

The interplay between work practices and prescription: a key issue for organizational resilience

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Abstract. The paper deals with the interplay between work practices, which mainly assure the flexibility of a socio-technical system, and prescriptions, through which management tries to achieve robustness. To explore the interplay between prescriptions and work practices and its consequences on the organization's resilience, a conceptual model of work practice evolution is proposed. The model is conceived as an intermediary between models of individual human cognition and action at work, and models of organizational behaviour. It considers work practices as the product of acting in context developed through repetition, regular contextual distinction, and subsequent reflections on action. This triple process ensures adaptability and evolution, sustaining the local ecology of work. The discussion on the interplay between practice and official formalizations presents a number of typical mechanisms leading either to the decline of practice evolution and development –and the consequent organizational arteriosclerosis–, or the unreflective evolution –and the consequent erosion of organizational robustness. In the conclusion, we advocate that the dialectic between practice and official formalizations is not only inevitable but also vital for organizational resilience.

1. INTRODUCTION

Resilience Engineering aims to enhance the ability of a complex socio-technical system to adapt or absorb disturbance, disruption and change (Woods & Hollnagel 2006). One of the main prerequisites to achieve this goal is the ability to create processes that are robust as well as flexible. The present paper deals with the organizational aspects of resilience, and more specifically with the interplay between work practices, which mainly assure the flexibility of a socio-technical system, and prescriptions, through which management tries to achieve robustness.

There is an inherent antinomy between prescription and practice. Prescription is a notion in the realm of logic and declarative discourse. It is ultimately a description of what needs to be done and how, conveying in this way the intentions of the supervising entities of an organization to subordinate levels. As such prescription is the product of abstract reflections informed both from past experience and logic, aimed at helping to attain the supervising entities' declared objectives. On the other hand, practice is a notion in the realm of embodied thinking-acting. It designates the "customary" ways of doing things intra- or inter-personally. As such it is the product of acting in context developed through repetition, regular contextual distinction, and historical evolution aimed at sustaining the local ecology of work.

Any prescription, no matter how detailed or generally applicable, is subject to interpretation. In a field of practice, people will receive the top-down prescription as a space of constraints and affordances, but will devise their own original understanding of what, how and why. This understanding will be moderated by prescription, but will also be influenced by peoples' accumulated experience, motivational stance, peer accountability, day to day management decisions (Woods and Cook 2002). The development and continuous evolution of this understanding is considered vital for intelligent adapting coping.

To explore the interplay between prescription and practice and its consequences on the organization's resilience, a conceptual model of work practice evolution is proposed. The model is conceived as an intermediary between models of individual human cognition and action at work, and models of organizational behaviour. It considers work practices as evolving through confrontations between action in context, reflections on action and external prescriptions. We advocate that this dialectic is not only inevitable but also vital for organizational resilience.

2. THE REPETITIONS - DISTINCTIONS - DESCRIPTIONS (RDD) MODEL

Work communities progressively familiarize with and substantiate their environment through regular repetitions of action in differing situations. They stabilize their ways of acting through material and conceptual artifacts and assimilate them as routine practices (Giddens 1984).

Repetition as a characteristic of practice is never strictly repetitive (Bernstein 1996, Béguin, & Clot 2004). Every time something is re-enacted some development takes place. This may simply involve stabilizing action or action coordination, stabilizing perception of classes of situations, terminology for such situations, communication patterns among members, specific uses of artifacts, etc. Thus, in the context of human action, repetition is not to be understood as strict recurrence of an event but as re-enactment in analogous situations. Repetition as re-enactment is not a-temporal, it is reinforced accumulatively and as such it progressively gives shape and durability to practice.

However the development of work practices does not only rely on repetition. Work communities have the unique ability to change their ways of acting in the face of unexpected external events and subsequently generate new distinctions. Through cycles of breakdowns in routine practice and subsequent reflection-in-action, people in work communities distinguish new situations, enrich and share their experience and progressively enhance or modify their already assimilated practices. But even in the absence of external triggers, work communities, as they progressively assimilate their routine practices, tend to experience their activity in differing ways. In other words, people may step upon their assimilated practices and produce new distinctions in what seemed already familiar. In fact, the ever-developing nature of lived experience, which is evidenced by the inescapable intrinsic variability in behavior, is a fundamental property of human conduct and possibly of all intelligent behavior.

2.1 The Repetitions Distinctions double loop

Practice development can be modeled by a basic double loop as illustrated in Figure 1. The left loop represents the reinforcement of routine practices through repetition while the right loop represents their challenging when distinguishing new types of situation and/or new ways to act, through reflection-in-action. According to the model, once a new type of situation / way to act is identified by the community through the distinctions loop, it progressively enters into the repetitions loop enriching or substituting parts of already routine practices. This model is certainly a simplification as it does not acknowledge the processes through which preexistent personal experiences and cultural beliefs, diverging personal intentions, antagonistic objectives shape practices.

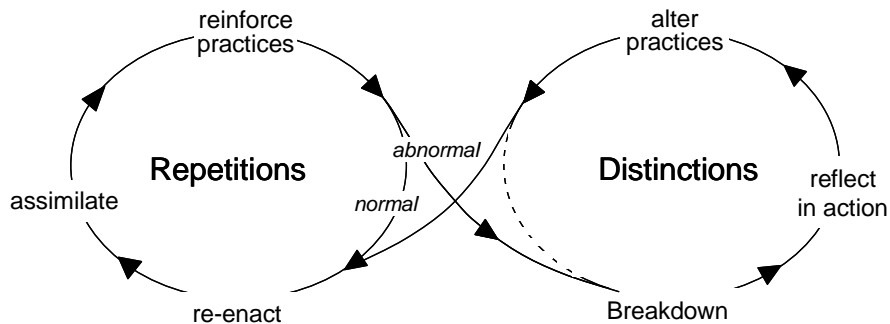


Figure 1: The basic double loop of practice evolution

The repetitions loop is not to be understood as the blind conformity to an established set of procedures. Practices are more like a constellation of alternative ways of doing, which are profoundly embedded in their physical setting and in the minds and bodies of the people that enact them. As such they resist detailed description even by practitioners themselves. Their existence is manifested mostly in action and evidenced, for example, by the effortless and successful changes in courses of action to cope with differing situations. In other words, the core invariant in repetitions of practice, is not the recurrence of the same events as seen by an external observer; rather, it is a kind of shared or convergent understanding of how, who and when to act, that seems to be assimilated by a specific community in a specific setting.

In the same way, the distinctions loop should not be understood as a deliberate effort to see things differently by means of disengaged reflection. Since it takes place in the actual doing it functions more like a discovery than an invention. Indifferently if it emerges as a result of external triggers or internal variability, the distinctions loop is highly situated; it aims at coping with the situation at hand, with the here and now, and although reflective it is highly dependent on the particularities of the moment. Reflection-in-action is so deeply grounded on the here and now that it may fail to recognize even evident, for the detached observer, inefficiencies in coping. In fact, if no breakdowns in the courses of action occur, it is doubtful that such inefficiencies will ever be distinguished by the community in action as opportunities for change. Nevertheless, through such cycles of situated distinctions, work communities may progressively alter their practices through practical intelligibility and minute adaptations to their routine activity and material surroundings without deliberately trying to do so.

This double loop model underlines the dynamic equilibrium between stability and change in work practices. It dictates that the sustainability of work practices in an open environment is not some kind of a static property but the result of continuous re-enactment, i.e. of embodied engagement and reflection-in-action. The repetitions loop acts as an attractor for stability preserving cognitive economy, while the distinctions loop acts as an attractor for change ensuring adaptability and to some degree evolution. However, as stated briefly above, the situated character of the distinctions loop may also account for the all too common observation of persistent inefficiencies in real work settings, such as problematic equipment that continue to be used, inefficient methods, redundant communication patterns, etc. Work communities live with them. They progressively discover workarounds through whatever at hand. One by one such inefficiencies gradually may become part of the ordinary, i.e. they get absorbed by regularity. Precisely because they are assimilated as ordinary, they become in a sense concealed from day to day reflection-in-action. Therefore, the R-D model thus far can only account for a slow “Darwinistic” evolution of practices that follows the lived but unrecognized law of “survival of the fittest”.

2.2 The Descriptions Loop

Members of work communities are not only found acting in the present. They are also observers of themselves and others, and as a result they will at times place their identity outside of their evolving work experience and reflect upon it (Schön 1983). In this way they produce interpretations of “what they do” and express them as descriptions through language and other communicable typologies (graphs, charts etc.). However, descriptions produced by members of a community for their proper practices through discourse are not and cannot be a complete deciphering of their practice. They are “rationalized accounts” of “what they do” aimed to support sense-making and consensus. They are rational in the weak sense described by Habermas (1984) as “communicative rationality” meaning that they are acknowledged by members of the community as legitimate representations of “what they do” and not in the sense of any generic validity criterion.

It is maintained that through cycles of descriptions, work communities progressively build some kind of rationalized representation of their proper practices. This may simply start as exchanges of stories of significant past events. Nevertheless, even such descriptions tend to stimulate reflection and/or discourse between members which often goes well beyond sharing experiences to categorizing and theorizing about them. The result of such reflections or discourse is a growing repertoire of formal descriptions (i.e. representations) that will inevitably have an influence both (i) on subsequent practical understanding during action and (ii) on the evolution of practice through purposeful interventions.

The descriptions loop, apart from its direct influence on situated understanding during action, promotes theorizing. By exchanging “war stories” and reflecting-on-action at disengaged moments, practitioners may develop new interpretations of their experiences. Reflection-on-action may also generate new ideas and “what if” scenarios, supporting anticipation of new ways of acting; something that clearly indicates a deliberate

effort towards change. In doing so, work communities may purposefully intervene in their ongoing practices by devising new artifacts (both conceptual and material).

Therefore, the descriptions loop underlines the formalization of practice through rational discourse. Formalization in this sense should be understood as both standardizing and rearranging practice. Typical manifestations of this loop are the expression of rules of conduct, tips of the trade, declared responsibilities and division of labor, but also the design of new tools, conceptual taxonomies etc. To paraphrase Giddens (1984) in a way, reflection on practices continually enter into, become disentangled with and re-enter the world they describe as formalizations, rearranging existing practices on the way. Figure 2 depicts the basic elements of this process.

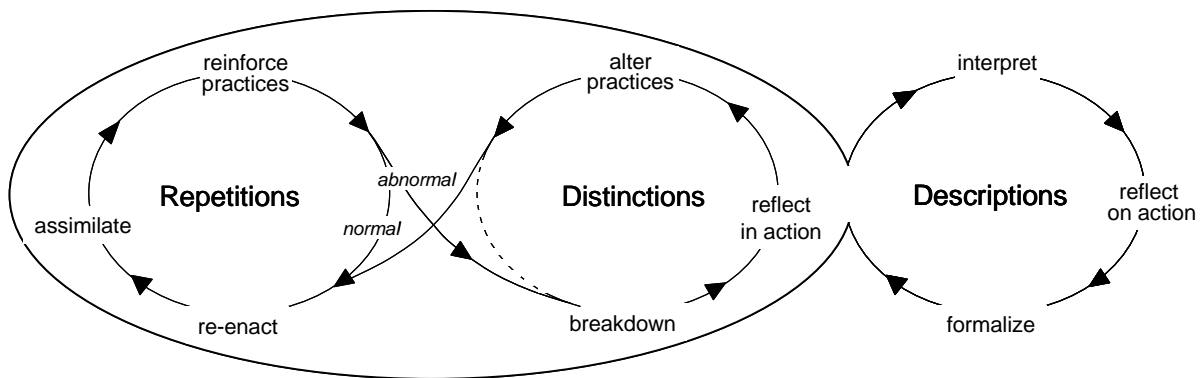


Figure 2: The interplay between Repetitions, Distinctions and Descriptions

However, since a large part of practice is embedded in the actual coping in context, formalizations that result from interpretations and reflection-on-action do not depict the totality of a community's practices. This implies that although people maybe competent in the practice through a sustained period of participation, they are not always in a position to translate into explicit discursivity the inherent logic of their own practice (Nicolini 2006). As noted in the beginning of this section, formalizations can greatly influence existing practices but cannot entirely override them.

This is even more evident in practitioners' attempts to rearrange practice. Formalizations inevitably adopt certain perspectives and cannot fully anticipate all eventualities as encountered in the actual doing nor can they predict the often cumulative effects of an intervention. A new formalization, in order to rearrange practice, needs to confront the realm of action, i.e. needs to get integrated in the Repetitions-Distinctions double loop. During this phase, a formalization may be adopted and assimilated as planned, distorted, or even abandoned altogether.

It is a trivial observation that the RDD model as presented has a fictional character. It is an imaginary case of a work setting that starts with zero history by people with minimum predispositions (i.e. culture). This off course is hardly true in the real world. The model was presented in a sequential developmental way only for the sake of clarity. Therefore it should not be seen as supposing a one sided start from Repetitions progressing to Distinctions and finally to Descriptions. In fact the three loops of the model

should be seen as running concurrently and perpetually through the lifecycle of the work setting.

The historicism of work settings does in a certain way constrain the evolutionary dynamism of practice. Institutionalization has a homogenizing and stabilizing effect by providing “ready made recipes” that work. Specific tools, material arrangements and established methods direct towards stabilization. Even the established terminology may constrain practice evolution by directing reflection-on-action towards certain paths obscuring others. However since the sustainability of work practices is based on re-enactment rather than on blind execution, work communities, through the inevitable variability in behavior, will continue to adapt through re-enactment to both external and internal triggers. Thus although a work setting’s history hinders developmental dynamism, work communities, given sufficient autonomy, will in general not stop forming new distinctions, new descriptions and attempting new formalizations.

3. WORK COMMUNITIES IN ORGANIZATIONAL SETTINGS: THE CONFRONTATION BETWEEN PRACTICE AND PRESCRIPTIONS

Up to now we have limited our analysis in the development and evolution of practices as a process carried-out exclusively by the participants of work communities. Although we maintain that the RDD model as defined so far is relevant for any work setting, autonomous or not, it is clearly insufficient to account for work settings that belong to complex socio-technical systems. This is because the RDD model thus far did not consider the effects of higher level constraints and impositions.

In large hierarchical organizations, descriptions are as a general rule assigned to specialists (managers, engineers, consultants) who, as a general rule, do not participate in the practices they reflect upon. “Outsider” descriptions are not grounded on lived experience; instead they rely on quantitative evidence biased by theory laden predispositions in the typical manner of managerial and engineering thinking. Consequently formalizations of practice take the form of top-down prescriptions.

However, work communities do not just perceive the downwards prescription as a constraint and affordance space. Instead, based on that, they formulate their own original understanding of what, how and why. Such an understanding is moderated by this constraint space, but is fundamentally influenced by the pragmatics of practice i.e. the adequacy of tools, the complexity of the work environment, peoples’ accumulated experience, motivational stance, peer accountability, day-to-day management decisions etc. (McCarthy et al. 1997, Woods and Cook 2002)

In other words, prescriptions direct and constrain action, but in order to rearrange existing practices they need to pass from all three loops of practice evolution. That is, they have to be acknowledged (descriptions loop), but also understood (distinctions loop) and habituated (repetitions loop). During these phases prescriptions will necessarily confront the realm of practice. According to the RDD model the two basic types of confrontation are: (i) confrontation between prescriptions and practice and (ii) confrontation between prescriptions and work community descriptions.

Confrontation between prescriptions and practice. As already stated there is an inherent antinomy between prescription and practice. Prescription is a notion in the realm of declarative discourse. It is a more or less rational description of what needs to be done and how, conveying in this way the intentions of the upper levels of an organization to lower ones. As such it is the product of abstract reflections informed both from past experience and logic, aimed at helping attain the upper levels' declared objectives. On the other hand, practice is a notion in the realm of embodied situated thinking – acting (Thévenot 2001), it designates the “customary” ways of doing things intra or interpersonally. Prescriptions may get espoused by a work community at a discursive level but nevertheless may contradict regularity and implicit understanding during action. In this case the confrontation is not between management and work community but between description and action. It becomes apparent whenever day-to-day activity, even day-to-day management decisions are in discordance with the disengaged reflections on it.

This discordance needs constant monitoring. If practice blindly follows prescription it loses its ability to adapt in the face of change and as a result organizational flexibility and learning are inhibited. On the other hand, if practice is not explicitly pressed to account for its deviations from what is prescribed, it may evolve without the necessary reflections-on-action. Such unreflective practice will progressively “absorb” more and more variability through local repairs. This may progressively erode defenses without immediate impact on performance.

Confrontation between prescriptions and work community descriptions. Top-down prescriptions differ in many ways from community descriptions. Prescriptions depend more on rational concepts. They use these concepts as a coherent axiomatic base (scaffolding) and manipulate abstract symbols to produce new “abstract knowledge” and then put it back to the messy reality. On the other hand community descriptions are typically episodic, fragmented and frequently inconsistent. All the above tend to intimidate and downgrade community descriptions.

If a work community is unable to form its proper interpretations of top-down prescriptions it may either (i) adopt them blindly or (ii) secretly reject them.

In the first case, blind adoption of top-down prescriptions decay the work community's own descriptions. Such communities tend to produce interpretations of what they do only through the inflexible standardized procedures and terminology. In this case the community's descriptions being far from the experienced reality stop acting as fertile reflections-on-action. Furthermore, due to the sustained influence of standard procedures and terminology in the R-P loop, the dynamics of practice evolution decline. Work communities that have acquired all their descriptive apparatus from upwards often enter into a pseudo-reflective loop that inevitably results in organizational arteriosclerosis. If a community is unable to form its own original descriptions in the face of change, has difficulty enriching its practices and finally becomes unable to innovate. In the absence of external intervention (i.e. by management or consultants etc.) such communities stagnate; the most evident example being the well known phenomenon of the bureaucratic stance in the services sector.

In the second case, by rejecting top-down prescriptions, a work community will go on building its own original descriptions independent from official prescriptions. In this case work practices may be dynamic and rapidly evolving, but concealed from higher level control through gambits of compliance (Bittner, 1965). However, such evolution being blind to high level constraints and formal engineering knowledge will inevitably result in a degradation of organizational robustness.

4. CONCLUSION

The above discussion on the interplay between practice and official formalizations showed a number of typical mechanisms leading either to the decline of practice evolution and development –and the consequent organizational arteriosclerosis–, or the unreflective evolution –and the consequent erosion of organizational robustness.

Resilience at the sharp end level depends on the work communities' ability to adapt and evolve in the face of change. However, practice adaptation and evolution depends on the ability of organizations to actively deal with the two above confrontations.

Organizations should neither impose downward prescriptions blindly nor ignore the unofficial descriptions produced by work communities through reflection-on-action. In fact there should be a perpetual dialogue between work communities' descriptions and official formalizations. The purpose of this dialogue is to (i) promote continuous reflection-on-action by the communities themselves and (ii) to ensure that the resulting descriptions are in accordance with official formalizations.

Organizations should keep a constant dialectic between what is actually done in practice and what is officially espoused. The effort should not strive to make the two identical. This is both infeasible as an act and unconstructive as a process. The inherent anarchy of practice is a double edge sword. If strongly repressed it will hide from view and lose its constructive role as a mechanism of rapid adaptation, if left unattended it will degrade robustness and lose its role as crucial informant of change.

Organizational interventions should be considered as hypotheses or tentative rearrangements of practice rather than as rigid and definitive prescriptions. In this way they can function as stages of confrontations provoking work communities, and the organization as a whole, to actively challenge their practices through a reflective stance upon their work.

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