Technology Use as a Status Cue: The Influences of Mundane and Novel Technologies on Knowledge Assessments in Organizations

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This study explores the relationship between the use of information and communication technologies (ICTs) and assessments of workers’ knowledge and abilities in 2 knowledge-intensive organizations. Drawing on expectation states theory, the article argues that a worker’s communication through mundane, widely diffused ICTs may lead to status assessments from colleagues that are different than when he or she communicates through novel ICTs. Data from interviews and observations at both organizations revealed that mundane ICT use influenced assessments about the general level of proficiency of workers, and use of novel ICTs influenced assessments about a specialist type of proficiency. Additionally, workers expressing communicative cues indicative of higher statuses played larger roles in organizational tasks than workers who were viewed as lower-status.

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Employees in professional service firms, and many other knowledge-intensive industries, often have little insight into the behaviors of fellow workers other than what is revealed through e-mails, shared documents, and occasional conversations in the hallways. Without the ability to observe the work of their peers, individuals may have difficulty determining who holds what types of knowledge among organizational members (Cross, Borgatti, & Parker, 2003). Workers must instead assess the proficiency of others based on the behaviors and characteristics that are accessible to them (Bunderson & Barton, 2011).

I argue that how people use information and communication technologies (ICTs) may influence these assessments of others’ knowledge and abilities in organizations. Because ICT use is a dominant and pervasive form of communication in
contemporary work settings (D’Urso & Pierce, 2009), it may serve as a visible and easily assessable signal of a worker’s knowledge. In this study, I explore, first, how variations in ICT use may provide signals that are treated as representative of workers’ knowledge. Second, I evaluate the consequences of ICT-based assessments of individuals for ongoing practices in two knowledge-intensive organizations.

Theoretical background

Signals of individual knowledge and abilities in organizations

Individuals in task-oriented groups often operate with incomplete information about the skills, abilities, and knowledge of peers (Stasser, Stewart, & Wittenbaum, 1995). Through communication, they develop a sense of “who knows what” and associate individuals with particular knowledge domains or task abilities—providing the basis for what Wegner (1987) termed a transactive memory (TM). A TM consists of the encoding, storage, and retrieval of information among group members who are given responsibility for particular domains of knowledge (Brandon & Hollingshead, 2004; Wegner, 1987). A TM first emerges through a process of encoding, whereby group members assess the knowledge of their peers. The process is transactive in the sense that communication facilitates the association of knowledge with some individuals, and not with others. Communication among group members is seen as a way to develop a more accurate, applied, and relevant sense of coworkers’ abilities (Brandon & Hollingshead, 2004). As individuals learn more about the abilities of group members they adjust their assessments of who should be given particular task responsibilities (Wegner, 1995).

Individuals develop differential assessments of group members’ knowledge based on a variety of communicative signals including broad characteristics such as gender (Hollingshead & Fraidin, 2003) or ethnicity (Yoon & Hollingshead, 2010), as well as task-specific signals such as shared training (Moreland, 1999). This assessment process is influenced by the multiple sources of communicative signals accessible to individuals at a given time—including face-to-face interaction and the use of ICTs that store and display workers’ knowledge (Yuan, Fulk, & Monge, 2007). For example, Su (2012) tested the mutual effects of work location and use of digital knowledge repositories on individuals’ perceptions of coworkers’ expertise. Results showed that remote workers had less accurate assessments, but that this effect was smaller for workers who used digital knowledge repositories. This research indicates that the forms of communication accessible to workers will influence judgments of who knows what.

Though theory related to TM helps explain how knowledge responsibilities are divided among group members, it provides limited insight into why particular forms of communication are associated with particular assessments of group members’ knowledge (Bunderson, 2003). In other words, little is known about when, and under what circumstances, workers will rely on certain signals and not others in making assessments of colleagues’ knowledge (Bunderson & Barton, 2011).
Alternatively, expectation states theory (Berger, 1974) provides a framework to explore how the signals people communicate are associated with differential assessments of individuals’ knowledge and abilities. Expectation states theory is a broad theoretical program aimed at addressing how individuals use information in a context to develop perceptions of and expectations about others, and the associated consequences for group participation (Wagner & Berger, 2002). As a framework, expectation states theory helps to explain why workers quickly develop a sense of who is knowledgeable in particular domains, and why certain individuals possess greater influence in decision making (Bonito, 2003; Littlepage & Mueller, 1997).

Expectation states theory has produced a variety of individual theories (for review see Wagner & Berger, 2002), perhaps the most prevalent of which is status characteristics theory (Berger, Cohen, & Zelditch, 1972). Status characteristics theory posits that people hold performance expectations regarding the abilities of others to complete organizational tasks. These expectations emerge from the presence of status characteristics: attributes or behaviors that reflect perceived individual capabilities. Often, people assess characteristics and associated expectations based on status cues, which are communicative signals taken to indicate that an individual possesses a certain status (Berger, Webster, Ridgeway, & Rosenholtz, 1986). For instance, having a diploma from a prestigious university is a cue indicating the characteristic that one is well-educated. In turn, being well-educated (high status) is associated with greater expectations regarding one’s knowledge and work productivity relative to those who are less educated (low status). Differences in status characteristics and associated cues among workers inform assessments of who is knowledgeable in particular domains and who is not.

Status characteristics are only useful for workers’ judgments of colleagues’ knowledge and abilities when several conditions are met. First, different states of a status and associated cues must exist (e.g., possess vs. lack, high vs. low) among a group’s members so an observer may compare workers. Second, the person assessing a worker’s knowledge and abilities must perceive the status characteristic as relevant to an organizational task. For example, speaking French has no clear connection to a worker’s ability to sell widgets. However, if an employee is assigned to sell widgets in Paris, his or her ability to speak French becomes extremely relevant. When status characteristics are connected to tasks it is expected that individuals who signal cues associated with those characteristics are the most qualified to work on related tasks. Therefore, workers with relevant status characteristics are likely to have greater participation and influence in tasks linked to the respective attributes or behaviors (Berger et al., 1972).

Research has recognized how changes over time to the context of workers’ communication may affect how particular status characteristics influence knowledge assessments. Although status characteristics are often conceptualized as associated with macrolevel social categories such as race and gender, unique status characteristics can develop in groups based on emergent differences among individuals, and behaviors that deviate from accepted norms may facilitate the construction of status cues (Webster & Hysom, 1998). As groups interact some status characteristics are
selected, and others deselected, based on what is seen as most applicable to tasks in a particular context (Bianchi, Kang, & Stewart, 2012). Within social contexts, status characteristics may increase in visibility over time and become more meaningful in assessing individuals’ knowledge and abilities (Keister & Cornwell, 2009). The relevance and influence of particular status characteristics is a function of the communicative context within which status characteristics, and associated cues, exist and are assessed.

ICT use and status characteristics
In contemporary organizations, even employees who are collocated may spend far more time interacting through ICTs, or working independently on computers, as opposed to communicating face-to-face (González & Mark, 2004). Therefore, ICT use provides a likely context for the differential expression, maintenance, or emergence of status characteristics and associated status cues. Indeed, experiments have shown that, when compared to face-to-face conditions, communication via ICTs may diminish the influence of pre-existing status differences in new working groups (Dubrovsky, Kiesler, & Sethna, 1991), or maintain and reinforce differences in groups where status levels are made salient (Saunders, Robey, & Vaverek, 1994; Weisband, Schneider, & Connolly, 1995). Additionally, ICT use may make visible previously inaccessible task-specific cues related to workers’ knowledge. For instance, Leonardi and Treem (2012) studied a newly formed team of computer support technicians using a communal knowledge management system and found that group members used the length of colleagues’ entries into the ICT as a rough heuristic to determine who was knowledgeable in particular domains. Technologically mediated communication provides a number of signals—through the content, delivery, and presentation of messages—that can inform assessments of an individual’s knowledge.

The studies mentioned above all investigated the relationship of status differences and ICTs in settings where group members all used a single technology, a context not reflective of communication in contemporary organizations. Rather, workers routinely use a variety of ICTs to conduct organizational tasks, and vary in the rates and forms of ICT use (Reinsch, Turner, & Tinsley, 2008; Stephens, 2007; Watson-Manheim & Bélanger, 2006). These different ICTs are used to communicate in sequential, simultaneous, and complementary ways (Bélanger & Watson-Manheim, 2006). The distinction between and among ICTs is critical because workers may choose one ICT over another to fulfill both functional and symbolic goals (Trevino, Lengel, & Daft, 1987). Analyzing the relationship between the use of a single ICT and assessments of a worker’s knowledge treats technology as a potential carrier, or container, for the communication of status cues, but obscures how technology use itself may reveal status characteristics.

As organizational ICTs vary in their adoption, application, and novelty, they may vary both in their usefulness as status cues (how they reveal different states) and usefulness in evaluations of workers’ knowledge and abilities (how they are relevant to tasks). ICTs that are novel to an organization, which I hereafter refer to as “novel
ICTs,” may spur shifts in the types of knowledge valued in organizations (Pentland, 1995). However, ICTs that are widely adopted and mundane to the organization, which I hereafter refer to as “mundane ICTs,” may not spark similar organizational change because individuals often ignore these technologies (Dourish, Graham, Randall, & Rouncefield, 2010). An ICT becomes mundane when “its novelty has worn off; these are technologies which are now fully integrated into, and are an unremarkable part of, everyday life” (Michael, 2003, p. 131). Current examples of mundane ICTs in formal, industrialized organizations include e-mail, knowledge repositories, and productivity software such as Microsoft Word, Excel, and PowerPoint.

The mundane nature of these ICTs suggests that their use may not produce the same perceived differences in workers’ knowledge that commonly emerge with the introduction of a new technology. Mundane ICTs reflect existing social relations or facilitate ongoing routines, instead of sparking organizational change (Michael, 2003). Over time, use of mundane ICTs merges with everyday experiences and is taken for granted by workers such that the ICTs themselves become less salient. For example, in contemplating how perceptions of the Internet have evolved over time, Parks (2009) noted that many online activities have become “ordinary” and “less visible.”

Scholarship concerned with the history of communication technologies has documented how the role of ICT use as a status cue may shift over time, as a technology moves from novel to mundane status. Marvin (1988), in her influential text When Old Technologies Were New, described how the introduction of electricity elevated the social status of electricians because the use of electrical machinery was seen as requiring technical knowledge and skill that only few possessed. As electrical devices became less expensive and more common, owning and operating electrical communication technologies shifted from a status cue indicating technical, social, or financial prominence to a ubiquitous component of everyday communication. This demonstrates how considerations of an ICT’s novelty or mundane ness may help us understand if, or how, ICT use may operate as a cue that facilitates status assessments of users.

Though studies such as Marvin’s look at a single technology over time, there is little work examining the simultaneous use of novel and mundane ICTs in organizational contexts and the associated influences on the perceived statuses of workers. Analyzing the concurrent influence of novel and mundane ICT use on workers’ perceptions of their colleagues’ knowledge is important because numerous ICTs are present in contemporary organizations and use of one versus another may provide a different cue regarding a worker’s knowledge. As Pinch (2010) noted, “Old technologies live on alongside new ones. Often the old technologies become invisible, just part of the stuff of life while attention is focused on a subset of technologies deemed new and interesting” (p. 409). As individuals in organizations shift attention to newly available ICTs, the change in what is considered novel may also alter the significance of workers using an older ICT that may now be considered mundane.

This study examines the simultaneous use of mundane and novel communication technologies in organizational settings and the associated assessments of workers’ knowledge and abilities. Specifically, it presents a case study of perceptions of ICT use
in two public relations agencies, and the assessments of individuals associated with those perceptions. The following analysis addresses two research questions: (1) Does use of mundane and novel ICTs produce different status cues? and (2) What are the organizational consequences of the status cues produced by use of mundane and novel ICTs?

Methods

Study context

To explore the use of ICTs among knowledge workers, I drew on behavioral data collected through an ethnographic study of routine work at two public relations firms in the Midwestern United States, Alpha and Beta (pseudonyms for the two firms studied). I chose these firms as research sites for this study because although they both exhibited the knowledge intensity common to professional service firms (Von Nordenflycht, 2010), the organizations were very different from one another. Alpha was an international public relations agency with more than 3,000 employees distributed among more than 50 offices worldwide. It was a generalist organization that executed public relations—including media relations, crisis management, event planning, and public affairs—for clients in numerous industries. In contrast, Beta was a midsized public relations agency with a single office housing approximately 40 employees. Beta was a specialist firm; they focused on clients in only a few industries: health care, education, and nonprofit. Choosing two very different firms permitted me to examine the relationship of ICT use and assessments of workers’ knowledge across contexts.

Both firms provided employees with nearly identical ICTs: an e-mail client, productivity software (for word processing, spreadsheets, and presentations), and an instant messaging tool. At both organizations these applications were licensed from Microsoft. Despite differences in the structure and scope of the two firms, employees at Alpha and Beta conducted nearly identical work. Four main types of tasks made up the majority of work conducted in these two firms: (a) Media monitoring, which consisted of searching through media sources for the mention of content relevant to a client; (b) Media pitching, which involved direct interaction with members of the media to facilitate coverage of a client; (c) Constructing communication, which was the creation and maintenance of ongoing communication publications on behalf of the client; and (d) Strategic counsel, which included the identification of opportunities for clients to reach new audiences or bolster their reputation in specific forums.

Data collection

I conducted observations of and interviews with workers over a 3-month period at Alpha and during a separate 3-month period at Beta. At Alpha, I observed a team of eight account-level (nonmanagement) workers who served a single client, a large agricultural trade group. At Beta, I observed eight account-level staff members on two work teams: Four individuals facilitated communications for a medical school, and the other four conducted public relations efforts for a medical association. In
both firms, I observed each employee in three separate sessions: once for a full workday, and once each for a morning and afternoon to capture different periods of work. During observational data collection, I paid particular attention to (a) the ICTs used by individuals, (b) how individuals were assigned tasks, (c) judgments made about ICTs, and (d) judgments regarding the skill and knowledge of coworkers. Observations took place in the cubicle of the observed employee, with the researcher taking notes on a small laptop computer and following informants to all relevant meetings. Informants’ computer screens were visible during all observations allowing for the capture of online communication, as well as content that was created and not shared with others. In instances where the complete record of online exchanges could not be captured in situ (as was the case in serial e-mail conversations), I would ask the informant to share material later by e-mail or by printing documents, and this material was then reinserted into field notes. In total, I conducted 116 hours of observation at Alpha, which resulted in more than 420 pages of field notes. At Beta, I conducted 125 hours of observation, resulting in more than 400 pages of field notes.

In addition to observations, I interviewed each informant at two different times. The first interview was semistructured (Kvale, 1996) to establish a baseline of comparable data across respondents. Questions in the first interview elicited descriptions of primary job roles, common organizational practices, uses and perceptions of ICTs, and the specific skills and knowledge needed to complete organizational tasks. The second round of interviews asked individuals about the respective tasks engaged in during the period of observations. Particular attention was paid to interactions with and judgments of various ICTs.

Data analysis
Analyses of the observation and interview data proceeded in three iterative stages. These stages are summarized in Table 1 and described in detail below.

The first analytical step served to establish and verify the role of ICTs in the two observed firms. The goal was to develop a sense of both the pervasiveness of ICT use relative to other modes of communication, as well as the level of visibility of work practices. To evaluate ICT use I coded all discrete communicative acts, as well as the duration of those acts, including e-mail use, telephone calls, contributions to and retrievals from shared file repositories, instant message conversations, social media use, and face-to-face meetings. E-mail represented the most common form of communication, with individuals spending an average of more than 20% of their time composing, reading, or organizing material related to e-mails. Additionally, I counted the amount of time individuals were copresent with colleagues at work to inform the extent to which practices were conducted in isolation. The analysis confirmed that workers were invisible to colleagues for the majority of their time in the office, except through ICT-based communication. Individuals rarely observed colleagues working on tasks, and it was common for workers to go hours without any in-person interaction with another coworker.
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<td>Organized segments of text iteratively into like groups</td>
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<td>Observational and interview data</td>
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On the basis of the frequency and duration of ICT use observed, two mundane ICTs and two novel ICTs appeared clearly as the most and least commonly used communication technologies, and served as the focus for analysis. The mundane ICTs selected were e-mail and productivity software (Excel, Word, and PowerPoint); and the novel ICTs were social media (blogs, wikis, microblogs, and social networking sites) and production software (for graphic design or audio/visual editing). Other ICTs, such as telephone, instant messaging, and shared file repositories, were used often in both organizations but at a level that was neither as frequent or widespread as the labeled mundane ICTs, nor as rare as the recognized novel ICTs.

In the next stage of analysis, I examined the interview transcripts. Using a process of selective coding (Strauss & Corbin, 1998), I identified segments of text related to three issues: (a) use of ICTs, (b) knowledge needed to be successful in one’s role, and (c) assessments of the knowledge and abilities of coworkers. The process of coding relevant passages was broadly inclusive in order to capture comments that explicitly addressed the role of ICTs, as well as passages mentioning general attributes or
behaviors relevant to evaluations of work. Segments of text were organized iteratively into like themes in a process of theoretical coding (Glaser, 1998) and continued until saturation was reached and no new groups emerged. This process produced two forms of assessments of workers’ knowledge and abilities related to mundane ICT use, and a single assessment related to novel ICT use.

In the third stage of data analysis, I returned to the observational data to examine the consequences of assessments resulting from the respective ICT use. I identified indicators of group influence and participation for organizational members related to established knowledge and abilities. I then examined the differential presence of these behavioral indicators among workers of different perceived status levels. The specific categorization of assessments and consequences will be discussed further in the findings section. The remainder of the article describes the differential assessments of workers’ knowledge and abilities associated with mundane and novel ICT use, and the resultant consequences for organizational practices.

Findings

Assessments based on mundane ICT use
During interviews workers rarely discussed the use of e-mail and productivity software when recounting the types of knowledge required for colleagues to consider them as knowledgeable or skilled. Instead, individuals focused primarily on the products of mundane ICT use—press releases, media monitoring reports, and messaging documents. When asked whether mundane ICTs were important, individuals spoke of the consequences of poor mundane ICT use. Although workers conceded they spent a great deal of time on activities such as crafting e-mails or formatting documents, no employee noted differences among peers in technical skill or understanding of the features of the mundane ICTs. Instead of focusing on technical aspects of mundane ICTs, workers noted two things that use of these technologies indicated about an individual’s abilities: their attention to detail and the level of responsibility they could take on.

Assessments of workers’ attention to detail
As workers did not see the use of mundane ICTs as requiring unique technical skill, they believed typographic or formatting errors demonstrated that an individual was not exerting the effort appropriate for a task. As Informant 8 at Alpha, an assistant account executive, noted, “I think that having mistakes and not paying attention to detail are chinks in your armor.” Workers commented that proper use of mundane ICTs was a shared expectation among all organizational members. Mistakes using mundane technologies were not connected to an individual’s technical ability, but reflected their general aptitude and attitude as a worker. When asked about differences in skill among workers when completing a media monitoring report, a task involving mundane ICT use, Informant 3 at Beta, a senior account executive, commented, “I don’t think better or worse. I think thorough and not as thorough is the way to put it.” Informant 1 at Beta, an account supervisor and a teammate of Informant 3,
echoed the idea that differences in work were not related to technical ability: “I don’t think it’s a skill issue I just think it is, say, what stimulates you intellectually.”

The products of mundane ICT use offered the main source of insights regarding colleagues’ work because employees frequently completed tasks (online research, interaction with the media, etc.) in isolation. Informant 2 at Beta, an account executive, noted what mistakes in communications to colleagues revealed about fellow workers:

A lot of our business is about the details and making sure that the details are perfect. Especially in media relations, it’s all about communications and details. And if you can’t get the details right in an e-mail, it will reflect on your capabilities, maybe as a general communicator, your attention to detail, things like that.

It was assumed the mistakes a coworker committed when communicating with a mundane ICT were also occurring in other task contexts.

When discussing the importance of attention to detail, workers consistently mentioned mundane ICTs as the site where mistakes were produced and observed. Informant 1 expressed how communicating properly with mundane ICTs was seen as necessary for success in the organization: “We don’t throw curve balls at each other and try to come up with crazy ideas. We have to worry about Excel charts. So that’s not in everyone’s personality and you can usually tell, after a short period of time, whether this kind of structure is going to work for somebody.” Workers viewed the inability to effectively use mundane ICTs as a useful cue to assess if a group member paid attention to the details necessary to succeed in public relations.

Assessments of appropriate level of responsibility for workers
Mundane ICT use offered a barometer for judging an individual’s capability to take responsibility for important tasks or complete work with limited supervision. Because most assignments were completed on computers, managers had few opportunities to inspect a worker’s performance on an assignment until it was finished and distributed. One consequence of this autonomy was that team members often had the responsibility of communicating to clients on the organization’s behalf. As Informant 1 at Beta discussed, “What we send to our clients is a representation of how we’re representing them to reporters and the outside world and the quality of our work, and it has to do with e-mails, too, so there can’t be mistakes. I almost got fired because of mistakes in e-mails to clients.” Mistakes when using mundane ICTs for routine or minor tasks, such as internal communication, were seen as particularly reflective of how an individual would perform on other, more uncertain, assignments. As Informant 4 at Alpha, a senior account executive, commented, “It’s those little things that as soon as we start sort of letting go of spelling, and grammar, and formatting, then it’s sort of where does that stop?” These mistakes on routine work, which were made visible through mundane ICT use, signaled that a colleague would likely err on other, more significant, tasks.

Workers expressed awareness that everyday communication, such as e-mails and recurrent assignments, shaped the perceptions that colleagues had of their
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Employees treated even routine communications, such as daily internal media monitoring reports, with great care. They spent more time arranging content in these reports than creating the material the documents contained. Informant 8 at Alpha explained why workers were so worried about the appearance of basic documents, “A lot of it is if, and likely when, someone has an issue with it or a question, who was the point person on it? Who was accountable for it? And do I want to get e-mails from my boss being like, ‘What the heck is this document and why did you do it this way?’”

The association of mundane ICT use with perceptions of responsibility and attention to details indicated that workers made broad assessments of the abilities of fellow group members. Mistakes present in the use of mundane ICTs operated as a salient status cue, indicating a difference in knowledge and abilities between workers who exhibited errors and those who did not. When evaluating colleagues based on their mundane ICT use, individuals did not confine their assessments to the task or domain where errors occurred. Rather, individuals used mundane ICT use as a means to judge their peers’ general level of knowledge and abilities. Because activities involving mundane ICTs were seen as “basic processes” everyone knew, related failures reflected an inability to serve proficiently as a practitioner.

Assessments based on novel ICT use

Unlike the pervasive use of mundane ICTs, only a small set of individuals at Alpha and Beta were known by peers to use novel ICTs. At Alpha, team members only believed that two individuals actively used social media during work (observations revealed four actually did), and two used production software. At Beta, three employees were believed to use social media (observations revealed four) and one person used production software. Among workers, novel ICT use resulted in a single assessment: domain knowledge related to the ICT used.

Assessments of domain knowledge related to an ICT

Because social media and production software were not widely diffused in the organization, workers recognized the use of these ICTs as a departure from everyday practices. Workers commented that they directed questions regarding novel ICTs to colleagues they knew used these tools, regardless of the specific experience they demonstrated. Informant 1 at Beta shared her perspective on the knowledge divide between employees who used novel ICTs and those who did not: “The younger staff, they’ve definitely got their fingers more on the pulse of all the online stuff, and the social media and all that, so I turn to them for that. Like okay, so how do I get this Twitter thing going, and do I really want to? So they’re very helpful in that.”

The novelty of these ICTs meant individual use stood out relative to other workers, and therefore signaled a level of knowledge and ability with the respective ICTs. When compared to a lack of experience with social media, knowing a fellow worker had personally interacted with social media served as metacriteria to judge the knowledge a worker had regarding this ICT. Employees were not restricted from accessing social
media or displaying their experience, yet few did. Informant 5 at Beta, an account executive, discussed how she gained reputation as a “social media expert”: “I’m interested in the social media stuff, so I know some stuff about [social media], but not even a lot. But because I’m interested in the social media stuff I have people who come to me.” Knowledge of social media was not difficult to attain, but was valued. Observing use of social media influenced others’ assessments of a worker because social media use was new, and knowledge of the ICT was rare among group members.

Although proficiency with mundane ICTs was expected and ordinary among workers, knowledge of novel ICT use was something that only few possessed and a characteristic that could be used to assess differences among group members. Moreover, because little was known about novel ICTs perceived differences applied both to knowledge regarding the actual operation of the technology, and the ability to contribute to more abstract tasks such as determining how these ICTs should be incorporated into ongoing account work. If any client task involved a novel ICT in any way, it was thought to require the input of a worker who demonstrated use with the novel ICT, even if that worker did not regularly work on that client’s assignments. Informant 7 at Alpha, an account executive, described why she worked on projects for several different clients:

Last year I was on the GTP team, and we did a lot more planning. And they would give me those [production] jobs and they figured out that I had those skills. So, now even though I am on this other account whenever they have this type of work they will pull me in. Like later today I am supposed to work on a creative PDF project they have.

Perceived proficiency with novel ICTs provided individuals a broad access to tasks perceived as reliant on the respective novel ICT, even when the assignment involved communication about how to use the ICT instead of direct use by a worker.

Use of a novel ICT not only signaled that the person using it knew how to operate that ICT, but that the individual was also the most qualified to provide counsel regarding issues related to the ICT. This exchange with Informant 3 at Beta demonstrates the broad assessment of knowledge and ability given to those using novel ICTs:

Interviewer: Let’s say I’m really interested in social media, I feel like I know some stuff about it but I’m never given any assignments related to it. How would you know that I . . .

Informant 3: (Interrupting) If you’re talking about it and you do it in your own life then I would trust your judgment and let you do it for some of your clients.

In this case, Informant 3 felt that merely demonstrating interest and use of social media in a personal, nonorganizational context qualified someone to advise clients on social media use.

Whereas individuals found mundane ICT use useful for assessing the general level of fellow workers’ proficiency, use of novel ICTs signaled the possession of a specialist
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type of proficiency. Those using novel ICTs were viewed as having knowledge and abilities in domains related to the respective ICTs, such as advising clients on social media use. The differential use of the novel ICTs among workers, coupled with the inability to observe the specific processes associated with ICT use, meant that the mere awareness of novel ICT use by a coworker operated as a status cue that informed assessments of that person’s knowledge and abilities.

Consequences of assessments of knowledge and abilities for organizational practices

Consequences of mundane ICT use

Findings from interviews with workers revealed that mundane ICT use shaped general views about colleagues’ level of knowledge and abilities—helping answer the question about whether someone was a competent public relations practitioner. To determine whether these assessments had consequences for organizational practices, I examined the social interaction of team members recorded from observations. As discussed earlier, status characteristics theory posits that judgments of relative ability among workers result in differential participation and influence of individuals in organizational decision making (Berger et al., 1972). People viewed as capable in a relevant task domain should have greater influence in organizational decision making than those not viewed as similarly qualified. I coded the observational data to test if the assessments of a worker’s abilities had consequences for his or her participation in group activities and identified five forms of social interactions related to task influence and participation in decision making: (a) Being asked for advice, (b) Making a judgment, (c) Given deference, (d) Asked to participate, and (e) Asked to rework material (a reverse indicator). It is important to note that only interactions among team members were considered in the coding process. I excluded interactions between managers and team members to control for hierarchical differences. The analysis also excluded responses to questioning by the researcher so as to capture normal communication during work tasks. Table 2 provides examples for each of the five forms of social interactions observed.

When coding for consequences of assessments of knowledge, I had no awareness of whether the observed individual was considered higher or lower status by peers. After coding the observational data, I returned to the interview data to determine who was viewed as more or less capable in conducting general work tasks. Because, as mentioned earlier, individuals rarely explicitly mentioned differences in operational abilities with ICTs like e-mail or productivity software, coding focused on who was assessed as exhibiting superior skill with everyday communication using mundane ICTs—the distribution of daily reports or completion of routine tasks. Though an explicit causal link between mundane ICT use and assessments of capabilities is difficult (because of the assumption everyone should be proficient in using the ICTs) examining how people talked about everyday ICT use provides a useful proxy of this relationship. In interviews, individuals with higher general task ability were recognized as using ICTs in ways that showed they are “on top of things,” “getting things done,” “go-to,” and people one could “trust to get the job done.” The
Table 2 Examples of Influence Indicating Behaviors From Observations

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| Asked for Advice  | Informant 7: (Whispering across to other cubicle) Hey, where is the national pitch? I can’t find it
Informant 4: Don’t follow that link, I moved it. Go to 293, media materials 2010, client announcement
Informant 7: You rock |
| Makes Judgment    | Informant 2: I say [the folders should be] red
Informant 1: Really?
Informant 6: I think [the boss] wanted white
Informant 1: Well, I think red looks better. I am going to go with red. Is she going to be mad if they are not white?
Informant 6: You have to make the decision on this. Remember, she said you are in charge
Informant 1: Ok, I am going to go with red. I hope it is not controversial |
| Given Deference   | Informant 5: (e-mail to Informant 7) Do you want to send the client an email saying we will look into additional media outlets?
Informant 7: (reads e-mail, and immediately composes IM to Informant 5) Are they huge clients? I don’t know if I feel comfortable e-mailing them yet
Informant 5: You can if you want
(Informant 7 starts drafting e-mail to client, but pauses after one sentence and IMs Informant 5 again)
Informant 7: Are you sure it is okay for me to e-mail them, because I have never done it before
Informant 5: I think it is okay, but if you are more comfortable, you can just draft it for my review
Informant 7: Yeah, I am more comfortable with that, just I haven’t done it before |
| Asked to Participate | Informant 1: [Informant 3] asked me to update a roles and responsibilities chart for the event. Something internal that listed everything everyone on the team is doing. And I am updating it right now. From a logistics standpoint, I am doing the best I can, but would you be able to look it over.
Informant 2: Yeah, totally |
| Asked to Rework   | Informant 1: (Calls Informant 7) Let me ask you a question, where did you search when you were doing the Polio pickup, because I am finding some stuff that is not on there, like the Kansas City Star.com |
ability expressed through use of mundane ICTs was referred to as general proficiency. Individuals assessed as having general proficiency by multiple team members were labeled as higher status, and others were labeled lower status. Coding results were entered into a matrix indicating the volume of influence indicators performed by those with general proficiency and those lacking this status. Figure 1 shows the numbers in graphical form.

Figure 1 reveals that across both Alpha and Beta, those with general proficiency exercised greater influence in team decision making and task completion. One possible conclusion from these findings is that individuals perceived to be more adept at tasks reliant on mundane ICTs were also more likely to be judged and treated by coworkers as being of higher status. An equally valid interpretation is that errors using these ICTs signaled that a worker lacked the basic knowledge, ability, or disposition needed to be a proficient practitioner and he or she was marginalized from making important decisions. Mundane technology use did not reveal higher-status workers as possessing any esoteric knowledge or expertise, but did reveal lower-status workers as lacking the general proficiency needed by practitioners.

Consequences of novel ICT use
Alpha and Beta operated on a client billing structure; work groups earned revenue based on the amount of time their members dedicated to client tasks. If it was determined that a task required a capability the group did not possess, the team would have to enlist an individual from outside the group and would sacrifice the revenue associated with that time. Informant 1 at Beta lamented the frequent need to enlist production specialists from outside the group, saying “I can’t afford to keep bringing them in on projects.” Knowledge related to novel ICTs was valued because it meant that accounts did not have to bring in specialists to assist with tasks, and billing remained with existing team members.

Given the reluctance of teams to enlist outside members, having one’s services requested by another group represented a form of participation and influence not afforded to all workers. Therefore, to assess the potential consequences of novel ICT use, I coded for all instances when an individual was asked to work with an outside
team, as well as the reason for the request. I followed the same blind coding process used earlier in examining the consequences of mundane ICT use. However, in this case the identified ability was with reference to a specialized knowledge domain. The attributed specialist proficiency could have been related to a novel ICT or an organizational task (e.g., media pitching). I also separated individuals judged as having generalist proficiency but not assessed as having specialist proficiency, as well as those receiving no assessments of proficiency. Table 3 shows the number of times individuals with specialist proficiency at Alpha and Beta were asked to complete work for a team aside from their own.

The data show that individuals perceived to have specialist proficiency in tasks not related to novel ICT use were rarely afforded the opportunity to work on other teams. This was likely because organizational members may not have perceived other forms of proficiency, though specialized, as novel, valuable, or relevant to tasks. For example, although media relations was a needed skill, other teams already had competence in that area, so workers with that ability did not gain additional influence. Alternatively, those perceived as proficient with novel ICTs were asked to contribute to other teams far more frequently than coworkers lacking this specialist proficiency. Perceived proficiency with novel ICTs had consequences for task assignments because it was both relatively rare and valued in the organizations.

**Discussion**

The findings demonstrate that use of different forms of ICTs—mundane and novel—provided different communicative cues regarding the knowledge and abilities
<table>
<thead>
<tr>
<th>Area of Perceived Proficiency</th>
<th>Company/Informant</th>
<th>Number of Times Asked To Work for Another Team</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social Media</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Alpha</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informant 2</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Informant 5</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><em>Beta</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informant 4</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Informant 5</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Informant 6</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><strong>Production Software</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Alpha</em></td>
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<td></td>
</tr>
<tr>
<td>Informant 2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Informant 7</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><em>Beta</em></td>
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<td></td>
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<tr>
<td>Informant 3</td>
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<td>1</td>
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<tr>
<td><strong>Media Pitching</strong></td>
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<td><em>Alpha</em></td>
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<tr>
<td>Informant 5</td>
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<td>1</td>
</tr>
<tr>
<td>Informant 8</td>
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<td>0</td>
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<td><em>Beta</em></td>
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<td>Informant 3</td>
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<td>1</td>
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<td><strong>Constructing Communication</strong></td>
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</tr>
<tr>
<td><em>Alpha</em></td>
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<td></td>
</tr>
<tr>
<td>Informant 1</td>
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<td>1</td>
</tr>
<tr>
<td>Informant 6</td>
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<tr>
<td><em>Beta</em></td>
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<td></td>
</tr>
<tr>
<td>N.A.</td>
<td></td>
<td>N.A.</td>
</tr>
<tr>
<td><strong>General Proficiency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Alpha</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informant 3</td>
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<td>0</td>
</tr>
<tr>
<td><em>Beta</em></td>
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<td></td>
</tr>
<tr>
<td>Informant 1</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td><strong>No Recognized Proficiency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Alpha</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informant 4</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td><em>Beta</em></td>
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<tr>
<td>Informant 2</td>
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<tr>
<td>Informant 7</td>
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<td>0</td>
</tr>
<tr>
<td>Informant 8</td>
<td></td>
<td>0</td>
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</table>
possessed by the workers studied, and produced different status influences among group members. Not surprisingly, competence in using mundane ICTs did not reveal any exclusive proficiency among workers, as it was expected that everyone could easily operate these ICTs. However, mistakes with mundane ICTs were seen as a cue indicating the broader abilities and expected behaviors of workers, specifically one’s attention to detail and ability to take on important task responsibilities. Alternatively, use of social media or production software, which were novel and not used regularly by workers, served as cues that a worker had knowledge and abilities specifically related to the respective ICTs. Using a novel ICT qualified a worker as proficient in operation, discussion, and consultation related to that ICT, and therefore conferred on these individuals a status not attributed to all employees. Not using a novel ICT had no apparent negative consequence beyond one lacking that form of specialist proficiency.

These findings extend theory regarding the relationship between ICT use and status characteristics by suggesting when and how ICT use may produce differential evaluations of workers’ knowledge. In line with status characteristics theory, ICT use served as a status cue when it led observers to conclude that some workers were more or less proficient in task completion than others. For widely adopted ICTs, mere use did not signal differential knowledge, but mistakes made visible through the use of mundane ICTs provided a signal regarding which workers could be trusted with tasks (higher status) and which workers could not (lower status). This indicates that when ICTs are widely distributed and become mundane they are likely to be perceived as passive carriers of information and communication. In other words, the use of a mundane technology reveals status cues of a user’s knowledge through the ICT. Conversely, with novel ICTs, knowledge differences were perceived between those who used the technology and therefore appeared knowledgeable related to the ICTs (higher status), and those who did not (lower status). When a technology is used or understood by few individuals, status cues of a user’s knowledge may be communicated merely with the use of the respective technology.

The differential status processes associated with mundane and novel ICTs indicate the need for theories of organizational communication that address concurrent ICT use by workers (Reinsch et al., 2008; Stephens, 2007; Watson-Manheim & Bélanger, 2007). Specifically, the recognition that ICTs in organizations may facilitate distinct, but interdependent, communicative cues means that novelty, or familiarity, needs to be considered in examining the sociomaterial consequences of ICT use (Herring, 2004). As Baym (2009) commented, “Within a continued focus on the mundane, we should examine how people simultaneously integrate multiple media into their daily communicative experience” (p. 721). Research cannot validly represent the effects of ICT use, or the relative importance of specific features of technologies in organizations, without considering the context of ICT use (Fulk & Gould, 2009). Although the features of mundane ICTs may not change over time, how those features matter may change. Explaining the interdependent relationship between specific ICTs and organizational practices necessitates considering the unique
historical, cultural, and structural characteristics of organizations, and the ICTs within them (Orlikowski & Barley, 2001).

More broadly, this study indicates two ways that communicative signals conveyed through ICT use may aid reliable assessments of individuals in organizations. First, research indicates that in the absence of objective criteria to judge one’s knowledge or abilities, the time, interest, and effort an individual spends in a pursuit may serve as a signal of his or her proficiency in the respective domain (Feldman & March, 1981). Similarly, in instances where a novel ICT enters an organization, and there is uncertainty regarding how to evaluate who is knowledgeable in related domains, simply identifying which individuals dedicate time or interest to the technology may be an effective heuristic for identifying qualified workers. Alternatively, finding that someone is abnormally preoccupied with mundane technologies may be a signal of concern regarding the capabilities of that worker. The second implication is related to the idea that communication via ICTs may be an unreliable source of information about individuals because of the low cost of producing and communicating social signals (Donath, in press). The ease of curating signals in mediated contexts may create the expectation that individuals will present themselves in a positive way (Gibbs, Ellison, & Heino, 2006). This study indicates a potential paradox regarding the communication of signals of competence in mediated environments: As signaling through ICTs becomes easier, it may decrease the value of positive self-presentations, but make poor self-presentations particularly disadvantageous. In this study, mistakes with mundane ICTs were particularly useful for making broad, negative attributions of workers because individuals were perceived to have control over the communication they provided, and no technical obstacles existed to alter self-presentations.

The analysis presented here only briefly touches on the implications of ongoing mundane ICT use in organizations, its relation to the use of novel ICTs, and the significance of workers’ ICT use for assessments of proficiency among organizational members. Future work is necessary to (a) more directly address the interdependence of assessments of individual knowledge based on ICT use, (b) explore the coevolution of assessments of knowledge and ICT use over time, and (c) investigate how assessments of knowledge based on individual novel ICT use result in broader organizational knowledge regarding the respective ICT. The hope is that this work will encourage communication scholars to see the role of mundane ICTs in organizational practices and recognize the ways that, with a different analytical lens, the ordinary can be extraordinary.

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References


Technology Use as a Status Cue

J. W. Treem


