social media was particularly attractive to new and early career employees. Organizational newcomers could access the wiki instead of having to ask colleagues basic questions such as where to find office supplies or what are nearby places to eat (Rober and Cooper, 2011). In their study of blog use at a large IT company Jackson et al. (2007) also found

newer workers used the social media to gain access to an established community of information and resources that would be difficult to cultivate through other communication channels.

**Growing content.** The persistence of content means that information stored in a technology grows over time. Social media such as blogs and wikis afford nearly limitless space for communication through the addition of posts and pages. Huh, Bellamy, Jones, Thomas, and Erickson (2007) interviewed 14 internal bloggers at IBM and found one use of the technology was as repositories for knowledge that employees bring in from outside the organization. Poole and Grudin (2010) conducted interviews and online discussions at a large software company in an attempt to categorize types of organizational wikis. One way that people used wikis was as a personal information management tool for storing materials, which allowed for the ongoing addition of relevant information. Riemer and Richter (2010) conducted a case study of microblog use at the German software company Communardo, using text analysis and seven interviews to determine if participation could be separated in different genres of use. The analysis found that organizational microbloggers who recognized that social media could hold information for future use occasionally used the tool to record knowledge such as login identifications and meeting minutes. Although this practice was not common, the authors found that users appropriating the technology for the purpose of information storage knew information would be indexed by search engines and could be easily called upon later.

One consequence of this seemingly unlimited storage is that the content embedded in social media tools can become unwieldy over time. In discussing the use of wikis in IBM's research group Ding, Danis, Erickson, and Kellogg (2007) noted that maintenance quickly became an issue, and Grudin and Poole (2010) found that most wikis at the software company they studied were quickly abandoned. Giordano chronicled efforts among public-health oriented

non-profits in London to use wikis for shared learning and discovered the clutter of content caused users to “trip over” entries and discouraged use (p. 271). However, though social media affords individuals the ability to build a tremendous amount of content, it also provides individuals the means to find content with filters and search tools. Gunther, Krasnova, Riehle, and Schoendienst (2009) conducted four focus groups aimed at gathering individuals’ perceptions about microblogging in the workplace and building a model of adoption of the technology. Comments indicated that though some individuals were concerned with being overwhelmed by information, others felt microblogging, by allowing users to control who and what information streams they follow, could be a useful tool to manage content (Gunther, Krasnova, Riehle, & Schoendienst, 2009).

### **Editability**

Editability refers to the fact the individuals can spend a good deal of time and effort crafting and re-crafting a communicative act before it is viewed by others (Walther, 1993). Dennis, Fuller, and Valacich (2008) describe a similar affordance, rehearsability, that they assert enables a sender to compose a message with the exact meaning that he or she intends. Editability is a function of two aspects of an interaction: communication formed in isolation of others, and asynchronicity. Both physical separation and delayed response minimize the cues that an individual may “leak” during communication. A speaker need not worry about regulating non-verbal cues or involuntary reactions when using an asynchronous CMC; instead, they can focus on the form of the message they hope to convey. When communicating through a teleconferencing technology people can view the physical displays and reactions of counterparts. But when using social media tools, users need not worry about non-verbal cues. Editability is an

actor-oriented affordance in that it allows the communicator a great deal of control over initial display of communication.

Editability can also refer to the ability of an individual to modify or revise content they have already communicated (Rice, 1987), including such straightforward acts such as the editing of a spelling error or the deletion of content. For example, an individual who includes a typographical error in an email can do little to fix this mistake, and anyone subsequently viewing that email will see the error. Users of a wiki, blog, or SNS can correct errors they identify and later viewers may never know a mistake occurred. Thus, the communicator retains some degree of control over content after the original communicative display has taken place. In Table 4, we indicate which material features of various social media were shown to afford editability.

[INSERT TABLE 4 HERE]

By offering individuals the time to craft and compose messages, editability allows for more purposeful communication that may aid with message fidelity and comprehension. Even in the case of instant messaging where the users are not physically present to each other, the synchronicity means that people are constricted in how much effort they can put into crafting and editing messages. Dennis, Fuller, and Valacich (2008) argue that low synchronicity in a communication medium is particularly useful when organization's goal is to convey information, or share knowledge that was previously unknown. Editability also allows individuals to make their points more clearly, and deliberate over what they know and what they want to convey. Additionally, editability allows communicators to take into consideration the context in which their message is likely to be viewed (or later, after it was made, view the actual context in which it was viewed) and tailor their ideas accordingly. In sum, editability afforded by social media

may allow for more purposeful sharing of information to aid personal expression, target particular audiences, and improve information quality.

In the sections below, we summarize three ways in which the literature suggests that the affordance of editability is used to shape behavior: (1) Regulating personal expressions, (2) targeting content, and (3) improving information quality.

**Regulating personal expressions.** The editability of content entered into social media allows users to strategically manipulate the ways that personal information is shared with others. For example, as discussed earlier, IBM's SNS contained an "About You" feature that allowed people to determine what information they wanted displayed to others in their personal profiles. Dugan et al. (2008) reviewed usage of the SNS over eight months and found that the percentage of users taking advantage of the free-form "About You" feature was higher than rates for other content categories such as lists, photographs, or comments. Furthermore, results from Farzan et al.'s (2008) experiment regarding incentives for SNS participation at IBM suggested many users patterned contributions in a way that would increase recognition from others and garner rewards. Similarly, studies examining social tagging at IBM found that organizational members used the ability to dictate labels as a form of impression management (Muller, Ehrlich, & Farrell, 2006) and "observed that most people tended to be extremely aware of tagging as a social activity. People think about how others will react to the tags they give" (Farrell, Lau, Wilcox, Nusser, & Muller, 2007, p. 99).

**Targeting content.** Given the common concern individuals have for how they will be perceived, studies indicated that users of social media often tailor messages for specific audiences. Because they have a high level of editorial control, communicators using social media can time when they present information and reshape messages based on the perceived responses

from audiences. For example, research on the use of wikis in organizations revealed that individuals are reluctant to share works in progress and use the technology to control when particular audiences can view material by strategically timing when they contribute (Danis & Singer, 2008; Giordano, 2007; Holtzblatt et al., 2010). Schaffert (2006) discussed the design of a wiki system at Salzburg Research and noted that, “The wiki represents an easily modifiable ‘learning content pool’ where content creators can author, search for, and recombine learning material to form learning content tailored towards the learner’s needs” (p. 6). In their study of wiki implementation at a software company, Grudin and Poole (2010) found that users took advantage of the ability to control contributions and commented that users “created content to share information opportunistically” (p. 4). Similarly, interviews with organizational bloggers at IBM by Huh et al. (2007) indicated that participants often had an audience in mind when sharing knowledge and provided information they thought would appeal to potential viewers. Although social media can share information widely, the editability afforded by technology provides users with greater control of how content is viewed by others.

**Improving information quality.** Social media allows employees to edit, revise, and alter organizational content long after the time it is first displayed. A survey by Arazy, Gellatly, Soobaek, and Patterson (2009) of 919 wiki users at IBM found that users valued the technology’s flexibility and the “change control” they possessed, including the maintenance of revisions (p. 62). Workers at a research organization who were interviewed by Danis and Singer (2008) reported that the ability to review and edit content was fundamental to the perceived value of the technology resulting in greater collaboration and a more valuable end product. Features of social media that allowed for ongoing edits of communication afforded workers more opportunities to improve presentations to other organizational members.

Hasan and Pfaff (2006) examined four cases of wiki implementation in organizations in an effort to investigate the opportunities for knowledge sharing presented by the technology. The authors concluded that because it was so easy to publish and maintain content on wikis, novices – not just technical experts – would likely use social media to contribute domain specific information. Research by Yates, Wagner, and Majchrzak (2010), which explored content changes that organizational members made to wiki pages found that some people in the organization assumed responsibility for editing and integrating wiki content, and that willingness to assume this role was not related to one's position in a company. By affording the open-editing of content, wikis provide individuals a way to take control over the content provided by others in a way not available through other CMC. In another example of wiki use, Chi et al., (2010) described five pilot tests at IBM's China Research Lab of an application that allowed individuals to enter and edit task-related tags in wikis to assign and alter roles of users. Post-use surveys of wiki users found that the use of tags to establish roles was successful in promoting collaborative authoring.

This principle that well-crafted labels can improve information use is supported in research on social tagging. Thom-Santelli, Muller, and Millen interviewed 33 users of a social tagging system at IBM and found participants anticipated how others would find information and shaped contributions accordingly. Riemer and Richter (2010) coded the text of microblogging contributions in a German software provider and found that workers often shared messages in order to coordinate ongoing or future activities. By enabling participants to carefully craft communication, the editability afforded by social media provides individuals with the opportunity to revise, reshape, and coordinate content with an ease unparalleled by most existing CMCs.

## Association

Associations are established connections between individuals, between individuals and content, or between an actor and a presentation. Associations in social media exist in two forms. The first type of association - of a person to another individual - is most commonly referred to as a social tie. A social tie is best expressed through one's friends on a SNS, following a microblogger, or subscribing to another's tags. This type of association indicates an explicit relationship, albeit of no discernable strength, between two people. Over email, unless someone is included on a communication exchange, there is little information displayed regarding whom individuals communicate with and what the nature of a relationship may entail. boyd & Ellison (2007) argue that this focus on relations is one of the defining characteristics of SNSs. As they noted, "What makes social network sites unique is not that they allow individuals to meet strangers, but rather that they enable users to articulate and make visible their social networks." (p. 211). The other form of association is of an individual to a piece of information. Exemplars of this form of association are a wiki contribution, a blog contribution, or the tagging of an article. The association displayed here is of an individual with a piece of information that they have either created or recognized. Alternatively, a database system that houses documents may not display who contributed specific information, and even if it does it would only be revealed to those who interact with that material. Table 5 indicates which material features of various social media were shown to afford association.

[INSERT TABLE 5 HERE]

Although associations are most often conceptualized as actor-initiated (e.g., friending someone on Facebook) social media differs from other forms of CMC in that recommendations for additional association are often provided by the technology itself (e.g. Facebook suggesting



people you may know or the prompting of related bookmark tags on delicious). Numerous social media applications such as SNSs and social tagging use algorithms to recommend content and associations to users based on patterns of use or contributed information.

The associations of people to other people, people to content, or content to content afforded by social media have potential implications for both users and potential audiences. First, research has shown that relationships formed through a variety of CMC media can provide individuals with a form of social capital (Blanchard & Horan, 1998; DiMaggio, Hargittai, Neuman, & Robinson, 2001; Wellman, Haase, Witte, & Hampton, 2001). Contrary to some arguments that online communication would isolate users, this line of research has shown that the connectivity afforded by CMC can bridge individuals, supplement existing relationships, and help build a greater sense of community. Specific to social media use (but not in an organizational setting), Ellison, Steinfield, and Lampe (2007) found that use of the SNS Facebook provided college students with increased social capital among peers. Furthermore, the SNS was used primarily to strengthen and formalize already established associations, and not necessarily to establish new connections. Social media affords a number of different associations through both active connections and those suggested through the features of the technology.

One of the primary benefits of association in organizations, and the social capital it carries, is greater identification and flow of information (Reagans & McEvily, 2003). The use of CMC, which can easily facilitate associations between people or between people and content, is seen as a powerful tool to connect information seekers with experts (Pipek, Hinrichs, & Wulf, 2003). Indeed, evidence shows that individuals with greater social capital have greater knowledge of who knows what in workgroups (Yuan, Fulk, & Monge, 2005). The ability of

associations in social media to connect various individuals and knowledge results in greater social connection, surfaces relevant information, and suggests potential audiences.

Below, we outline three outcomes that the literature suggests arise when social media afford association with other individuals or content: (1) supporting social connection, (2) access to relevant information, and (3) enabling emergent connection.

**Supporting social connection.** Social media afford individuals a way to make associations more explicit. One way in which this explicitness is achieved is through the signaling of relationships with others. For example Thom-Santelli et al. (2008) classified different types of social tagging practices in a large technology organization based on interviews with users and found that workers are often “concerned with using tags to articulate social connections to others in the group” (p. 1042). Additionally, interviews with and log data from users of an SNS inside of IBM revealed that employees used the technology to establish associations with individuals about whom they knew little, and, unlike in non-organizational contexts, there was less SNS activity among close, co-located colleagues (DiMicco et al., 2009; DiMicco et al., 2008).

The ability to forge new associations between people and content through social media has clear implications for the development of social capital in organizations and associated knowledge transfer. Steinfield, DiMicco, Ellison, and Lampe (2009) surveyed users of a SNS at IBM regarding use of the technology and social capital and found that increased usage of the tool was correlated with increased social capital among new and existing relationships. Subsequently Wu, DiMicco and Millen (2010) surveyed IBM SNS users regarding their perceived personal and professional closeness to coworkers. The study looked at the relationship between perceived closeness and behaviors on the SNS site such as viewing a coworkers page, contributing content,

or friending others. The results of a regression analysis found that explicit friendship connections, recommendations of content to another, and time spent viewing another's content were all associated with closeness between coworkers. Ferron, Frassoni, Massa, Napolitano, and Setti (2010) also studied the issue of organizational SNS use and social capital. The researchers surveyed more than 300 employees at an Italian research institute and found workers with SNS access reported significantly higher levels of social capital than those without SNS access.

Beyond increasing social capital of individual users, the use of social media and its support for associations may facilitate the creation of a larger community to support employees. Jackson et al.'s (2007) interviews of bloggers at a large technology company found that users viewed participation as a way to associate with others in the organization, become a part of a community, and build personal networks. Even in organizational microblog use, where associations are not labeled as friendship connections, use may help individuals feel closer to the rest of the company. Ehrlich and Shami (2010) analyzed the messages of 34 IBM employees using an internal microblogging tool, and interviewed 25 of the identified users in order to examine the purposes for participation. The study concluded that use of the technology, particularly among distributed workers, helped individuals feel closer to the rest of the company by providing an ongoing sense of what was happening. By facilitating easy affiliation and interactions among users the associations afforded by social media increase social connections.

**Access to relevant information.** In addition to the creation of person-to-person ties, individuals also established explicit associations with the content found in social media. For example interviews with wiki users at IBM by Ding et al (2007) revealed that the use of keywords and tags in entries served as a way for users to view the explicit connections among projects (2007). In another instance of social media use, Millen and Feinberg (2006) examined

the social tagging behaviors of IBM employees and found that nearly all individuals using a social tagging application looked at the tags or bookmarks of other individuals at some point. Thus associations should not be thought of merely as existing ties, but also pointers to potential relationships between content.

Associations to information can also benefit the organization by allowing existing experts to share knowledge. Thom-Santelli, Cosley, & Gay (2010) studied the implementation of a social tagging system at a museum gallery, comparing the tagging behaviors of 15 novices with those of 15 experts. Results indicated that experts contributed more content to the system and were more likely to down-vote the tags of novices, causing the researchers to conclude that the tool afforded experts a chance to act in manner that reaffirmed their superior knowledge. By making explicit associations regarding the source, quality, and usefulness of information social media can improve content use in organizations.

**Enabling emergent connection.** In addition to supporting the active, purposeful creation of actor-initiated connections, features such as rankings and recommendations in social media afford emergent forms of associations and suggest ways to improve existing associations or initiate new ones. For example Zhang et al. (2010) studied the use of the microblog tool Yammer at a global Fortune 500 company, coding 300 random messages, interviewing 18 users, and conducting a survey with 160 employee responses. More than half of users responding to the survey indicated the microblog tool helped them connect with others they did not know. The researchers noted that one way the technology may facilitate connections is through a feature that recommends people to follow on the microblog tool, though in this particular case that feature was not widely used. In another study of recommender systems in organizational social media Freyne, Berkovsky, Daly, and Geyer (2010) extracted log data on instances when IBM SNS

users clicked on information in the activity stream of friends behaviors. Then, offline, the researchers entered in the activity stream information, applied an algorithm to help identify information that would be relevant to the user, and compared the results to the user's actual clicks. Results suggested that the use of algorithms to process content on an organizational SNS could help personalize news delivered to users and help prevent information overload. Showing how social media can match users with helpful content, Dugan, Geyer, and Millen (2010) studied reactions to an application at IBM that matched blog authors with topics of interest. Analysis found that the feature resulted in increased blog traffic and interactivity among users.

These emergent associations generated by social media tools are unique in that single uses of the technology afford additional opportunities for relevant interaction with people and content. In other words, the tools helped people develop associations to others or information beyond the intentions of the original communicative act. For example, Farzan, DiMicco and Brownholtz (2009) implemented a rating system in IBM's SNS Beehive that allowed selected users to promote content to others by applying a visible badge to content that indicates material of interest to another user. This feature was effective in getting workers to view more diverse sources of information. Additionally, research by Shami et al. (2009) on the use of social media to identify expertise in IBM found that individuals were more likely to contact others active in social media at the company because users not only signaled expertise but also that they may be more likely to respond to inquires. It is important to note that though recommender systems have been shown to be effective in increasing connections among organizational SNS users, different forms of recommendation systems may make certain associations easier to form, more salient, and more likely to be accepted by individuals. In related studies, researchers found that implementation of four different friend recommender systems in the SNS at IBM all expanded

friend networks in different ways (Chen, Geyer, Dugan, Muller, & Guy, 2009), and concluded that organizations might want to try different algorithms to support connections in order to find a way to support desired associations (Daly, Geyer, & Millen, 2010).

### **Implications of Social Media Affordances for Organizational Communication Processes**

As we have demonstrated in the previous section, the use of social media across various organizational contexts seems to result in at least four relatively constant affordances for organizational communication: a high degree of visibility, persistence, editability, and association. Given the prevalence of these affordances in the current body of research on social media use in organizations (see Tables 2-5 for summary), we argue that communication scholars should take seriously these affordances in their theorizing about various communicative processes that occur within and constitute organizations. By enabling work practices that were previously difficult or impossible, social media have the potential to facilitate communication in ways that are distinct from traditional CMC technologies. Consequently, these social media affordances may call for a need to update our theorization of key organizational processes.

As Table 1 suggests, and as the references to literature regarding each affordance revealed, existing communication technologies afford visibility, editability, persistence, and association in a number of different ways across organizational contexts. Certainly, other CMC technologies have features that are used to produce occasions of these four affordances. However, the consistency with which social media produce high levels of all four affordances serves as a means of distinction from other communication technologies in organizations. A database system entry may have the same visibility of a blog post, a worker may carefully craft an email just as she would a wiki entry, an employee may record and look back through an instant message conversation just like a microblog thread, and viewing a teleconference could

provide similar insights in association as seeing one's friend list on an SNS. However, we argue that social media differs in that it affords *all* of these four communicative outcomes simultaneously in an organizational setting. The potential presence of all four of these affordances may offer users greater flexibility in the ways that they employ these communication technologies and enact behaviors with them, which in turn could influence organizational communication processes.

In the following section we conduct a thought exercise by considering how these four social media affordances might alter three processes that have, historically, been of great theoretical concern to organizational communication scholars: socialization, information sharing, and power relations. These three processes were chosen because, as we will discuss, researchers have already recognized, either implicitly or explicitly, that the four social media affordances identified are relevant to these areas of organizational communication theory. By no means do we attempt an exhaustive theoretical exposition of how social media affordances alter the dynamics of these three communication processes, nor do we claim that these are the only constructs affected by social media use. Rather, we use this thought exercise to show the usefulness of the affordance typology established above for integrating social media research into existing organizational communication concerns. In conducting this thought exercise, we raise a number of potential research questions that scholars might explore when examining the implications of social media affordances for each of these three processes (Tables 6-8). As these potential research questions reveal, there are many ways in which social media use in organizations may alter the dynamics important to organizational processes. Although intended only to be examples of the utility of adopting an affordance approach, our application of visibility, persistence, editability, and association makes it clear that seemingly stable scholarly

knowledge may become more volatile as social media enter into organizational practice. We hope that the exercise conducted below, and the potential research questions it inspires, will seed ideas for research that focuses specifically on how social media use is implicated in the accomplishment of organizational communication.

### **Socialization**

Research on socialization has a long history in the field of organizational communication (Allen & Meyer, 1990; Ashforth & Saks, 1996; Bullis & Bach, 1989; Feldman, 1976; Jablin, 1984; Jablin, 2001; Miller & Jablin, 1991; Stohl, 1986; Van Maanen & Schein, 1979). Communication is the primary avenue through which individuals manage the uncertainty related to entering a new organizational setting (Jablin, 2001), and research has shown that socialization outcomes can be influenced by the medium through which organizational messages are communicated (Wesson & Gogus, 2005). As Flanagin and Waldeck (2004) noted about the increase in communication technologies available to organizations, “in addition to understanding the dynamics of traditional socialization, researchers must examine how advanced technologies alter the nature and content of socialization-related communication” (p. 138). Although there are many topics about socialization that are of interest to organizational scholars, we consider the ways in which social media affordances might affect processes related to three of the most commonly discussed topics (1) people processing tactics, (2) information seeking, and (3) relationship formation. Table 6 highlights some key research questions that should be explored to understand how the affordances of visibility, persistence, editability, and association affect these three processes.

[INSERT TABLE 6 HERE]



**People processing tactics.** In a seminal discussion of socialization tactics, Van Maanen and Schein (1979) developed a framework for the dimensions of organizational people processing. They noted that tactics used by organizations could be divided into two main categories: (a) Custodial people processing tactics designed in a formal, singular form aimed at providing a uniform experience for workers, or (b) An innovative approach offering flexible, informal tactics aimed at supporting individual experiences (Van Maanen & Schein, 1979). The principle guiding the choice of people processing dimensions was that an organization's socialization strategy should match the context of the job an individual is entering. However, the visibility afforded by social media may undermine organizational efforts to provide a distinct socialization strategy. For instance, because social media used in organizations have been demonstrated to support wide-spread informal communication, even among people who do not know each other personally (Zhao & Rosson, 2009), social media use may undermine formal socialization efforts by management that are based on the strict control of information doled out to employees at pre-determined intervals. Similarly, the persistence afforded by social media, which offers employees the ability to view and search records of communication, may conflict with organizational efforts to structure the timing of information given to employees. Both the visibility and persistence of information may result in diverse socialization experiences for employees as individuals make unique choices regarding the material they access or encounter.

**Information seeking.** Organizational entry is a time of great uncertainty for employees as they seek information about roles, norms, and appropriate behaviors (Jones, 1986; Van Maanen & Schein, 1979). Employees use a variety of communication tactics to gather information during organizational entry (Miller & Jablin, 1991) and the usefulness of information for socialization is closely related to the communication technology people use to

find it (Flanagin & Waldeck, 2004). Therefore, it is important to consider how social media might afford individuals novel ways to seek information. For instance, the persistence of content, over time, may be attractive to organizational newcomers hoping to learn about the company and access information that preceded their arrival (Jackson et al., 2007). Indeed, research at IBM found that both early career employees and workers distant from the organization's headquarters used the company's SNS more heavily than others for acculturation activities like learning about issues surrounding culture and values (Thom-Santelli, Millen, & Gergle, 2011). Alternatively, the visibility afforded by social media use may result in more efficient information seeking by allowing access to more knowledge sources. An example of this occurred at IBM where researchers found that users of a microblogging platform felt they were able to find quality information more quickly than through other forms of communication (Ehrlich & Shami, 2010).

The persistence and visibility of social media can also afford information seeking that does not require direct, interpersonal social interaction. The ability for a person to seek information passively through social media extends arguments by Ramirez, et al. (2002) that forms of CMC, "liberate communicators to seek information in new and unique ways. Contrary to some widely held beliefs about the nature of [technology] as a tool that constrains behavior, we contend that it frees communicators to pursue information in qualitatively significant ways" (pp. 218-219). These affordances create a qualitatively different experience because social media users can decide how visible they want their information seeking behaviors to be based on a number of contextual factors, such as the type of information being sought, the credibility of the source, or one's role in the organization. Indeed, although social media use is most commonly associated with content contributions, studies in organizations have recognized the presence of lurkers who view content without making their presence visible to other users – a finding that

holds for SNS (Farzan et al., 2008), blogs (IP & Wagner, 2008), and microblogging (Zhang et al., 2010). Because many individuals are likely to never contribute actively to an online community (Takahashi, Fujimoto, & Yamasaki, 2003), the visibility and persistence afforded by social media allow more individuals to access the information provided by heavy users (Jackson et al., 2007). Research has shown that decisions by organizational newcomers to seek information are influenced by the perceived difficulty in obtaining the information (Morrison & Vancouver, 2000). The mix of active and passive information seeking strategies afforded by social media may shift perceptions of information accessibility and future research should examine how this change might alter socialization processes and outcomes.

**Relationship formation.** The associations afforded by social media can be a powerful way for employees, particularly newcomers, to establish relationships with others in an organization. Social media offers workers the opportunity to find individuals with similar interests, or discover potential mentors, particularly when they do not know others personally. For example, a social networking application might afford the means for an association with an employee at a different location with similar interests (DiMicco et al., 2008). Also, the lightweight nature of the associations, which are often accomplished through a simple click of a computer mouse, may, in turn, facilitate the formation of a wider organizational network.

The associations afforded by social media use can also exercise a form of social influence that restricts the type of relationships formed. As one example, research on internal blogging at a large, multi-national company found that managerial use was strongly related to the level of participation by employees (Wattal et al., 2009). Employees using social media may feel the need to replicate the associations made by senior employees or peers in a business unit, creating a more insular network of connections. Individuals may also want to use social media to display

connections with known experts or highly-regarded others, regardless of whether they intend to interact with these individuals. Doing this would potentially help them to accrue status by association, which research suggests is often a tactic newcomers use to improve perceptions of their standing in the organization (Blau, 1955). Thus the associations afforded by social media may promote symbolic associations that give the appearance of diversity or prestige through relationships.

### **Knowledge sharing**

Many organizational communication researchers are interested in the processes by which people create and transfer knowledge within and across organizational boundaries (Argote, Ingram, Levine, & Moreland, 2000; Belanger & Allport, 2008; Brown & Duguid, 1998; Carlile, 2004; Contractor, Zink, & Chan, 1998; Cramton, 2001; Flanagan, 2002; Hollingshead, Fulk, & Monge, 2002; Leonardi & Bailey, 2008; Yuan, Fulk, & Monge, 2007). We consider how the affordances enabled by social media use may affect four processes that organizational communication researchers argue are central to effective knowledge sharing in organizations: (1) capturing tacit knowledge, (2) motivating knowledge contributions, (3) overcoming organizational boundaries, and (4) identifying expertise. Table 7 outlines a number of important research questions that arise when we consider the ways in which the affordances of visibility, persistence, editability, and association create opportunities for and constrain the knowledge sharing processes detailed below.

[INSERT TABLE 7 HERE]

**Capturing tacit knowledge.** One of the paramount challenges organizations face is how to capture and learn from the tacit knowledge held by workers (Nonaka, 1994). The visibility afforded by social media allows workers to present personal information in a publicly available

setting such that they can surface many of the nuanced aspects of tasks, routines, and know-how. A case study of participation on IBM's BlogCentral platform found that blogs were used to express individuals' tacit knowledge (Huh et al., 2007). The blogs were useful for capturing tacit knowledge because talking about one's tasks in a public forum forced individuals to work hard to articulate how they conducted tasks. In essence, the visibility of the medium afforded people the opportunity to turn their tacit knowledge into explicit knowledge because they knew others were watching their actions and wanted to appear competent. However, Huh, et al. also noted that users often had an audience in mind when sharing knowledge, which implies that users took advantage of the affordance of editability when communicating. If one of the leading motivations to participate in social media use in organizations is to gain recognition in an organization (DiMicco et al., 2008; Yardi et al., 2009) then it stands to reason that users may craft messages in ways that present them as knowledgeable even if it is not an accurate reflection of their knowledge. Future research should consider how the editability of social media influences perceptions of individuals' knowledge and whether this matches actual knowledge.

**Motivating knowledge contributions.** Traditional examinations of communal information technologies have treated decisions for individuals to contribute as discretionary (Connolly & Thorn, 1990; Kalman, Monge, Fulk, & Heino, 2002) and have been largely concerned with how to motivate users to contribute individually-held knowledge (Beenen et al., 2004; Cress, Kimmerle, & Hesse, 2006). This concern is similar in much of the research on social media use in organizations, in which scholars discuss a desire amongst progenitors of these technologies to generate the greatest volume of participation and contributions possible (DiMicco et al., 2008; Dugan et al., 2010; Farzan et al., 2008). However, Yardi, Golder, and Brzozowski (2009) note that internal corporate blogs create a paradox in that the goal is for

employees to contribute knowledge, but the more knowledge that it is contributed the harder it is to find any specific piece of information. The persistence of content in social media means that there may come a point of diminishing returns where knowledge contributions produce more noise than value. Because research on social media in organizations is largely based on initial adoption, future work should explore whether the growth of content alters motivations to contribute knowledge.

Additionally, associations afforded by social media may do little to actually contribute to task-related knowledge contributions or organizational goals. Mirzaee, Iverson, and Khan (2008) concluded in their study of social tagging that although social media facilitated exploration of knowledge within the organization, it was not likely to be relied on in task-specific situations. One reason that social media may not be seen as valuable in task situations is that communications are often more relationally or personally oriented. For example, Zhao and Rosson (2009) interviewed organizational microbloggers and found that the medium was largely used to promote informal communication. Given the ways that social media supports relations, motivating contributions may merely increase social exchanges and not necessarily increase organizational knowledge.

**Overcoming organizational boundaries.** Information and communication technologies, such as social media, are commonly viewed as a means to organize knowledge and place it in a form accessible to other organizational members (Flanagin, 2002). However, individuals often have trouble understanding communication from other organizational members because they have different vocabularies and situated understandings of work (Bechky, 2003; Cramton, 2001). This issue has been identified as a problem with social tagging systems in organizations - empirical research shows tremendous disparity in tagging terms used across applications and

individuals, even within a single firm (Muller, 2007b). One way that social media use can address this issue is through the affordance of visibility – social media makes the activities of other individuals and work groups more visible, which helps individuals make connections with people or content that facilitate their own interests. Another way that social media use may help individuals overcome organizational boundaries is through easy associations that encourage workers to explore new relationships. For example, a study by Green, Contractor, and Yao (2006) showed how a social networking application with algorithms to make emergent associations between people and user-generated content spurred cross-boundary interactions and knowledge sharing in environmental engineering and hydrological science research. This increased collaboration occurred because once users learned that others were interested in similar topics to them individuals were more willing to work to overcome cross-boundary differences and understand one another, even if they did not share a common store of domain knowledge. Additionally, at IBM, the implementation of a feature in an internal SNS that allowed users to recommend content to others resulted in more diverse exposure to the activities of organizational members (Farzan et al., 2009). Future studies should consider the ways that social media can be used to help overcome organizational boundaries.

**Identifying expertise.** The ability to accurately identify the expertise of organizational members allows managers to assign individuals to appropriate organizational tasks and, as research suggests, improve group performance (Brandon & Hollingshead, 2004). The visibility afforded by social media use is one way that individuals can recognize the expertise of others, particularly those with whom they have had little or no interaction (Shami et al., 2009). For example, organizational social tagging is able to leverage the personal act of bookmarking in a way that also shares knowledge with others (Pan & Millen, 2008). Associations also aid in the

ability to recognize expertise. Social media bring similar content and activities together, creating communities of knowledgeable individuals (Muller, 2007b) and one's ratings of another's content can be used to signal or assert expertise in work groups (Thom-Santelli et al., 2010). In sum, individuals not only look to visible content, but also to associations in order to develop attributions of expertise.

## **Power**

The processes of managerial power enactment, and resistance to it, have occupied a great deal of organizational communication scholars' attention over the last two decades. Some scholars take a resource dependency view on power, exploring the asymmetry in distribution of organizational resources (e.g. knowledge, information, money, social capital) and the power dependencies they create (Conrad, 1983; Gould, 1989; Haunschild & Beckman, 1998; Pfeffer & Davis-Blake, 1987; Scott, 2004), while others have adopted a critical-cultural stance on power, arguing that power is exercised through the enactment and perpetuation of organizational discourse that privileges the interests of some and marginalizes the voices of others (Deetz, 1992; Deetz & Mumby, 1985; Fairhurst & Putnam, 2004; Knights & Willmott, 1985; Mumby & Stohl, 1991; Nadesan, 1997; Trethaway, 1997). Across these two perspectives, three processes are often discussed in the relationship between power and organizational communication: (1) resource dependencies, (2) discursive construction, and (3) surveillance. Table 8 lists potential research questions that fall at the intersection of these three power processes and the affordances of visibility, persistence, editability, and association.

[INSERT TABLE 8 HERE]

**Resource dependency.** The knowledge contained in social media is a potential source of power for individuals in organizations. By making information visible to others in the



organization, individuals may be able to subtly signal that they possess knowledge. If that knowledge is then perceived as valuable, it can be a source of power that can result in increased influence in decision-making (Pfeffer & Salancik, 1974). Individuals are likely to defer to those they feel are more knowledgeable, or have expertise, in a particular domain (Gould, 1989). Research on social media has revealed that visibility can both consolidate and distribute power. Individuals who garner increased attention may become influential figures (Efimova & Grudin, 2007). Alternatively, the ability of any employee to make him or herself visible through social media may have a democratizing affect on knowledge contributions (Hasan & Pfaff, 2006). As an example of the inclusive potential of technology, the addition of social media to the innovation process at research and technology organization The MITRE Corporation resulted in more comments on proposals from a wider group of employees (Holtzblatt & Tierney, 2011). Additional research should explore the conditions under which social media use creates a more inclusive or exclusive knowledge environment.

Another way that individuals may become less dependent on others in an organization is through the ease of associations made through social media use. Unencumbered by time and space, workers in organizations can use social media use to expand their networks and build social capital across boundaries (Ferron et al., 2010; Steinfield et al., 2009). These associations can provide access to thought leaders that would be otherwise difficult to obtain, thus reducing or eliminating the role of gatekeepers who controlled access to these individuals. (Ehrlich & Shami, 2010). Moreover, the use of social media allows individuals to develop weak ties and create a more robust organizational network (DiMicco et al., 2008). Employees using social media, particularly those in less powerful organizational positions, may be able to use the ease of associations to garner social resources.

**Participation in discursive construction.** Organizational scholars operating in the critical-cultural tradition have developed a perspective that views power as constituted by discursive formations created and reproduced in practice (Mumby, 1987). This critical view holds that through communication, powerful organizational actors are able to develop a narrative around what the organization is and how it should operate (Clair, 1993; Deetz, 2000). Social media, by facilitating visible text, can be viewed as an inherently discursive space where individuals are able to put forth arguments and engage in public deliberation. In such studies, researchers are interested in how everyday talk (discourse with a “little d”) shapes and sustains broader ideologies (Discourse with a “big D”) and how powerful actors marginalize the contributions of other forms of discourse so as to maintain their positions of power (Alvesson & Deetz, 1999; Nadesan, 1997). Studies of social media in organizations have noted that the visibility of content is seen as an effective way for employees to get a feel for what is happening in an organization (Brzozowski, 2009; Jackson et al., 2007; Zhao & Rosson, 2009). Individuals or groups in the organization who are able to shape Discourse and participation in this space will wield power over the narrative around how the social media ought to be used and, in so doing, will perhaps be able to control the larger Discourse that controls perception in the organization. However, the visible, informal nature of social media participation may encourage open communication that may make it difficult for any individual to dominate discourse (Kosonen & Kianto, 2009; Zhao & Rosson, 2009)

Additionally, the associations afforded by social media may exert normative pressure for conformity around Discourse. Individuals may use the medium to coalesce support for the existing organizational discourse and the persistence of social media may increase inertia to maintain the status quo (Sunstein, 2007). For example, because lack of attention from

management deters participation in social media (Yardi et al., 2009), minority voices may be discouraged from communicating. Evidence also suggests that absent explicit incentives to encounter diverse content, individuals using SNS in organizations may restrict views to material in their own network (Farzan et al., 2009).

**Surveillance.** Scholars have long recognized that technology offered management new ways to monitor workers (Attewell, 1987). Social media, by making the practices and contributions of employees more visible, may increase surveillance of workers. Visible participation via communications technology carries with it a form of accountability on the part of the communicator (Brown & Lightfoot, 2002). Research suggests that workers may recognize the accountability of participation, with findings showing individuals using social media in organizations were reluctant to contribute works-in-progress because they knew contributions would be viewed by others (Giordano, 2007; Holtzblatt et al., 2010). Research should explore the processes by which individuals monitor the social media activity of coworkers.

Additionally, the persistence of social media makes surveillance activities easier as information is stored, aggregated and searchable. At one global IT organization studied, the communications department monitored the activity of internal bloggers to identify any emerging issues or inaccuracies (Jackson et al., 2007). Surveillance also emerges from the associations afforded by social media. This form of surveillance is built into social media through subscriptions such as notification of when an edit has been made on a wiki, or when a blog author has constructed a new post. For instance, when users logged on to the SNS site at IBM they were shown a list of activities in which all of their connections had recently engaged, and the site updated users as statuses change (DiMicco et al., 2008). In sum, social media creates a record of activity that may be used for a variety of surveillance purposes by managers and peers.

## Conclusions

In this chapter, we have argued that social media are of important consequence to organizational communication processes precisely because they afford new types of behaviors that were previously difficult or impossible to achieve before these new technologies entered the workplace. Our review of existing studies of social media use in organizations uncovered four relatively consistent affordances enabled by these new technologies: visibility, persistence, editability, and association. We suggested that these four affordances could bring substantial changes to the way that many of the processes, which are core to concerns of organizational communication theorists, are carried out in organizational contexts. To illustrate this point, we engaged in a thought exercise in which we explored what consequences these four social media affordances might have on socialization, information sharing, and power processes in organizations.

Clearly, the study of social media use in organizations is in its infancy. We urge scholars to move forward cautiously. The academic landscape is littered with many studies of *new* communication technologies that are now outdated because their authors focused on particular technologies, exploring what consequences the use of those technologies had on social and organizational dynamics. With the swift development of new communication technologies the particular social media we use today are not likely to be the ones we use in the future. We have argued, herein, that an affordance approach, which focuses attention not on any particular technology, but on the types of communicative practices that various features afford, is much more likely to have staying power because it builds theory about the relationship between technology and communication without foregrounding one concept or the other. Much empirical study is needed on the role that social media affordances play in organizational processes if

communication research is to remain important, timely, and applicable. We offer this chapter as an early effort to encourage organizational researchers to undertake this important task and we hope that within it are some bold ideas and provocations that help researchers decide how and where to begin.

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### Notes

1. Social tagging in organizations has also been commonly referred to as social bookmarking (e.g., Damianos, Cuomo, Griffith, Hirst, & Smallwood, 2007; Pan & Millen, 2008). We use the term social tagging to refer to technologies that allow users to apply tags or labels to a variety of online content, not just websites.

2. We recognize that there is a wealth of research on social media in a variety of contexts including among children and teenagers (Flanagin & Metzger, 2010; Lenhart, Purcell, Smith, & Zickuhr, 2010), information seekers (Adamic, Zhang, Bakshy, & Ackerman, 2008; Agichtein, Castillo, Donato, Gionis, & Mishne, 2008), and individuals forming impressions of prospective social partners (Tong, Heide, Langwell, & Walther, 2008; Walther, Van Der Heide, Hamel, & Shulman, 2009). Our intent is not to discount the contributions or findings of these studies, but rather to argue that the affordances of social media may have consequences unique to organizational settings.

3. The technologies that constitute social media are often recognized in the literature as Web 2.0 (e.g., Chong & Xie, 2011; Fuchs-Kittowski, Klassen, Faust, & Einhaus, 2009; Scholz, 2008; Stocker, Dosinger, Saaed, & Wagner, 2007; Tredinnick, 2006) or social software (e.g., Raeth, Smolnik, Urbach, & Zimmer, 2009; Steinhuser, Smolnik, & Hoppe, 2011; Warr, 2008). For the sake of consistency we use social media throughout this paper.

4. We recognize, and regret, that a disproportionate number of studies included in this review are the result of research conducted at IBM and involving that organization's employees. At this point, researchers at IBM are the most active in publishing work related to social media use in organizations, in part because it is related to the development of the company's products.



Wherever possible we tried to include studies from other organizations. It is our hope that future research will consider social media use in more diverse organizational contexts.

**Table 1*****Comparison of Affordances Across Social Media and Between Social Media and other Organizational CMCs***

Technology	Example Applications		Affordances			
	Public	Organization	Visibility	Editability	Persistence	Association
<b>SOCIAL MEDIA</b>						
Wikis	Wikipedia	Socialtext , MediaWiki	High	High	High	High
Social Networking Applications (SNA)	Facebook	IBM's Social Blue Sales Force's Chatter	High	High	High	High
Blogs	Wordpress, Blogger,	Most can be installed in organization	High	High	High	High
Social Tagging	Delicious	IBM's Dogear; PARC's SparTag	High	High	High	High
Microblogging	Twitter	Yammer	High	High	High	High
<b>OTHER ORGANIZATIONAL CMC</b>						
Instant Messaging	AOL Instant Messenger, GChat	Jabber	Low	Med	Low (can be recorded, but rarely is)	Low
E-mail	Hotmail, Gmail	Outlook Exchange	Low-High	High	High	Low
Teleconferencing	Skype	Webex	Low	Med	Med (can be recorded)	Med
Shared Database	Dropbox	Microsoft Access/ Sharepoint	Low-High	Med	High	Low

**Table 2*****Social Media Features Affording Visibility***

<b>Social Media Technology</b>	<b>Features Affording Visibility</b>	<b>Illustration in Literature</b>
Wikis	<ul style="list-style-type: none"> <li>• Displays text and graphic content contributions</li> <li>• List of edits to entries</li> <li>• Notification when changes have been made to entries</li> <li>• Personal Profiles</li> </ul>	(Danis & Singer, 2008; Holtzblatt et al., 2010; Kosonen & Kianto, 2009)
Social Networking Sites	<ul style="list-style-type: none"> <li>• Status Updates</li> <li>• Pushes activity to connections</li> <li>• Lists of “friends” or connections</li> <li>• Personal Profiles</li> <li>• Visible in Search Engines</li> <li>• Allows comments and opinion expression (e.g., the “like button”) on content</li> <li>• Recommender algorithm shows similar others</li> </ul>	(DiMicco et al., 2009; Farzan et al., 2008; Holtzblatt & Tierney, 2011)
Blogs	<ul style="list-style-type: none"> <li>• Content publishing consisting of text, video or audio</li> <li>• Pushes content to subscribers</li> <li>• Personal Profiles</li> <li>• Allows comments on content</li> <li>• Entries indexed by search engines</li> <li>• Inbound links</li> </ul>	(Brzozowski et al., 2009; Efimova & Grudin, 2007; Farrell et al., 2008; Wattal et al., 2009; Yardi et al., 2009)
Social Tagging	<ul style="list-style-type: none"> <li>• Content publishing consisting of comments and descriptions of entries</li> <li>• Displays number of people who bookmarked same content</li> <li>• Pushes content to subscribers</li> <li>• Shows others with similar entries</li> </ul>	(Damianos et al., 2007; Millen & Feinberg, 2006; Muller et al., 2006; Pan & Millen, 2008; Thom-Santelli & Muller, 2007)
Microblogging	<ul style="list-style-type: none"> <li>• Content publishing consisting of text or hyperlinks (limited in number of characters)</li> <li>• Pushes content to subscribers</li> </ul>	(Schondienst et al., 2011; Zhang et al., 2010; Zhao & Rosson, 2009)

- Shows subscribers and those to whom user subscribes
- Personal profiles, indexed by search engines

**Table 3**  
***Social Media Features Affording Persistence***

<b>Social Media Technology</b>	<b>Features Affording Persistence</b>	<b>Illustration in Literature</b>
Wikis	<ul style="list-style-type: none"> <li>• History of activity and discussion recorded</li> <li>• Entries indexed by search engines</li> </ul>	(Ding et al., 2007; Giordano, 2007; Grudin & Poole, 2010; Holtzblatt et al., 2010; Kane & Fichman, 2009; Majchrzak et al., 2006; Poole & Grudin, 2010; Rober & Cooper, 2011; Wagner, 2004; White & Lutters, 2007)
Social Networking Sites	<ul style="list-style-type: none"> <li>• Profiles indexed by search engines</li> <li>• Allows catalogs of photos</li> <li>• Displays past activity of individuals on site</li> </ul>	(DiMicco et al., 2009; Geyer et al., 2008; Mejova et al., 2011)
Blogs	<ul style="list-style-type: none"> <li>• Links to past content</li> <li>• Entries indexed by search engine</li> <li>• Reverse chronological format provides timeline of content</li> </ul>	(Huh et al., 2007; Jackson et al., 2007; Kolari et al., 2007)
Social Tagging	<ul style="list-style-type: none"> <li>• Catalogs history of bookmarking activity</li> <li>• Profiles indexed by search engines</li> <li>• Contributions searchable</li> </ul>	(Millen & Feinberg, 2006; M. Muller, 2007a, 2007b)
Microblogging	<ul style="list-style-type: none"> <li>• Catalog of entries</li> <li>• Profiles indexed by search engines</li> </ul>	(Gunther et al., 2009; Riemer & Richter, 2010)

**Table 4*****Social Media Features Affording Editability***

<b>Social Media Technology</b>	<b>Features Affording Editability</b>	<b>Illustration in Literature</b>
Wikis	<ul style="list-style-type: none"> <li>• Asynchronous text-based entries</li> <li>• Previous history of edits available</li> <li>• Revisions permissible</li> </ul>	(Arazy et al., 2009; Chi et al., 2010; Danis & Singer, 2008; Giordano, 2007; Grudin & Poole, 2010; Hasan & Pfaff, 2006; Holtzblatt et al., 2010; Schaffert, 2006; Yates et al., 2010)
Social Networking Sites	<ul style="list-style-type: none"> <li>• Asynchronous text-based entries</li> <li>• Revision of own content on site permissible</li> <li>• Content contributions of others on individual's site can be deleted</li> </ul>	(Dugan et al., 2008; Farzan et al., 2008)
Blogs	<ul style="list-style-type: none"> <li>• Asynchronous text-based entries</li> <li>• Revision of content on own site permissible</li> </ul>	(Huh et al., 2007)
Social Tagging	<ul style="list-style-type: none"> <li>• Asynchronous text-based entries</li> <li>• Revision of content on own site permissible</li> <li>• Previous entries of others recommended for potential re-use</li> </ul>	(Farrell et al., 2007; Muller et al., 2006; Thom-Santelli et al., 2008)
Microblogging	<ul style="list-style-type: none"> <li>• Asynchronous text-based entries</li> <li>• Contributions on own site can be deleted</li> </ul>	(Riemer & Richter, 2010)

**Table 5**

***Social Media Features Affording Association***

<b>Social Media Technology</b>	<b>Features Affording Association</b>	<b>Illustration in Literature</b>
Wikis	<ul style="list-style-type: none"> <li>• List of editors for each entry</li> <li>• List of privileges, rights and contributions in profiles</li> </ul>	(Ding et al., 2007)
Social Networking Sites	<ul style="list-style-type: none"> <li>• Relations to others displayed (e.g. Friends)</li> <li>• Comments and opinion (e.g. "Like" Button) on entries</li> <li>• Activity of related others displayed on page</li> </ul>	(Chen et al, 2009; Daly et al., 2010; Dimicco et al., 2008; Dimicco et al., 2009; Farzan et al., 2009; Ferron, et al., 2010; Freyne, 2010; Steinfield et al., 2009; Wu et al., 2010)
Blogs	<ul style="list-style-type: none"> <li>• Links to other blogs (both on page and in entries)</li> <li>• Identifies commenters with links to profiles or personal sites</li> </ul>	(Dugan et al., 2010; Jackson et al., 2007)
Social Tagging	<ul style="list-style-type: none"> <li>• List of individuals who bookmarked same content</li> <li>• Displays individuals of whom user has subscribed to receive content (e.g. fans)</li> <li>• Shows topic to which user has subscription to receive content</li> </ul>	(Millen & Feinberg, 2006; Thom-Santelli et al., 2010; Thom-Santelli et al., 2008)
Microblogging	<ul style="list-style-type: none"> <li>• Displays those to whom user receives and sends content (e.g., followers and following)</li> <li>• Use of tags to show reuse of content or directed messages (e.g., @)</li> <li>• Use of tags to show contribution to topic (e.g., #)</li> </ul>	(Ehrlich & Shami, 2010; Zhang et al., 2010)

Table 6

***Potential Research Questions Exploring the Relationship Between Social Media Affordances and Organizational Socialization Processes***

Affordances	Research Areas in Organizational Socialization		
	People Processing Tactics	Information Seeking	Relationship Formation
Visibility	Does the increase in visibility afforded by social media undermine formal socialization efforts?	How does the visibility afforded by social media affect decisions to seek information from others?	Will newcomers form relationships more or less quickly with individuals who post content similar to them than they will with those who do not?
Persistence	Under what conditions will the persistence afforded by social media use result in individualized versus collective socialization experiences?	Does the persistence afforded by social media use result in less active information seeking?	If new entrants to the organization find content posted by someone in the past, will they assume that the poster is still working in this content area and try to form relationships with him or her?
Editability	In an attempt to influence new members, will long-tenured organizational members edit old content to re-create organizational histories?	When looking to reduce uncertainty about organizational norms, how will information providers edit messages that are intended for select newcomers but that are disseminated to all organizational members?	Under what conditions and how will individuals edit their self-presentations to build relationships with others in the organization and what effects will the recognition that others are doing such editing have throughout the organization?
Association	Under what conditions does the development of online relationships with experienced organizational members undermine managerial socialization tactics?	If content is associated with someone whom an individual trusts, will that individual continue to seek out information, or stop because he/she believes that his/her trusted friend has the "right" answer?	Does the increase in association afforded by social media use result in larger organizational networks?



Table 7

***Potential Research Questions Exploring the Relationship Between Social Media Affordances and Organizational Knowledge Sharing Processes***

Affordances	Research Areas in Organizational Knowledge Sharing			
	Capturing Tacit Knowledge	Motivating Knowledge Contributions	Overcoming Organizational Boundaries	Identifying Expertise
Visibility	To what extent does the visible knowledge afforded by social media use reflect the tacit knowledge of workers?	Does the increase in visibility afforded by social media encourage or deter contributions of knowledge?	Does mere visibility of the activities of others through social media result in a greater understanding of other work groups?	Will organizational social media result in more accurate identifications of experts?
Persistence	Does an accumulation of poor conversions of tacit into explicit knowledge encourage or deter individuals from trying conversions yet again?	Is there a point of saturation for social media use such that large quantities of content deter further contributions?	Does the discovery of old content used by individuals from across a boundary build positive affect such that individuals are motivated to try to build mutual understanding in the here-and-now?	Can the mining of old documents (either quantitatively or qualitatively) shed light on who is and who is not an expert and can this knowledge shift current-day interactions?
Editability	Can the requirement to enter knowledge into a social media tool compel individuals to carefully articulate tacit processes such that they become explicit?	Under what conditions do individuals revise their old knowledge contributions? What effects do these revisions have on organizational learning?	As individuals from other parts of the organization find the need for information contained in social media tools that does not address their concerns, will they edit this information to align with their needs and, consequently, produce more generalized organizational knowledge?	Does the editable nature of self-presentation allow people to be deceptive about their true knowledge and, hence, alter others' perceptions of where expertise lies in the organization?
Association	Do systems that recommend associations between people or between people and content create connections that enable individuals to convert tacit into explicit knowledge?	Do associations afforded by social media use support social or task-oriented communication?	How can social media use facilitate more working relationships beyond one's existing group?	How can organizational social media use best create and support communities of expertise?

**Table 8*****Potential Research Questions Exploring the Relationship Between Social Media Affordances and Organizational Power Processes***

<b>Affordances</b>	<b>Research Areas in Organizational Power Processes</b>		
	<b>Resource Dependency</b>	<b>Participation in Discourse Construction</b>	<b>Surveillance</b>
Visibility	When others can see who uses social media and who does not, does increased social media use result in an increase in perceived power in the organization?	Can the increase in visibility afforded by social media facilitate more diverse participation in Discourse construction?	Does the increase in visibility afforded by social media use result in more monitoring of colleagues?
Persistence	Does the documentation of past dependencies that are revealed through the persistence of older organizational documents have an imprinting affect on one's ability to exercise or enact dependencies today?	Does old content that persists in social media platforms continue to shape Discourse in organizations even if the content's proponents are no longer with the organization?	How do organizations use social media to monitor employees over time?
Editability	Can individuals present content in such a way so as to highlight or obscure critical dependencies on others? If so, can dependencies be controlled through strategic content editing?	Are there conditions under which organizational members might revise past documents to re-shape people's memories of the dominant organizational Discourse? If so, do such changes actually work?	If people feel that others are watching them through social media use, what will it take for them to begin to strategically edit their self-presentation and what consequences will this strategic editing have for communication processes throughout the organization?
Association	Does the association afforded by social media use result in less dependency on senior employees who are normally sought because rank is a proxy for power/status/knowledge?	How can organizations motivate individuals to consider new forms of discourse?	Does a system that suggests associations between people or between people and content lead to more or less surveillance than a system that does not suggest associations?