

# **The Performative Nature of Organizational Capabilities**

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## **Abstract**

The literature on organizational capabilities thus far has implicitly held multiple notions of the performance of these capabilities. In this paper, we explicate these by distinguishing between the efficacy, effectiveness and efficiency (operational and innovative) of a capability. We incorporate these into an evolutionary framework of capability learning and show that the underlying learning processes are different, depending on the type of performance. Our terminology may thus help in clarifying some underlying tradeoffs and avoiding potential inconsistencies when theorizing about the nature and development of organizational capabilities.

## **Introduction**

The 'capable' organization seems an enticing concept in times of great environmental pressures on organizations. Like sportsmen facing increasingly tough opponents, the notion carries with it the feeling of being in control, an ability to take on any challenge. The appeal of the concept has helped to spur research on capabilities from a wide variety of theoretical perspectives and levels of analysis. Literature on organizational capabilities has developed perspectives on capabilities that emphasize strategic and economic dimensions, for instance dynamic capabilities (Eisenhardt *et al.*, 2000; Nelson *et al.*, 1982; Zollo *et al.*, 2002) and (meta) routines (Feldman *et al.*, 2003). Oftentimes, research deals with categories or areas of (meta)capabilities, such as coordination capabilities (Kogut *et al.*, 1992), information processing (Gupta *et al.*, 1994), control, collective mind (Weick *et al.*, 1993), innovation (Kuemmerle, 1997), absorption (Van den Bosch *et al.*, 1999), learning and change (Teece *et al.*, 1997), integration (Grant, 1996) and so forth.

While these and similar contributions have developed our thinking on capabilities and may have supported management, they also raise some new issues that appear fundamental to this field. One of the most pressing ones is the question of what makes an organizational activity become a capability? The objective of this paper is to contribute to a more specific understanding of what constitutes an organizational capability by looking at the performative aspects of a capability and how these develop over time.

## **The Performative Nature of Organizational Capabilities**

We follow Winter (2000, p.983) in defining an organizational capability as a “high-level routine (or collection of routines) that, together with its implementing input flows, confers upon an organization’s management a set of decision options for producing significant outputs of a particular type”. This conceptualization of capabilities in terms of routines opens the door for applying a distinction recently made in the literature between the ostensive and performative aspects of a routine (Pentland & Feldman, 2003; Latour, 1996). The ostensive aspect is the ideal or schematic form of a routine. It is the idea of a routine, the routine that exists in principle (Latour, 1996; Feldman, 2000). The ostensive aspect is an abstract and generalized model used by participants to produce the set of specific performances that we refer to as the performative aspect of the routine. The performative aspect of the routine consists of specific actions, by specific people, in specific places and times. In other words, a capability in practice should always be thought of as a capability-in-use (cf. Orlikowski, 2000). Although the performative aspects are influenced by (and influence) the ostensive aspects, the performative aspects take precedence when theorizing about practical situations. It thus becomes paramount to think of capabilities in terms of the performance that they achieve. As we will argue below, this performative aspect is not as trivial as it may seem at first glance.

The performative quality of capabilities implies that as researchers we can retrospectively make sense of them (as opposed to *potential* capability, which can be assessed ostensively, *ex ante*). We could ask basketball team members to talk about their gameplan, tactics, and techniques, or we can watch them play the game and enact these in practice. Once we have observed and compared organizational performance, we can label it (Weick, 1995; Weick *et al.*, Forthcoming) in terms of “yes, they are able to do this,” or “yes, they are capable.” Capabilities differ from rules and resources (which by themselves cannot deliver an organizational performance). It is a common assumption that contexts vary to a certain extent. Hence, while rules and resources may remain similar, performances vary every time they are enacted (Feldman *et al.*, 2003). Capability differs from potential ability: this label, based on past performance, may not guarantee effective and efficient performance in a particular situation. Capabilities must also be

differentiated from (organizational) knowledge if we consider knowledge something individuals possess. Knowledge on how to perform car repairs could, but does not necessarily imply a capability. Only when individuals constituting an organization enact an activity can these practices be assessed and – depending on competitive performances – qualified as capable. Even then, retrospective assessment cannot guarantee future capable acting but it contributes toward expectations.

Thus, if the situated performance is taken as an indicator of organizational capability, qualification of that particular performance tells something about the performance of the underlying (ostensive) capability. In other words, we are interested in the quality of that situational performance and the drivers of that quality in generic terms. This leads us to consider the various connotations that performance carries. We borrow here from the medical literature on the performance of healthcare interventions (Cochrane, 1972). A well-established distinction in that literature is made between efficacy, effectiveness and efficiency definitions of performance. These qualifiers point towards specific, different questions about the quality of a treatment or medicine in relationship to a medical problem, an objective, and alternative treatments and medicines, or, as Haynes (1999, p.652) succinctly put it: Can it work? (Efficacy) Does it work? (Effectiveness) Is it worth it? (Efficiency). These questions reflect progressively stronger requirements for performance.

We can translate these concepts for use in strategic management research. First, at the efficacy level, an organizational activity can be considered a potential ability when it has a minimal level of organizational coherence that should result in the accomplishment of a collective task under ideal circumstances (compare to Miner's (1991: 378) definition of organizational routines as "(...) a coordinated, repetitive set of organizational activities" (Miner, 1991)). One can think of this as having *a priori* the necessary skills and resources to accomplish a task. Second, moving up the scale to the effectiveness question, an activity can be considered a capability if it indeed *does* result in the accomplishment of the task under real-life circumstances. That is, the goal of that task is being reached under circumstance that vary and are most likely to be less than ideal. Given that the necessary preconditions were in place, were these indeed sufficient and was the goal reached? Effectiveness points towards the likelihood that a performance will achieve a goal

regardless of the context in which it is enacted and could potentially be successful. And third, capability may correspond to the efficiency criterion because of its strategic, comparative nature: is our capability at this activity sufficiently better than our competition and hence, does this (tentative) capability really lead to strategic advantage? Efficient capability thus depends on the relationship with situated performance of other organizations performing a similar task. We further distinguish two criteria of efficiency, following the literature on competitive strategies (Porter, 1998). On one hand, an organization can accomplish the same activity at lower costs than competitors (operational efficiency). On the other hand, it can differentiate itself in terms of innovative value (innovative efficiency).

These distinctions are not necessarily new to the strategy literature. For instance, Helfat & Peteraf (2003, p.999) refer to the performative aspects of capabilities as "... in order for the performance of an activity to constitute a capability, the capability must have reached some threshold level", akin to our interpretation of efficacy, "To say that an organization has a capability means only that it has reached some minimum level of functionality that permits repeated, reliable performance of an activity", which due to the focus on reliability comes closer to our definition of effectiveness, and "Some versions of a capability are better than other", which would fit our definition of efficiency. Similarly, Dosi et al. (2000, p.1-3) talk about "To be capable of some thing is to have a generally reliable capacity to bring that thing about", in other words effectiveness, but also refer to "the threshold question of feasibility", aka efficacy, as well as point to Richardson's work (1972, p.888), who stated "organizations will tend to specialize in activities for which their capabilities offer some comparative advantage", which fits our definition of efficiency. Although both these articles implicitly highlight different interpretations of the performance of a capability, neither has explicated these distinctions more fully in order to analyze the consequences for theorizing about capabilities. This is what we aim to contribute in this paper by applying these distinctions to the question of how organizational capabilities come about, i.e. how do organizations learn and develop their capabilities?

## **Capability learning in context**

Routine activities draw upon multiple structures (Sewell, 1992). Examples include language and communication structures, organizational structure, technology, tools, and a variety of cultural structures. The context-specific nature of performance has been associated with specific thoughtworlds and ‘ways of talking’ (Dougherty, 1996; Fleck, 1979; Lave *et al.*, 1990). Within their professional task setting, individuals develop modes for labelling and thinking about their work. For a capable (routine) performance, structures are activated and adjusted in a situation specific manner (Orlikowski, 2000; Tyre *et al.*, 1997). Knowledge structures are not abstract entities apart from practice, but they are distributed over individuals and artifacts (Hutchins, 1996), connected in coherent relationships. Capable performances evolve over time as individuals acquire skillsets participating and practicing in different contexts (Lave *et al.*, 1990). A performative point of view stresses knowledge as intricate part of the actual performance, rather than abstracted from particular contexts. Knowing and doing are not separated but co-evolve in close relationship (Brown *et al.*, 1989). Progression of capability thus requires practice. Over time, routines get adjusted so that negotiated meaning, socially constructed understanding (Brown *et al.*, 1989) and organizational patterns emerge (Zollo *et al.*, 2002). The enactment of these patterns constitutes the organizational capability. At the same time, not all practice reflects capability. So a specific issue is how a capability evolves, depending on the outcome of the capability-in-use, the performance of the capability in practice.

## **Designs for capability learning**

From the preceding discussion it follows that the development of capabilities is dependent on the learning processes (how do existing capabilities get modified based on the outcome in a specific context) and learning goals (towards what goal, i.e. performance criterion, is the learning process directed). To further expand on this point, we model the learning process as an evolutionary process of variation-selection-retention (Aldrich, 1999) and we will argue below that the optimal design of this process depends on the type of performance that is aimed at. Table 1 summarizes the argument, in which

each cell describes the optimal design of that particular phase for that particular type of capability performance.

**Table 1 Capabilities: variation, selection and retention**

Phases of evolutionary processes:	Type of Organizational Capability Performance			
	<b>Efficacy</b>	<b>Effectiveness</b>	<b>Operational Efficiency</b>	<b>Innovative Efficiency</b>
<b>Variation</b>	Limited variation of performative contexts: ensure first workable trial run in a sufficiently relevant context	Increase variation of performative contexts	Limited variation of performative contexts, aimed at contexts in which will be competed	Wide variety of performative contexts to elicit new ideas for innovative performance
<b>Selection</b>	Limited selection: if trial run was workable, select capabilities	Select capabilities with the objective of stabilizing performance across a variety of performative contexts	Select capabilities that boast absolute performance differential	Select capabilities that increase the likelihood of out-innovating the competitor
<b>Retention</b>	Limited retention: if trial run was workable, retain capabilities	Develop contingent set of capabilities: multiple fall back scenarios	Continue training and performances to ensure continuity of performance and likelihood of performance differential	Selectively retain capabilities, avoiding dominant logic (Bettis <i>et al.</i> , 1995), slowly shift towards operational efficiency
<i>Examples</i>	<i>New market entrance: ensuring that products/ services can be delivered</i>	<i>Internationalizing business: adaptation to new markets</i>	<i>Competition in tightly regulated market</i>	<i>Competition in highly innovative markets (short product/ service cycles)</i>

## **Efficacy**

*Variation.* The efficacy of a capability is defined by its performance in an ideal setting (a 'windtunnel test'). It is a test of the core functionality of the capability in a setting where possible detracting context factors are omitted or abstracted away, in order to test the capability in a trial run where everything goes according to plan. Note that an efficacy test is not as trivial as it seems, as there are always uncertainties and unforeseen contingencies that were not taken into account. Since a capability is a bundle of routines, the interactions between the routines increase the complexity of the capability (Simon, 1962), which limits the predictability of its outcome, making the efficacy test non-trivial. The variation needed to achieve efficacy is limited to the performative context(s) in which the capability could be expected to function at its best.

*Selection.* Since the focus of efficacy is on testing the capability in an ideally situated trial run, the selection criterion for efficacy is a satisficing one (Winter, 2000): does the capability achieve a satisfactory level of performance? If it does not under ideal circumstances, there is no reason to develop this capability further and rather efforts should be directed towards developing other capabilities and testing these for efficacy in new trial runs.

*Retention.* Although capabilities that pass the selection test could in principle be retained 'as is', the real performance test of a capability is in applying it to the less-than-ideal settings encountered in practice. Thus, retention of an efficacious capability is short, if not non-existent, since the performance focus of the capability now shifts towards effectiveness.

## **Effectiveness**

*Variation.* The effectiveness of a capability is defined by its performance in a non-ideal setting (as opposed to an ideal setting as measured by efficacy), i.e. the performance of the capability-in-use in a specific context. Because every context is different and these differences cannot necessarily be predicted in advance, an effective capability must be robust to a wide variety of contextual features. Thus, to assess the effectiveness of a capability, large variation in possible performative contexts is necessary.

*Selection.* The outcome of the variation process is a set of performance levels associated with capabilities in different performative contexts. Since effectiveness deals primarily with the robustness of a capability, the emphasis is not so much on the absolute level of performance in a particular context, but rather on a guaranteed performance level across contexts. Therefore, the selection criterion for effectiveness picks the capability that maximizes the minimum performance level over all contexts (a maximin criterion). Note that this is not necessarily the capability with the highest average performance as this capability may perform badly in some contexts, contradicting our interpretation of effectiveness.

*Retention.* To retain this selected capability, two approaches are possible. The first approach refines the capability by further increasing the variety of performative contexts in which the capability is applied. The second approach refines the application of the capability by developing a second-order capability that governs the application of specific instance of the original capability, depending on the contingencies of the specific task at hand.

### **Operational Efficiency**

*Variation.* When the focus of capability performance is on the most efficient execution of the capability, i.e. operational efficiency, performance increases result from the repeated execution of the capability in a limited variety of performative contexts (Ericsson & Lehmann, 1996). Learning in this case is aimed at routinization and mastery of the capability across a set of homogeneous performative contexts in which the capability is to be used.

*Selection.* Contrary to effectiveness, which is aimed at gaining a robust, reliable performance across a wide variety of contexts, (operational) efficiency aims to maximize performance in a few specific contexts. Thus, the selection criterion for operational efficiency picks the capability with the highest absolute performance.

*Retention.* To retain the selected capability at the desired level of operational efficiency (or further increase its performance), continuous training in the specific contexts remains necessary (Ericsson & Lehmann, 1996). Although over time perhaps some small

variations in contexts may be added, thus broadening the scope of the capability, the focus is on high performance in a specialized set of performative contexts.

### **Innovative Efficiency**

*Variation.* Contrary to an operational efficiency focus on capability performance, which aims to outdo the competition by ‘doing things better’, an innovative efficiency focus is aimed at ‘doing things differently’. The aim is to develop new, creative ideas to achieve high performance in the intended performative contexts. Such creativity is less likely to come from experience in the intended contexts, but rather from contexts that are significantly different (Drazin et al., 1999). Although the contexts should not be too different such that it inhibits cross-domain knowledge transfer, the focus in the variation process is on applying the capability in a wide variety of performative contexts.

*Selection.* Like its operational companion, the focus of innovative efficiency is to maximize performance in the specific performative context in which the capability is to be used. However, since the origins of this newly developed capability are (at least partly) in a different context, judging performance in the intended context becomes a bit more problematic given the newness of the capability. Therefore, if the focus is solely on innovative efficiency, the criterion becomes one of potential innovativeness of the capability, i.e. its radicalness.

*Retention.* Initially retention may be achieved by expanding the set of contexts, thus hopefully further increasing its innovative potential. However, at some point, its innovative potential will be deemed satisfactory (Winter, 2000). From this point onwards, the capability and its applicable performative contexts will remain more or less stable and its performance focus will shift from innovative efficiency towards operational efficiency. Retention of an innovative capability is a somewhat paradoxical concept, not unlike the idea of ‘routine innovation’ (Sutton & Hargadon, 1996; Hargadon & Sutton, 1997).

### **Discussion: Tradeoffs in capability development**

What Table 1 and the accompanying discussion have shown, is that there are different interpretations of the performance of a capability and that optimizing different types of

performance requires different approaches to the process of developing these capabilities. This implies that there are certain tradeoffs in the process of capability development that require managing as well as further theorizing.

The most obvious tradeoff is in the process of variation: while initially limited variation is necessary to establish efficacy, capability development can then take three distinct approaches. The first approach is to retain the limited variation and focus primarily on operational efficiency of the capability at the expense of foregoing increased robustness and innovative efficiency. The second approach switches to moderately increasing the variation of performative contexts in order to achieve an effective capability, even though this may not be as efficient as it could be. The third approach switches to a wide variety of performative contexts in order to increase the chances of developing the capability into something innovative (a risky approach in and of itself), thus foregoing both effectiveness and operational efficiency initially, although the discussion around retention of innovative capabilities showed that at some point the performance focus needs to shift towards operational efficiency.

At the selection level, it highlights the tradeoff between the effectiveness and efficiency of a capability, because both have different selection criteria that need not be compatible. There is evidence at the corporate level (Foster & Kaplan, 2001) that companies with a focus towards continuity (in other words, the reliable performance exemplified by effectiveness) consistently underperform the market, i.e. they exhibit comparatively low efficiency. Our analysis suggests that a similar tradeoff may exist at the level of individual capabilities.

How to resolve these tradeoffs? One possible influence on where the balance is struck may be the competitive environment. It seems plausible that the more intense the competition, the more pressure there is to develop a capability quickly and hence focus on operational efficiency since there is not enough time to achieve the wide variety of performative contexts necessary for innovative efficiency. Similarly, task uncertainty may dictate which type of performance is preferred. The more uncertain the task, the more a premium will be placed on reliability of the capability across a wide variety of tasks, in other words a focus on effectiveness. Another influence may be the speed of technological developments: the faster the technological developments, the more

opportunities there are for recombining experiences from various settings, thus increasing the potential for developing innovative efficiency.

An alternative to the contingency approach sketched above is to incorporate the various performance measures into a lifecycle perspective (Helfat & Peteraf, 2003). For instance, a capability in the mature phase may place a premium on operational efficiency. However, when a capability is in the mature phase, the potential advantage of an innovative capability is substantial and more likely to be sustainable than for capabilities in the founding and development phase and hence a premium may be placed on innovative efficiency. Given these multiple possible interpretations from a lifecycle perspective, a fuller discussion of this is beyond the scope of this paper and we leave this for further research for now.

## **Conclusion**

What we have attempted in this paper, is to explicate different interpretations of the performance of capabilities that have thus far been held implicitly and sometimes interchangeably in the literature. We distinguished between the efficacy (can it work?), effectiveness (does it work?) and efficiency (is it worth it?) of a capability. We further subdivided efficiency into operational efficiency and innovative efficiency. Although none of these concepts are new by themselves, to the best of our knowledge they have not been presented in an integrated framework in the strategy literature. We show the usefulness of this integrated framework by looking into the learning processes underlying the development of capabilities. This has highlighted the different, and sometimes conflicting, role that variation, selection and retention play in this process. We hope this will trigger further research on the practical issues involved in developing high-performing capabilities.

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