How can people and computers be connected so that-collectively-they act more intelligently than any individuals, groups, or computers have ever done before?

A COMPREHENSIVE FRAMEWORK FOR CONSIDERING PRACTICES AND PROCESSES

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A comprehensive framework for considering practices and processes

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Abstract

We proposed four categories for a set of activities that integrate both practices and processes: practice, recorded practice, endorsed process, and mandated process. We considered their usefulness for explaining phenomena, including change over time. We then applied them to a case in which a company that had a large incumbent business launched a new business. We observed that when the mandated process has limitations in fulfilling a need, a move to a less formal process or practice occurred, allowing for experimentation. When the mandated process proved effective, people used the activities in their daily work. This case study suggests that formal processes are cost efficient and effective only if the problem that must be solved is relatively stable and predictable. When an environmental change occurs, people start to invent new ad hoc ways to deal with it. These ad hoc activities might become practices if they prove useful. By using this more articulated continuum, researchers can better understand the dimensions of the tension between informality and formality.

1. INTRODUCTION

Considerable research has examined the activities through which organizations accomplish work—in general and around information technology (IT). One set of literature has categorized and analyzed various *processes* or sets of activities in organizations (Malone et al., 2003). This literature typically focuses on sequences of organizational activities that have been managerially defined, formalized, and documented. Another set of literature focuses on work *practices* or 'the situated recurrent activities of human agents" (Orlikowski, 2002). This literature examines repeated everyday activities of individual employees—what people *actually do* in work—and generally approaches them as emergent and often informal activities.

In general, the first school tends to focus on processes as structured activities that reduce the cost of coordination and communication, while the second school focuses more on the improvisational and potentially generative role of practices that emerge in everyday activities. John Seely Brown and Paul Duguid have suggested that a useful tension "exists between how

companies generate knowledge in practice versus how they implement it through process" (Brown & Duguid, 2001). In particular, they note that formalized, repetitive *processes* yield efficiency, but that they may hamper a rapid response to environmental changes such as market needs or the emergence of competitors. New ideas and approaches to problems, they argue, often arise from small communities of *practice*, whose members share "a common set of habits, customs, priorities and approaches that both produce new insights and enable them to flow with little attention to how they might be transferred to outsiders" (p. 93).

In this paper, we propose a continuum for thinking about both formalized processes and emergent practices. We also look at various movements among the four types of activities that we identify on this continuum. We argue that this framework offers a useful way of thinking about organizational activities. To illustrate this, we apply these categories to a case where a large company with entrenched businesses launched a different type of business. We show how the framework helps us understand the various work activities around this new business over a four-year period, and how managers could use it to consider when and how they might want to change activity types to gain efficiency or flexibility.

2.   PROCESS, PRACTICE, AND A NEW THEORETICAL FRAMEWORK
        INCORPORATING BOTH

Before introducing the new framework, we briefly examine the existing literature on process and practice, and on formality and informality.

2.1 Literature on Processes and Practices

One group of scholars has focused on business processes, especially around IT. This literature explicitly defines and catalogues the activities making up such processes, on levels from the most general to increasingly specialized. They have provided tools such as Malone and colleagues' Process Handbook to help organizations understand their own processes and consider alternatives to them. Process researchers tend not to differentiate between practices and processes. Because each can be divided into a set of activities, they reason that there is no fundamental difference between process and practice. They believe that people may perform a set of activities repeatedly and similarly whether or not they are conscious of it. In other words, they focus not on how difficult it is to describe a set of activities in detail but rather on whether the activities can be described. Identifying differences in the specificity of the process can yield a continuum or 'specificity frontier' (Bernstein, 2000).

Various researchers have suggested different ways of representing processes, including flow charts and data-flow diagrams (e.g., Yourdon, 1989), state transition diagrams (e.g.Winograd & Flores, 1986), Petri nets (e.g., Peterson, 1977), grammars (e.g., Pentland et al., 1994), and goal-based models (e.g., Yu, 1992). Others have focussed on how to reengineer processes for improved efficiency (e.g. Hammer & Champy, 1993, Scheer, 1994). In most of this research, scholars define a process as a set of explicitly defined, repeated activities. Some of the grammar research recognizes less explicit definition and considers more of a continuum including semi-repeated activities with ambiguous boundaries (e.g. Pentland et al., 1994).

The practice perspective focuses on what people actually *do* in their situated work. The term "situated" is important to this perspective. As Jean Lave, one of the major figures involved in bringing this perspective into modern social sciences (Lave, 1988; Lave and Wenger, 1991; Chaiklin and Lave, 1993), has noted, "Theories of situated everyday practice insist that persons

acting and the social world of activity cannot be separated…" (Lave, 1993 [in Chaiklin and Lave, 1993], pp. 4-5). In recent years, this perspective has been brought to bear on research on practices around information technologies in organizations (e.g., Orlikowski, 2002; Vaast & Walsham, 2005; Schultze and Orlikowski, 2004; Boudreau & Robey, 2005). Schultze and Orlikowski (2004) explain the perspective as follows:

Practices can be understood as clusters of recurrent human activity informed by shared institutional meanings (Schatzki et al. 2001). Practices are dynamic and ongoing, and engaged in by people as part of the structuring processes through which organizations and networks are constituted over time (Giddens 1984).

The focus in this research has often been on how practices emerge and change over time; some practices are recognized to be tacit and not conducive to being documented. Although both processes and practices can be described as sets of activities, few studies have examined the differences and similarities between the two. After a brief discussion of formality and informality, we propose a continuum of activities separated into four categories, two of which we label as processes and two as practices.

2.2 Formality and Informality

Because formality, we will argue, is one of the dimensions of practices and processes, it is important to consider briefly what we mean by the term. On the most general level, Stinchcombe (2001) argues that formality "[has] to do with abstraction *so as to preserve what is essential in the substance"* (p. 3). Based on this understanding, the more abstracted from the situation something is, the more formal it may be considered. Because much of what we discuss in this paper relates to communicative and interactive activities, it may be more useful to look at

formal and informal *communication*. The most formal communication is what McPhee and Poole (2001) term "formal structural communication," metacommunication that authoritatively spells out the organizational structure and that typically takes written or recorded form. This definition, by implication, associates formality with recorded form.

Fish et al. (1992) identify another important aspect of formality by defining formal communication as going "through organizational channels following the hierarchy of an organization's structure" (p. 37). Thus more formal communication follows and draws on organizational roles and hierarchy to acquire its authority. In contrast, according to Kraut et al. (1990, p. 5) "[i]nformal communication is a loosely defined concept and is often treated as the residual category in organizational theory," that which is not directly related to hierarchical structure. They also argue that informality is, in its essence, characterized by a "lack of pre-specification." Thus pre-specification may also be seen as an attribute of formal communication.

The approach to communicative formality and informality taken by Kraut et al. (1990) is a useful one. They approach formality as a continuum. On the formal end is planned (or pre-specified), managed, structured, and linguistically formal communication that follows and reflects organizational hierarchy, with participants communicating in their formal organizational roles. Informal communication, at the opposite end of the continuum, is unplanned, emergent, and interactive, and may be linguistically informal. Participants in informal communication are not necessarily acting authoritatively in their formal roles. This view of formality and informality will be useful in our framework.

3. THE FRAMEWORK

Figure 1 shows the four categories of activity sets proposed in this paper—practice, recorded practice, endorsed process, and mandated process—and the movements among them. We define the categories below, using some illustrative examples.
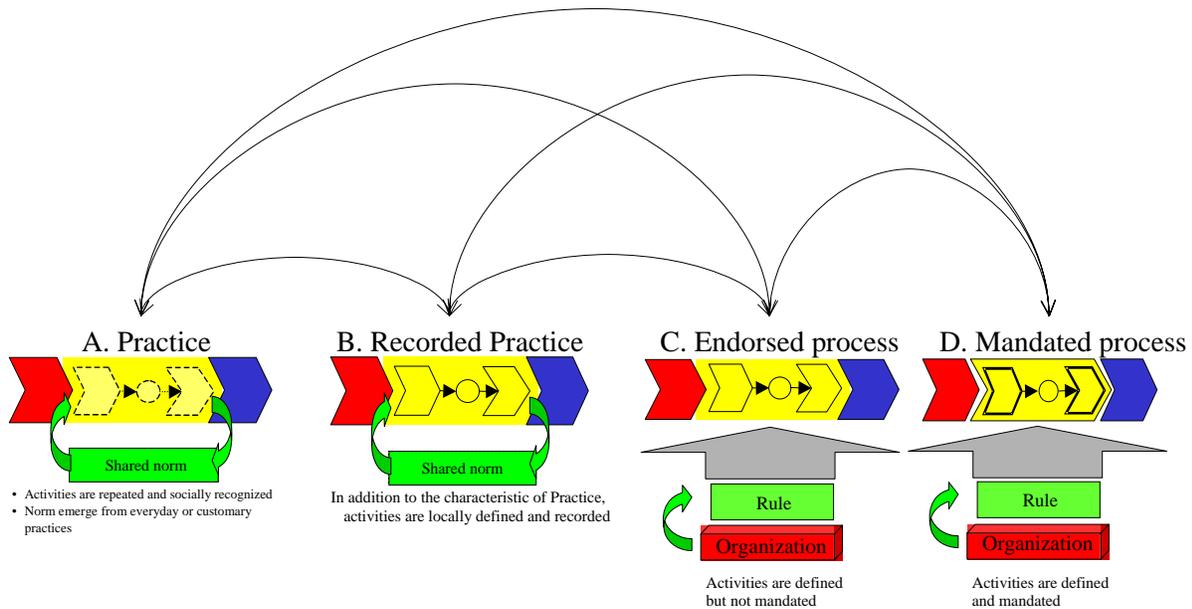

Figure 1. Continuum of practices and processes

3.1 Four categories of activity

A. Practice

We define a *practice* as a set of activities that are both *repeated* and *socially recognized*, whether tacitly or explicitly. A practice is not a set of activities that a person does only once or accidentally. If an activity is not repeated, we call it an ad-hoc activity. We do not consider these ad hoc activities in the framework, although every practice had to occur for a first time, so all practices evolve from ad hoc activities at some point. To be socially recognized, activities must incorporate a norm shared by a group of people. At this far left point of the continuum, practices

are not recorded; they are just recognized by observers and actors. Such practices are very much in line with the practice-based literature.

For example, in Boston there is a practice that when one car merges from a lane, as many cars as possible try to sneak behind the first. A slang saying cropped up around this – "three for free." In NYC the practice of alternate merge is the generally accepted practice. In neither case is there a written record of the local practice, although residents are familiar with the social expectations. In Tokyo, people who would like to ride on a train typically create two lines (one on the right and one on the left side of the doors) and wait for people to exit before boarding. In Osaka, however, people rush onto the train just after the doors open, even if someone is getting off.

Both the driving and queuing examples are clearly locally situated in particular communities.

B. Recorded practice

If the above characteristics of a practice are explicitly recorded, we call them *recorded practices*. The most distinctive characteristic of a recorded practice is the codification and persistence of a set of activities, which can be learned by a new group/community member who has not yet been socialized into group norms and practices. As new members do something according to the recorded practice, they may gradually come to understand the norm that defined the practice itself.

For example, in traffic there might be roadway signs that show new routes, such as "NYC traffic bear right," signaling to drivers unfamiliar with an area which way to go. Another example of recorded practices is an unofficial guide. At MIT there is a student-produced

handbook called "How to get around MIT," also known as "HowToGAMIT" that details MIT's culture, community, and environs.

MIT also has a culture about clever, benign, and "ethical" pranks or practical jokes known as "hacks" in their community (http://hacks.mit.edu/). Students at MIT define a shared "hacker ethic" as follows: a hack must "be safe"; "not damage anything"; "not damage anyone physically, mentally or emotionally"; and "be funny, at least to most of the people who experience it" (cited from the url: http://hacks.mit.edu/Hacks/misc/ethics.html). Because this ethic is not mandated by any authority at MIT, there is no way of enforcing this code, but anything that directly contradicts it will probably not be considered a "hack" by most of the MIT community.

As these cases show, a community or a group of people may cultivate or promote a shared norm or culture more effectively by recording it. The practice becomes slightly more formal when it is recorded. Indeed, it could be argued that the party recording the practice either acted in or took on an organizational role, though not necessarily an authoritative or hierarchical one.

C. Endorsed process

Once a set of activities is not just recorded but organizationally approved as appropriate or efficient, we designate them as a process rather than a practice. If such activities are endorsed but not mandated by an organization, we call them *endorsed processes*. 'Endorsing' a process requires a level of authority so an informal group of people (like students or drivers) cannot 'endorse' a process. Endorsement would be left to those in a position of formal authority. In an endorsed process, if a member chooses to do the process, they are expected to do it in the

prescribed manner. If they don't, they sometimes suffer indirect consequences. In addition to endorsing or prescribing a process, an organization might also discourage but not forbid a process—in essence a negative endorsement.

For example, a professional society such as the American Medical Association endorses practices. The AMA might describe 'approved' surgical processes but individual doctors are not required to use those processes. Of course, if they don't follow the process, they are at a greater risk of malpractice suits. Other examples are standards bodies such as the International Organization for Standards (ISO), which endorses multiple standards within a particular space (e.g. paper sizes) but doesn't require any actors to adopt them. In the traffic arena, there are recommended following distances or methods of passing that are endorsed (for example, by Driver's Education classes) but not legally mandated on the road.

The key difference between a recorded practice and an endorsed process is that an authority explicitly approves the recorded practice. An organization has officially endorsed it as a good or recommended process.

D. Mandated process

If activities are mandated by an organization, with organizational penalties for non-compliance, we call them *mandated processes*. Such sets of activities are similar to endorsed processes except that they are *formally required* rather than simply approved, and there are direct organizational sanctions for non-compliance. In addition to mandating a process, an organization can similarly proscribe or prohibit certain processes—a negative mandate.

A typical area for mandated processes is governmental law. For example, all traffic laws are mandated. If someone is caught breaking the law, pre-specified penalties (e.g., tickets,

suspended license, etc.) may be imposed. Within corporations, activities such as wearing

identification badges in certain secure buildings may be required. On construction sites, safety

processes are often mandated, and ignoring them may result in penalties including dismissal.

Mandated processes, unlike endorsed processes, are *enforced* by some authority, so non-

compliance results in penalties.

3.2 Migration among different categories

Sets of activities may migrate among the four categories. Theoretically we can consider

twelve possible patterns of migration from one category to another. By considering movements

we can examine how expectations or assumptions of an organization or members of an

organization change over time. Movement from left to right—informal to formal—on the

continuum is often seen as desirable and efficient in organizations. But in some cases, movement

in the opposite direction—from formal to less formal—may be more effective.

Movement towards a more formal state

The migration from practice to recorded practice occurs when an individual documents a

practice for future users, thus codifying the practice. If a corporation sets up a group to determine

and endorse "best practices" in an area, it might jump a set of activities directly from practice to

endorsed process. If the group decides to mandate the set of activities, the practice being

evaluated would move directly from practice to mandated process. Similarly, a recorded practice

could be mandated, skipping the endorsed process category.

For example, carpools might start as an informal practice, when individuals want to

reduce fuel costs or do less harm to the environment. When someone records these carpools as

bulletin board postings, they become a recorded practice. At some point a company might want to endorse this practice and provide access to vans for established carpools or special parking areas. High Occupancy Vehicle lanes are a governmental way of endorsing this process and mandating that those not carpooling refrain from using the lanes during peak travel times.

The migration from a recorded practice to an endorsed or mandated process is fairly typical of companies or governments or other organizations with inherent authority (a prerequisite for a process being endorsed or mandated). Some subset of the organization may have a recorded practice that a higher level of the organization sees as desirable and thus endorses it, or even sees as deserving of a mandate. In both cases, it is made more formal. Quality circles or suggestion boxes are one method by which recorded practices in a company are gathered and may eventually become endorsed or even mandated.

This migration from less formal to more formal also typically occurs with policies seen as less desirable. A practice may be officially discouraged as a (negatively) endorsed process, and then made illegal by mandating that it *not* be followed. This movement right on the continuum in Figure 1 is the goal of many organizational consultants, such as practitioners of Business Process Reengineering or advocates of best practices. Such movement towards formality may also be viewed as negative—as a loss of flexibility that may make future adaptation more difficult, as Brown & Duguid note (2001).

Movement to a less formal state

Movement to the left on the continuum—from a more formal to a less formal status— sometimes occurs around the repeal of laws. The ignoring of 'blue laws' (e.g., against selling alcohol on Sunday), which were relevant in centuries past but not any longer, may be seen as a

case of an organization not enforcing a mandated process, thus allowing other practices to occur and effectively reducing it to an endorsed, rather than mandated, process.

Similarly, a dress code in a company might initially be endorsed and then loosened over time. "Casual Fridays" originally emerged as a practice by which individuals dressed more casually at the end of the week, then became a recorded practice or even an endorsed process in some companies, possibly replacing an endorsed process of wearing suits or formal business attire to work. In other cases, the dress code might not be recorded and exist as just a matter of socially recognized practice. A new practice of informal attire on Fridays may emerge gradually to supersede the old practice on that one day of the week.

If a recorded practice no longer matches the situation, a changed practice may also emerge. For example, recorded directions may no longer apply due to new construction or traffic pattern changes. Some may view such movement left on the continuum in Figure 1 as a loosening or deterioration of standards. Others may view it as replacing rigidity with flexibility to adapt to conditions.

4. The Case

We illustrate the framework described above using a case study in a multi-national company with multiple lines of business ("the Company") that introduced a new service ("the Service") that was unlike its traditional products and services. The Company uses relatively formal communication channels for its traditional offerings. Their websites contain official information, and bulletin board systems are endorsed as the appropriate medium for asking questions.

Over a four year period the company used a number of communication channels, including three mailing lists, two call centers, conferences, and a series of newsposters intended to be posted on a wall. Table 1 below shows the various channels and their levels of formality, which can be defined in terms of whether the information in each channel was official or not. In an information channel, people can give information based on their personal opinions. If the information an individual gives is inaccurate, he or she is expected to apologize for the mistake. On the other hand, in a formal channel, the individual must give information that represents an organization. If the information is inaccurate, the individual must apologize for the mistake as a representative of the organization. No one blames the person who gave the information as an individual.

Table 1. Basic profile of each communication channel.

	Type of participants/ info	Formality	Number of users	Average monthly usage
Community Mailing List (CList)	Any interested party	Informal	1612	52
Keyperson Mailing List (KList)	Key users	Formal	481	27
Project Mailing List (PList)	Project teams	Informal	20-50(depending on the fiscal year)	67
Pre-implementation Call Center (Pre-CC)	Pre-implementation support	Formal	4000 (sales force)	374
Post-implementation Call Center (Post-CC)	Post-implementation support	Formal	4000(sales force)	1710
Conferences (CONF)	Key users	Formal	100-200	1/6
Newsposter (POSTER)	General info	Formal	distributed to CList and KList	2/3

The Community Mailing List is an informal list open to anyone with an interest in the Service. Its members are about 75% sales force personnel and 25% engineers or members of the

Service Development Department. This channel carries a wide variety of content including formal announcements and informal discussions of the technical capabilities of the Service, techniques for selling it, and competitors and trends. The Keyperson Mailing List is a more formal list used to communicate only official messages to representative individuals (key users), who were selected by each sales subsidiary company. The Project Mailing List was informally created by some members of Sales who launched a cross-Sales project around selling the Service in order to collaborate with each other across geographically distributed Sales offices. The members of the Project Mailing List worked on specific proposals or topics of limited duration. The Pre-implementation Call Center is a formal general information telephone contact center provided by the Service Development Department. Many topic areas are allowed. The staff of the Call Center must formally handle any questions or requests provided by the Sales force. The Post-implementation Call Center, also formally provided by the Service Development Department, is geared towards answering technical questions arising from problems at a customer site. The staff of the Call Center must formally handle any questions or requests provided by the Sales force. The twice yearly official Conferences provide a way of showcasing new features of the pre released service and allowing face-to-face contact between the Service Development Department and sales key users and among key users. The Newsposter is officially published about twice a quarter and contains stories showing sample implementations, features and trends. This was distributed as an electronic file. In most subsidiary companies, they put it on the wall of their physical office.

5. Application of our framework to the case

     We analyzed the communication used in each channel by coding the messages in CList, by interviewing participants and by administering a questionnaire to members of CList, as described elsewhere (Takahashi et al., 2008). While we found that a whole range of practices existed in each channel, there were some clear tendencies. The channel's typical use shaped the type of practice/process most often found in the channel. The community mailing list and project mailing list tended to be informal and the other channels formal.

5.1 Practices/Processes of using the communication channels

     By examining the use of the various communication channels, we can identify examples of practices, recorded practices, endorsed processes, and mandated processes. This section (5.1) provides examples of how the communication channels are used. The next section (5.2) addresses examples of sales or use practices or processes that developed as a result of using the channels.

Practices

     On the Community Mailing List many different practices developed over time. These included various methods by which the Sales force communicated among themselves, as well as methods of communication between the Sales force and the Service Development Department. While the mailing list was organizationally endorsed, there were no recorded practices about how to use the list (e.g., FAQs). A range of communication practices developed on this list, including the following:

● Sales asking the Service developers questions about technical capabilities

- Service Developers responding by explaining technical capabilities

- Sales asking each other for examples of how the Service is used in particular industries

- Sales responding by describing such examples

- Sales asking each other for advice on how to sell to a particular customer

- Sales responding to requests for advice

- Sales asking for particular applications of a feature of the Service

- Sales suggesting novel uses for the Service

- Sales suggesting further improvements to the Service

- Service Development Dept. posting suggested applications for the Service

- Sales sharing information about competitors or trends in the marketplace

The shared norm on the list was one of openness and informality. For example, participants were able to ask a wide variety of questions, such as inquiring about the weather in a city to which they planned to travel. The informality was also shown in the language used in the questions, which sometimes included informal slang. The utility of the list became widely known among the Sales force by word of mouth and email. Eventually, coworkers or management suggested that members of their Sales force who might sell the service enroll on the Community Mailing List, making list use an endorsed process. The non-traditional nature of the Service led to a perceived need among the Sales force to communicate with each other. For traditional products, there was a well-known established training program and an endorsed process for learning how to sell them. For this novel Service, the same depth of knowledge did not exist in the Company and the Sales and the Service Development Dept. needed to help each other out as they moved down the learning curve. As indicated in the above list of practices on the CList, Sales also tended to use it to lobby for support by proposing a new use or feature and getting

support from other Salespeople in similar circumstances. The other two mailing lists, the KList and PList also had very few recorded practices regarding their use. The Company endorsed use of the mailing lists, and had the usual mandated processes associated with using any mailing list such as prohibiting vulgarity.

Recorded practices

The Service Development Department (SDD) used the CList to document certain differences in how they operated in supporting the Service as opposed to more traditional offerings of the Company. These new ways of supporting the Service were initially recorded informally by members of the SDD on the CList. They documented a few practices regarding how to use the CList such as not using real customer names when asking for advice.

Sales started to conduct an experiment assessing the performance of the VPN (Virtual Private Network) with the Service and proposed that Sales should refer to the results in the proposal of a VOIP (Voice over Internet Protocol) application with the Service [CList 360] (3/6/03). Indeed, Sales conducted a number of experiments by themselves about the performance and compatibility of the Service in customer sites' actual environments even though this kind of experiment should traditionally be conducted by the quality assurance department or other formal organization based on the. Sales eventually created a document as a proposal to their customers and informally shared it among them. At this point, it had become a recorded practice.

Endorsed processes

Sales pointed out the desirability of a policy for participation on the CList by referring to the policy for other existing mailing lists in the Company [CList 108](10/30/02), and also

suggested that the logging of the CList would be useful to new participants who could search

past discussions [CList 242] (12/16/02). Based on these requests and questions, the SSD created

a policy and started to archive the CList on their homepage. While the number of participants on

the CList rapidly increased, the number of postings to the CList and the variety of information

also increased. The SDD added communication channels to handle information appropriately and

efficiently from their viewpoint. Sales had to consider which communication channel to use for

asking questions or informing the SDD of problems or issues. This led to a lot of confusion for

the participants regarding which communication channel to use depending on the type of

information, since they didn't know the SDD's intent for the various channels. Eventually, the

SDD announced a guideline on their homepage for how to use the various communication

channels based on the types of information (7/29/03).

Creating and using Newsposters are examples of endorsed processes. The content

included in the newsposter was carefully screened by management according to an authorized

process. The newsposter was then sent electronically to all branches with the explicit expectation

that it be printed out and posted on the wall.

The endorsed processes of using the pre- and post-implementation Call Centers were

meant to complement the informal practices of asking questions via the Community Mailing List.

Other processes endorsed by the Service Development Department included using a

feature/function database to suggest new features.

Mandated processes

Aside from the general Company policies on use of communication media in the

company—such as prohibiting vulgarity or sharing of trade secrets—the only attempt to mandate

a process in the Service implementation was to require the use of the Call Centers to ask any technical questions. As shown below, this was a failed effort.

5.2 Practices and processes resulting from use of the communication channels

In addition to the practices and processes involved in using the various communication channels, additional practices and processes developed as a result of Sales force and Sales Development Department use of the channels. There were many practices and processes developed by the SDD or Sales that did not use these channels such as typical sales procedures or how to operate the Service as designed. In this section we list some examples of practices or processes that developed as a result of using the channels and its evolution.

From practice to recorded practice to endorsed process

The Sales force used the CList to share their 'experiments' on how to use the Service at various types of customer sites, thereby recording their practices so other Salespeople could then use the results of these experiments at similar customer sites. Since the Service was new, leveraging the thousands in the Sales force provided a much wider array of documented new customer uses than the SDD could provide on its own. In the third year of the new product, Post-CC, a central sales support group, was established to fill a need for support in selling the service, the use of which created an endorsed process.

From ad hoc activity to recorded practice to endorsed process

Because another company's product provided similar capabilities to those of the Service, the Sales force initially considered the other company to be a competitor. The Service also

provided many additional capabilities not provided by the other company's product, however, and one Salesperson figured out how to link the Service with the other company's offering to provide a combination that provided much more to the customer than either did alone. The Salesperson posted a description of his ad hoc activity on the CList and after much discussion the SDD proposed a cross-selling opportunity to the other company. The other company also started cross-selling the Service to leverage their own Sales. This new relationship, which began through an ad hoc activity that was then recorded, led to an endorsed process.

Another example of user-suggested innovation (von Hippel, 1986) was in the establishment of a logo and catchy phrase associated with the security features of the Service. The discussion on the CList resulted in the incorporation of this logo into the official Service offering.

As various channels were established, the SDD tried to demonstrate which channels should be used for which purposes. They published messages to the various lists (including the CList itself) and through their website. They were attempting to change practices around the new Service to an endorsed process. For example, the number of queries asking how to sell the Service posted on the CList was significantly increased in 2003 due to the increased popularity of the Service in the Company. The SDD thought that they could systematically provide answers to the questions about how to sell the Service because they had gathered knowledge about a lot of sales cases from Sales. The SDD created the Pre-implementation Call Center and announced that Sales should contact them through the Pre-CC in order to get sales information. The approach was used to decrease of the number of messages related to sales information posted on CList.

From recorded practice to mandated process

One project used the Project platform to determine the utility of establishing a support organization for training in the Company's central sales department. After discussion in this project, the organization was proposed and accepted by senior management. The establishment of a formal organization with defined responsibilities is a mandated process.

The Service Development Department provided an accounting and registration system intended to automate certain backend procedures that Sales did repeatedly as identified on the Community Mailing List, creating another mandated process from recorded practices.

5.3 Failed movement to a more formal state

In addition to successfully implemented practices/processes, there were a few examples of failed movements - attempts to move from one type of practice/process to a new desired one that failed:

A failed movement to an endorsed process

The Service could be linked to the internet services provided by hotel chains. This required knowing the specific settings for each hotel chain. The Sales force starting sharing these settings on the CList and the SDD eventually committed to establish a shared repository (an endorsed process). The SDD decided later that this repository could be seen by some hotels negatively and stopped hosting the repository. A motivated Salesperson then started hosting the list of settings. Since it didn't have Company endorsement, this became a recorded practice.

A failed movement to a mandated process

After a time of endorsing the Call Centers, the SDD decided to mandate the use of the Call Centers for all questions. While the Sales force used the Call Centers extensively for technical questions, they also traded information about trends or competitors on the CList and wanted to continue to use it for that purpose. They also used the CList to confirm the answers they received from the CCs. They also shared their answers on the list. The CCs stayed as an endorsed but not mandated process due to the refusal of the Sales force to give up the CList.

6. DISCUSSION

As Brown and Duguid (2001) pointed out, there is a tension between informality and formality, where informal practices can yield innovation and formal processes can create efficiency and effectiveness. We found this to be true in the case we explored. The non-traditional nature of the Service meant that there were fewer existing formal processes that were applicable to it, and the informality of the CList allowed for much sharing of thoughts and new ideas. We found that both becoming *more* formal and becoming *less* formal were present and desirable as shown in section 5.

The company's recognition that the Service was not the same as their traditional offerings led to the emergence of the informal CList rather than the formal processes that existed for the incumbent businesses. This move from formal to informal was appropriate in the face of a changed environment. The trust that was built in the informal structure allowed for ideas to be generated that would not have been introduced through formal channels. This allowed for a smooth transition to a more formal state for many practices. Thus movement both ways on the continuum occurred to good effect.

Some adherents of the practice school see a move towards more formal processes as endangering creativity and knowledge generation. In contrast, some adherents of the process school see a move towards more formal processes as a desirable improvement in efficiency. This case illustrates that movement in both directions was desirable in different situations. Because the internal factors and external environments change over time, the desirable mix of practices and processes may also change over time.

We found that while the binary approach of informal practice and formal process that may be derived from reading the process and practice literature was useful, the additional categories we used for classification provided additional insights. Indeed, the boundary between each of the four categories on the continuum highlighted their different strengths and weaknesses.

Practice versus Recorded Practice: Recording a practice allows it to be shared with others at different locations. The recording on CList of various Sales practices around the Service, for example, allowed others to adopt and adapt these practices. The recording of a practice also enables new members to 'get up to speed' more quickly. The CList's lack of an FAQ resulted in a number of questions being repeatedly asked or ideas repeatedly proposed.

Recorded Practice versus Endorsed Process: A recorded practice is member generated and retains the informality of the group. When a process is endorsed, it loses some of the informality due to the authority's involvement. When sharing the hotel settings repository became an endorsed process, it carried the additional baggage of Company endorsement which meant being more sensitive to customers' perceived slights. Returning to an informal, albeit recorded, practice meant the customers did not perceive the same Company backing of any potentially negative slights against them.

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Endorsed Process versus Mandatory Process: While a mandated process might be most efficient, if it doesn't have grass roots support there might be an insurrection or refusal to use the process. The less restrictive endorsement allows for more discretion among the employees, which might allow for other, more effective, approaches to be used in some instances. This was true in the use of the Call Centers, where they were seen as a valuable additional source for the sales force but there was resistance to using them exclusively for asking questions.

We found that the four categories were useful in our understanding of this case. We also found examples of successful migrations in both directions among them. While we explored the categories and the movement among them to illustrate our theory, it may be useful in future empirical studies to pay more attention to understanding the situations in which certain movements are advisable.

7.   CONCLUSION

We proposed four categories for a set of activities that integrate both practices and processes. We considered their usefulness for explaining phenomena, including change over time. We then applied them to a case in which a company that had a large incumbent business launched a new business. We observed that when the mandated process has limitations in fulfilling a need, a move to a less formal process or practice occurred, allowing for experimentation. When the mandated process proved effective, people used the activities in their daily work.

This case study suggests that formal processes are cost efficient and effective only if the problem that must be solved is relatively stable and predictable. When an environmental change occurs, people start to invent new ad hoc ways to deal with it. These ad hoc activities might

become practices if they prove useful. By using this more articulated continuum, researchers can better understand the dimensions of the tension between informality and formality as highlighted by Brown and Duguid.

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