Socialization in Use of Communication Technology for Organizational Knowledge and Capability

JoAnn M. Brooks

University of Michigan
USA
jbrooks@umich.edu

Abstract

Substantial differences can be found in the ways that communication technologies are used across organizations; yet within each organizational context, participants arrive at common or shared expectations about how specific forms of communication technology are to be used. In this paper I focus on the socialization process that organizational newcomers go through in learning the use of communication technology-in-practice (Orlikowski 2000). I examine empirical examples derived from participant observation within the research and development division of a large high-tech organization. I find that affect, including collective affect and moral emotions, is important as it experienced by organizational members, as they move from new employee to seasoned old-timer around their use of communication technology. Implications for organizational knowledge and capabilities are identified.

Keywords: communication technology-in-practice; socialization; emotion.

Suggested track: Practice-based perspectives on knowledge and learning

Introduction

Substantial differences can be found in the ways that communication technologies are used across organizations (Yates & Orlikowski, 1992; Orlikowski & Yates 1994). Yet within each organizational context, participants arrive at common or shared expectations about how specific forms of communication technology are to be used, and how to interpret the meaning of informational "content" within that context.

How do people arrive at their shared expectations around the use of communication technology? And how do they know they can rely on each other to share similar expectations around such matters? These are important questions, answers to which are often grey-boxed in other practice-based approaches, under terms such as "norms" (e.g. Orlikowski, 2000) or “social learning” (e.g Brown & Duguid, 2000). That such shared expectations do not not necessarily develop in obvious or effortless ways is no surprise to any new member of an organization. Whether the situation involves getting familiar with an online calendaring system, or learning when it’s appropriate to use presentation software versus written reports, communication technology is a social technology: its usefulness depends upon tacit, consensual agreement between people about how certain types of artifacts will be used for communication across space and/or time.

In this paper I focus on the process that organizational newcomers go through a socialization process around the use of the communication technology. Socialization is a term originating in sociology, refering to how a society brings new members into its culture,[1] and I find it a useful term for studying this topic. It has been criticized by some for regarding the new member as a passive object of the socializing culture; however I do not mean to abnegate individual agency. Rather I see socialization as a relational phenomenon, with established groups influencing/guiding new members in their learning, via moral emotions. And I highlight the sense of the term used by Nonaka and Takeuchi (1995), emphasizing co-present, experiential learning (creation of tacit knowledge). I suggest that learning new practices may result from co-present association in particular, since otherwise, there would be infinite regress.

Understanding such socialization enables moving away from viewing technology as instrument or media, and closer to the perspective of technology-in-practice (Orlikowski, 2000). This view entails focusing on patterns of social engagement associated with communication technologies as core forms of organizational knowledge and capabilities,[2] and closely examining participants’ knowledge of shared expectations and practices around use of technology. This paper represents an attempt to unpack some of those practices associated with a simple form of communication technology, to gain insight into insight into the micro-mechanisms of the actual practices themselves, and into their significance for organizational knowledge and capabilities.

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[1] *This definition is based in part on work by Pascale, who defines socialization as “the systematic means by which firms bring new members into their culture” (cited in Pfeffer 1997:118).*

[2] *Here I mean capabilities in the sense of meta-capabilities, as identified by Collis (1994).*

Methodological Approach

To do this, I draw on examples derived from participant observation within the research and development (R&D) division of a large high-tech organization, called "National Technology."[3] Data was gathered during the normal course of work activity during 2004-2005. I take as a given that communication technology works only if/when participants are in agreement about its use, and examine how they achieve that agreement in cases where it doesn't already exist. And I focus on what occurs when organizational newcomers and regular members come into contact with organizational oldtimers and managers.

All data referenced here was all collected within context of reforming organization's R&D competencies. The examples include adding new researcher expertise, and finalizing a new area of research competency.

I will present three brief, *empirical* vignettes, all illustrating the use of communication technology for the articulation of previously tacit (R&D) knowledge –

1. New Employee
2. "Push" Motivation
3. "Pull" Motivation

Each is a case not only of individual and community engagement, but also reflects some aspects of how knowledge is made explicit, or codified, so that it can be transferred, and capability can be replicated. All are written in the first person, reflecting my use of the phenomenological method to study the individual experience of such practices.

Vignette: New Employee

no date

Because he knew I'm interested in studying social phenomena at National Technology, Ron would occasionally mention things he thinks might be of interest for my research. One day, he told me about how a new employee, who had a PhD and several years research experience, went into her first meeting with the chief engineers to talk about her research (which was assumed by all to include pitching it to them for funding). Although she had prepared for the meeting, she did not bring any presentation slides with her. Without saying a word about this omission, the engineers listened politely

[3] National Technology and all other names associated with it are pseudonyms.

and asked questions, but didn't really take her pitch seriously. Ron was chuckling about it, noting that this new employee would learn soon enough that at National Technology, being prepared means having a deck of slides.

This vignette illustrates the naiveté of a new member in an organization who is not familiar with "the way things are done around here." She had a PhD, and a solid track record as a researcher, yet was new to National Technology, and did not yet know that in this organization, being properly "prepared" for a meeting with senior managers includes bringing a set of slides that detail the main points one wants to make. No one told her ahead of time to prepare a deck; and she apparently saw no need or reason to ask. All that had been mentioned when setting up the meeting was "to talk about her research with the Chief Engineers", there was no explicit mention of slides or a deck.

In this vignette, her not knowing and not being told about the importance of preparing a deck, indicate that her membership relationships were not yet fully established. It seems easy enough for an outsider to understand the new employee's position: given that the meeting was co-present, why would communication technology be necessary? What seems more surprising, was that the engineers assumed that there was no reason to indicate that communication technology was to expected. This even though if she had known to bring a set of slides, it is unlikely that she would have put any different "information" or "content" on them than she had prepared to deliver verbally. However, the engineers' opinion of how "serious" she was would have been substantially different.

Nevertheless, it was clear to me by the way Ron related the incident, that had she gone into the meeting with a set of slides, she would have been much more likely to come out of the meeting with research funding. As it was, she was probably simply encouraged to come back after further developing her ideas.

This vignette is a base case – without using the "appropriate" form of technology-in-practice, the new employee's desired results of communication (i.e. research funding) were not achieved. Next time, she would be further motivated to fit in, and most likely ask someone in a possible mentoring position, how to better prepare.

What is it then, that lead the tenured employees to take for granted a certain form of technology-in-practice to the extent that no one even mentions it, and how does a new employee learn? The next couple of vignettes explore answers to these questions. Both are grounded in the history of an adhoc community of subject matter experts (SME's) organizing to become a legitimate organizational entity. Members of the community want to attain organizational recognition and visibility and budgetary support for their work, through establishing themselves as a Subject Matter Group (SMG). Conversely, members of the company's Engineering Board want to be able to draw on the exertise of the SME's, while ensuring that those SME's are responding in ways consistent with the good of the company. For this, they hold the members of the group to a set of constraints established for formalized Subject Matter Groups (SMG's), which entail formulating a persuasive articulation of the value of the subject matter expertise for the company as a whole.

Vignette: "Push" Motivation

050104

Today, at the Pre-SMG meeting, we were working together well as a group, and this was a notable accomplishment. We had started with one small adhoc group, merged with another small group, and then differentiated our group from another pre-existing Subject Matter Group, and were now going strong.

As we talked about how to prepare for our presentation before the Engineering Board (EB) the following week, one point of agreement was that in describing our group and who was involved, we should indicate that we "play nicely together." …there seemed to be a consensus, via nodding of heads, some low voice assents, a few giggles about the phrase itself, along with a general absence of any visible or verbal disagreement, that our success in this regard would be of concern to members of the Engineering Board.

As we discussed what to include in the deck [of slides] for our presentation to the EB, someone suggested that the slides for each of the component areas should be "hyperlinked" to the master list of component areas; again there were some "uh-huh"s, a low key "yeah" or two, a nodding of heads, and general display of agreement about this approach.

I realized that since I was the one who would be preparing the presentation, I would be expected to do the hyperlinking. I felt a sinking feeling in my gut, since I had never hyperlinked slides before, wasn't even positive what that meant, and had a history of bad experiences with the presentation software whenever I attempted anything unfamiliar with it. But I had seen what must have been "hyperlinks" in a previous presentation the month before, and so knew that it could be done. I dreaded learning how, but knew I would have to do it.

The next day, I reluctantly sat down to start working on the presentation slides. I stared at the screen with my slide containing the list of component areas, and knew I had to move forward. I reminded myself of everyone sitting around the table, the feeling of about how far we had come with our joint effort on the TAT, and how important to all of us it was to appear to have our act together when going before the EB. And how, as lead on this project, having managed to catalyze a group of very good contributors which now was "playing nicely together." I simply could not in good conscience face them if I did not get these slides hyperlinked. I was certain that the group members *would just be in disbelief, and/or think that I really didn't care about my job. And I worried too, that members of the Engineering Board would think I was unprofessional. My leadership position could be seriously at risk over something as petty as whether the slides were hyperlinked. It seemed silly really, but not in the context of an organization where everyone takes their job and the corporate mission seriously, and hyperlinking was considered appropriate within this context, and ostensibly a simple thing to do. sigh. Staring again at the screen, I typed "hyperlink" into the "Help" field at the top of screen. To my amazement, the help text appeared comprehensibly clear and reassuring enough that I was able to follow the instructions with only a few missteps. I ended up creating working hyperlinks, and feeling empowered about having learned a new skill and saved my professional career from the brink of public humiliation.*

As indicated above, I had a real aversion to learning due to previous frustrations with this and other software applications from the same manufacturer. Why then, did I feel I "had" to learn how to link slides for our presentation? What was going on for me with thinking I would not be able to face the group "in good conscience" if I hadn't used this specific technology-in-practice? and with having "saved my professional career from the brink of public humiliation" by having done so? There are at least two reasons.

Firstly, we had established a cohesive group ("play well together") and unified sense of purpose. My organizational kinship with author(ing) side of this technology-in-practice led to feeling the will of the group as I weighed my alternatives, trying to figure out what to do. This was not so much a rational reasoning process, but a gut knowing how to be consistent, how to fit in. Where did this come from? It came from my experience of the very real people (image *and feeling* of sitting around the table that afternoon); my established history of relationships with people in the group, and *with group as a whole*, evidenced by the "uh-huh" and nodding heads. It was not one or two specific people who influenced me to learn how to link slides, but the group as a whole – we had built the group together, and it's working well, ostensibly to bring us all collective benefit, and I did not want to risk the good feelings and results we had accomplished so far. They had invested their trust in me and my leadership ability – for me to not follow through would be a breach of that trust.

And secondly, National Technology is a technical, engineering company where learning new technological skills is *de rigueur*: "prescribed or required by fasion, etiquette or custom: PROPER." (*Merriam Webster's Collegiate Dictionary*, Tenth Edition).

I call both of these reasons "Push Motivation" – to convey that motivation comes as if from behind, or the past. I had no idea what would have been expected, but the group behind me clearly wanted this linked slides form of technology-in-practice. And I already had established positive relations with these people as a group. I knew that the form of technology-in-practice that I used would reflect on all of us, and that I was getting this guidance as an individual from the group because I had established relations with members individually, with the group, and was representing all of them to the Engineering Board. It was remembering all of them sitting there, and the feeling of being part of, even the acknowledged leader of that group that pushed me through my reluctance. Push here refers to my fear or avoidance of the anticipated shame, embarrassment, and/or humiliation that I would have felt, had I not enacted the technology-in-practice.

Vignette: "Pull" Motivation

20050126

During our next Pre-SMG meeting, Dick mentioned that it would be especially good if we could get a mention at the upcoming, annual proposers' meeting; it would help our overall status to get more proposers interested in our Subject Matter group. He suggested that I get in touch with Don Larramee, the VP running the meeting. Others chimed in with agreement; and I said okay, I would.

As the day of the proposers' meeting approached, I wondered how to proceed. I tried calling Dick to ask for guidance, but he wasn't in. I was most accustomed to communicating with Don Larramee through email, except when we had a formally scheduled meeting or a chance encounter. I never thought about picking up the phone to call him, or dropping by his office [what a funny thought – it makes me laugh!]

I knew therefore that I had to use email, but somehow email alone seemed a bit sparse – unsupported – to the extent that it might not be taken seriously. I realized then that the NTech way is of course [of course!] to use slides. Not that I would prepare a whole deck (too long!), but "a few slides" –I'd heard people mention that phrase numerous times in various contexts – and I could attach those few slides to the email.

The more I thought about other similar situations, the more I realized that indeed, "a few slides" was the most appropriate way to communicate. It would convey that our group was 'serious' – that we had done our preparation – that we were in the groove with everyone else. And not just incidentally, the practice of providing just "a few slides" is also a way of offering one's work such that it can easily be combined with the work of others, even modified/adapted as the receiver feels appropriate.[4]

I pulled some slides together from the ones we'd used in the past, made a few quick edits, and sent them off to Don with a short email. The next day I found the following email in my inbox:

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[4] *There are, of course, common practices for managing social arrangements around such modifications.*

MessageFrom: Donald R. Larramee [DRL@nationaltechnology.com]
Sent: Thursday, January 27, 2005 8:57 AM
To: 'JoAnn M. Brooks'
Subject: RE: Pre-SME Group info for Proposers' Conference January 27

Yes, I will mention it. I have the perfect place. But I don't have a lot of time so I can't go into details. I think I will refer them to you or reference this pres if we have the right repository set up.

I heaved a sigh of relief; I knew I'd communicated appropriately – the matter-of-fact tone of Don's message indicated that my email and slides were within bounds.

This case was similar to the previous one in that there was group consensus, resulting in a collective push from the group for me to communicate; and I agreed to do so. But in this case, there was no direct guidance given or available about what form to use for the communication.

My issue then was identifying the best form for this communication. The *audience* of the communication in this case was distant – both logistically, and hierarchically (up!) – someone I did not have a lot of experience communicating with, and someone I did not want to appear out of step with. I was representing my group, to a higher and broader level of authority – Vice President Don Larramee – who we expected to play a determining role in the future fate of our fledgling group.

My goal/intent was to identify a form of communication that fit with organizational expectations – creating no ripples, just going along smoothly with what's already existing, so the form would not be noticed apart from the "content" of the message. I was limited by not already knowing what that would be, and by not being able to ask Dick. Nor did I want to risk asking too many other people – that would make it appear that I did not know what I was doing, and I would therefore lose face, as Goffman (1967) describes. There were only a few people I would have felt comfortable asking, most of them wouldn't know anyway. Not knowing, and not having anyone else to ask, I knew I had to try to anticipate what would be appropriate.

I thought then, that I wanted to communicate with Don in a way that would be taken seriously, so that I could make the point. If I communicated in an "appropriate" way, using a common form (technology-in-practice), his awareness would focus on my communicative "content" rather than its "form", which is where I wanted it to be. If I did not, any unfamiliarities of form would obtrude and whatever attention he paid to my message would be colored by his discomfort at an unexpected [out of place] form, possibly triggering doubt about my qualifications to send the message in the first place. Here again too, is the issue of whether the communicator is perceived as "serious." "Serious" in this case equates to "that we had done our preparation – that we were in the groove with everyone else", and other adjectival qualifiers such as "relating to a matter of importance", "not joking or trifling; in earnest" and "deeply interested; devoted" (all from *Merriam Webster's Collegiate Dictionary*, Tenth Edition). Unaccustomed as I was to communicating with a vice president - especially on behalf of an entire group – I felt an intense pressure to come across as "serious" in this way, lest I be subjected to ridicule or embarrassment simply for not knowing the appropriate technology-in-practice to use.

As I considered the variety of options for communicating, drawing from previous and hypothetical experiences, each elicted a feeling or emotion:

- email alone felt "too sparse"
- phone – I wouldn't even consider it
- stopping by Don's office – so out of range that I laughed out loud!
- "a few slides" – emerged as the "just right" option.

How were these judgments being made? Where did these feelings come from?? They must have come from my prior experiences working at National Technology. Perhaps most striking of these was my outloud giggle while writing the field notes – that the thought of my just dropping by Don Larramee's office seemed so ridiculous that I could only just laugh about it, without even being able to explain why it seemed so ludicrous, other than the tautological reference to the difference in our positions within the organizational hierarchy(!) And heaving the sigh of relief on seeing that my choice was appropriate within context was another display of emotion – this one of comfort and release.

This time I could not get guidance from the people I already had comfortable relations established with [push], but needed to project forward to a relatively unfamiliar audience [pull]. As an individual working to fit in with the larger collective group and organization, I was therefore being guided by moral emotions both from push motivation (in this case simply to express, to communicate), and from pull (anticipating what form of technology-in-practice would be expected).

Discussion

In these vignettes, participants are learning through direct engagement with others within the organization, what is expected around use of the communication-technology-in-practice. Such socialization then, emphasizes "membership" in a big way, as suggested by Lave and Wenger (1991; Wenger, 1998). Social relations and "fitting in" are of key importance. Agency is reflected not just in the focal individual wanting to fit in, but in others giving explicit and affording implicit indications of what's appropriate, what they expect. Much of the teaching is accomplished in non-verbal, non-explicit ways; a kind of implicit social "pressure" is conveyed through bodily presence and vocalization by those in the know or in the majority.

Some of the emotions that specifically relate to other participants, e.g. ridicule, humiliation, etc. are known as *moral emotions* – "those emotions that are linked to the interests or welfare either of society as a whole or at least of persons other than the judge or agent" (Haidt, 2003, p. 853). Such moral emotions seem to figure especially prominently in motivating participants to comply with common organizational technologies-in-practice.

Affect then, including collective affect and moral emotions, seems quite important as it experienced by organizational members, as they move from new employee to seasoned old-timer. Co-present social engagements in organizations are infused with the same kinds of affect normally experienced in more personal relationships. Wanting to fit in with the group is an individual motivation; but feelings of motivation/pressure, involving very real economic and social sanctions, communicated non-verbally often simply through presence are more relational. The result is more of a diffuse affective milieu, generated through positive, co-present interaction, as described by Randall Collins in his discussion of "emotional energy" (1990). Significantly, this "feeling" is not (and cannot be) transmitted directly via communication technology; it must occur directly between people at both ends or else be inscribed and interpreted by people who are already in sync with each other.

This observation also bears some commonality with Rafaeli and Vilnai-Yavetz's (2004) work on emotion as a connection of artifacts and organizations, specifically with respect to interpreting the instrumentality of the artifact.

Furthermore, once organizational members have learned what is an organizationally appropriate technology-in-practice, it becomes almost "unthinkable" for them to not comply. Seasoned employees enact technologies-in-practice relatively automatically, unthinkingly; such social habits are hard to notice, much less break (Connorton 1989) because they combine the force of habit with the force of moral emotion. And those who do not use technologies-in-practice appropriately, are often simply not taken seriously.

And these things are doubly important, not only because of the community/practice aspects of knowledge, but because of the relevance of communication (and communication technology) for the development of other capabilities.

One significant limitation of this work is that the vignette examples were obviously flavored by my personality and current position at the company. Other people, and myself at other times, would be more competitive, or controlling, or other feeling. But in virtually all cases, there is still the social relation and its affective aspect, whatever the valence or strength. And people's choices around communication technologies-in-practice are going to be heavily influenced by these.

Implications

There are several implications of this work.

First, it highlights the crucial importance of social engagement around developing knowledge of technologies-in-practice as organizational capability for communication. This strengthens earlier insights provided by Nonaka and Takeuchi (1995) about the critical importance of co-present socialization in organizational knowledge creation.

This work also highlights the importance of affect, especially moral emotions, in encouraging the development of certain technologies-in-practice. It supports and extends other practice-based approaches by highlighting role of moral emotion/affect as driver, affecting judgement.

Furthermore, this work has potentially profound, if somewhat indirect, implications for the more general study of organizational knowledge and capabilities. Since many other organizational capabilities depend upon organizational knowledge and competence in the use of communication technology, the results of this research suggest that the primacy of social engagement and moral emotions may well undergird those other forms of organizational knowledge and capability, and their importance should be reconsidered.

Finally, this work makes a case for the importance of finding new ways of studying social engagement around information and communication technology as an important basis of organizational knowledge and capabilities. The phenomenological approach here has yielded one set of results; and other approaches may bring other improvements.

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