AN INSTITUTIONAL VIEW OF ORGANIZATIONAL CAPABILITIES

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The literature of organizational capabilities has overlooked the role of values. We present an institutionalist view of the capability phenomenon accounting for the values occurring in three levels: in the action at routine level, at the organization level and at the institutional environment level. The mutual influences among these three levels are needed to analyze capability dynamics in its entirety. Central to our argument is the Weberian notion of social action and rationality, and the concept of institutional fields. Taking routines as a social action, we allow for the possibility of a two-directional transition between the formal and the substantive rationality in routine performance. When routine is value-oriented and it is aligned with the two other levels, a hardcore capability is formed. We show that in stable environments, operational hardcore capabilities are more efficient, and in turbulent environments, they are more preferred at the dynamic level. The transition to an efficiency-orientation destabilizes the routine and facilitates capability change. We conclude by arguing that if one does not take into account the encompassing role of values, dynamic capabilities may loose efficacy. Implications to future research and to practice are also discussed.

1. Introduction

The emergence of the Resource-Based View of the firm (RBV) gave new flavor to knowledge and learning in explaining competitive heterogeneity. The concept of organizational capabilities (or competences) is at the core of this research development (Leonard-Barton, 1992). Although different understandings about the terminology, nature and importance of this concept (Dosi, Nelson and Winter, 2000; Collins, 1994; Eisenhardt and Martin, 2000), in the present paper we build on the research stream that considers routines as the building blocks of organizational capabilities (Nelson and Winter, 1982; Zollo and Winter, 2002; Teece, Pisano and Schuen, 1997; Dosi, Nelson and Winter, 2000).

The organizational capability concept shares the RBV tenet of the efficient use of firm resources as the means of achieving competitive advantage (Teece, Pisano and Schuen, 1997; Dutta, Narasimhan, and Rajiv, 2005). Superior capabilities are knowledge-based firm resources that make possible to the firm to implement value-creating strategies that cannot be implemented by neither actual nor potential competitors (Barney, 1991). They constitute the know-how that makes firms capable of delivering their products and services more efficiently than their competitors. Indeed, superior capabilities are an efficient learning system (Zollo and Winter, 2002; Winter, 2000). But this does not explain the whole story. We argue that literature on capabilities has narrowly focused on efficiency, leaving out of the mainstream relevant normative, value-based and legitimacy dimensions.

Accounting for values, norms, and institutional aspects reveal important sources of inertia and costs in capability dynamics. We offer here an approach of understanding capabilities around the concept of values we call “an institutional view”. We do it in a novel way. Different from previous attempts (Leonard-Barton, 1992; Oliver, 1997), we: (a) introduce institutional arguments into the capability framework using Weberian notions of social action and their underlying rationality types; (b) by addressing
routines/capabilities as a social action, we explore the two-directional transition between the formal and the substantive rationality and their implications on capability and firm performances; and (c) we present the idea of capabilities dynamics in its entirety, which expands the scope of analysis of the capability phenomena so far presented in the literature.

2. The role of values in capability theory

A plethora of knowledge related concepts has flourished in the literature: core competence (Prahalad and Hamel, 1990), organizational capabilities (Dosi, Nelson and Winter, 2000), combinative capabilities (Kogut and Zander, 1992), knowledge integration (Grant, 1996), absorptive capacity (Cohen and Levinthal, 1990), and dynamic capabilities (Teece, Pisano and Schuen, 1997) to cite a few. Knowledge-based theories to explain the existence and purpose of the firm were proposed, despite the criticisms (Foss, 1996). Not only to technology, but to all sorts of organizational knowledge were given attention, from managerial skills (Hitt, Bierman, Schimizu, and Kochhar, 2001) to inter-firm relationships (Dyer and Singh, 1998), and the know-how involved in corporate acquisitions (Zollo and Singh, 2004). The very nature of learning and knowledge made possible for the research in competitive advantage to benefit from contributions of different theoretical perspectives rooted in Sociology and Organization Theory.

We focus here on the concept of organizational capability defined 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 a significant outputs of a particular type” (Winter, 2000, p. 983). Organizational capabilities refer to the organizational knowledge or know-how that enables the performance of its characteristic “output” action, such as creating a tangible product or providing a service. An organization that is capable of something fills the gap between intention and output (Dosi, Nelson, and Winter, 2000).

Capability related literature has reported the importance of social and institutional dimensions to capability formation, strategic renewal and sustained product innovation. The social value of a competence, imparted from the usual taken-for-granted aspect of its performance, “goes beyond their usefulness in communicating and exchanging” (Galunic and Rodan, 1998, p. 1199). Leonard-Barton (1992) places values as infused in every aspect of a competence. She asserts that organizational values and norms that traditionally support a core competence may also constraint its change. Values assigned to the organizational knowledge systems may be sources of “core rigidities” or “inappropriate sets of knowledge” (p. 119). This paradox may be explicated by the concept of identity. As groups sharing these social values identify themselves with the capability they are performing (Galunic and Rodan, 1998), this identity facilitates the process of coordination and learning necessary to generate superior performance, but also “generates cost on limiting the search for new ventures of exploration and on imposing existing procedural rules suboptimally on new activities” (Kogut and Zander (1996, p. 503).
Reported problems of lack of shared meaning and managerial role conflict are also related to the role of values in capability dynamics. While sustained product innovation in large, established firms often violates institutionalized practices (Dougherty and Heller, 1994; Dougherty and Hardy, 1996) and face problems of shared interpretive schemes (Dougherty, 1992), new knowledge should fit into the firm history and culture for efficient strategy renewal through product innovation (Dougherty, 1990). However, this process also faces the paradox proposed by Leonard-Barton (1992) to the extent to which institutionalized practices are needed to the efficient deployment of current capabilities. Floyd and Lane (2000) suggest that “deploying existing competencies to developing new ones requires a shift in the roles that managers play, as well as in the relationships between those roles” (p. 154). As socially constructed realities, role expectations can be self-fulfilling and sources of core rigidities (Leonard-Barton, 1992), generating conflict and increasing the risk of opportunism among individuals (Floyd and Lane, 2000).

Despite evidences of the importance of the social and institutional dimension in capability formation and change, organizational capabilities are often considered under criteria of efficiency (Teece, Pisano and Schuen, 1997; Dutta, Narasimhan, and Rajiv, 2005). Organizational capabilities are intentionally devised to fulfill a predefined objective (Dosi, Nelson and Winter, 2000). Efficient learning processes are usually associated with superior capabilities (Zollo and Winter, 2002; Winter, 2000). Although important, issues of value are not integrated into the capability framework.

We advance here an institutional view of capabilities to integrate institutional and efficiency issues in the organizational capability phenomena. Values are taken into account as occurring in three levels: the institutional environment, the organization and the routine.

3. The Institutional Environment

The first dimension of our institutional view of organizational capabilities refers to values occurring at the environment level. The environment is viewed as emanating pressures over organizations. These pressures originate from two distinct environments, the technical and the institutional environment (Meyer and Rowan, 1977). The technical environment is mostly characterized by the competition on production efficiency (Scott, 1992) and on the search for resources and technological know-how (Scott, 1995). In the institutional environment firms pursue social legitimacy (Scott, 1987) through conformity to established norms and social rules (Scott, 1992). The technical-institutional divide serves solely analytic purposes, but in fact they are two sides of the same coin, and constitute the environment in which organizations are embedded. Drawn from the Institutional Theory, the institutional environment is found to exert important influences over organizations (Scott, 1995) and it is the focus of our discussion.

The concept of field is important to understand the pressures emanating from the institutional environment. It was originally introduced to help understanding how institutional pressures affected organizations (DiMaggio and Powell, 1983). Its conceptual underpinning has been discussed in the Organization Theory (Martin, 2003;
Davis and Marquis, 2005), and it is especially important for the New Institutional Theory (DiMaggio and Powell, 1983; Scott, 2005). One of the major problems of the traditional concept of fields is its tautological definition. Organizational field is defined by DiMaggio and Powell (1983) as “those organizations that, in aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products” (p. 148). The tautology is present when field defines itself, that is, the constituent organizations. Two organizations are said to belong to the same field if they deal with the same or similar suppliers, if they compete for the same resources and customers, if they are regulated by the same agencies, or if they produce similar products. Therefore, to determine if a given organization belongs to a field, it is necessary to compare it with other organizations in the field.

We understand field from the standpoint of the pressures and influences emanating from the field towards the organizations. Our view is akin to what Martin (2003) called Fields of Organized Striving, a concept derived from the idea of spheres of values of Weber. These spheres of values or spheres of lives are broad themes, as the economic or the religious life, which exert influences over individuals. We focus here on narrower issues, such as the environment, health or poverty, but broad enough to create a space in which organizations seek legitimacy vis-à-vis institutions. Our definition of an organizational field is a space encompassing organizations that receive pressures emanating from these themes. We call these spaces institutional fields, to make a distinction from the DiMaggio and Powell (1983)’s definition of organizational field. They are broader than the traditional definition of fields, as proposed by Scott (2005), but narrower than the field as a societal level. An organization may receive pressures from several distinct institutional fields. But, inside a given field, organizations and institutions strive to define the values that will give it legitimacy. Despite from this dispute, the resulting values generate coherent action.

Following a Weberian perspective, different institutional fields may generate conflicting pressures. While fields referring to health issues and to the natural environment may generate congruent pressures, they may do otherwise in the case of a pharmaceutical firm deciding to build its processing unit by a river. In the first case, they may emanate similar pressures towards the non pollution of rivers, but in the second case, the health field may favors the creation of a new medicine processing unit, but faces conflicting pressures from the natural environment field. Therefore, an organization, or group of organizations, may receive conflicting pressures from different fields as a result of a given action. Also, a field may emanate different, contradictory pressures towards its constituent organizations. Pressures for legitimacy follow the same pattern as defined in DiMaggio and Powell (1983), but their intensity may vary across fields, for a given organization, and inside a field, for distinct constituent organizations. A tire manufacturer, for instance, may receive stronger pressures from the natural environment field than a nail manufacturer.

Organizations receive pressures and influences from both the technical and the institutional environments. While the former pushes firms towards efficiency, the latter foster organizational actions towards legitimacy. Institutional pressures over an organization are dependent on the institutional fields in which it is embedded and also
on the intensity of those pressures. This is not to be understood as a static picture, as field dynamics may change value orientations.

4. Routines and Rationality

While the first dimension refers to the environment level, the second dimension we introduce into the institutional view of organizational capabilities refers to values occurring at the action level: the performance of routines inside organizations. Capability performance is found to be characterized by the exercise of repetitious, tacit knowledge-loaded, highly patterned behavior in the form of routines (Nelson and Winter, 1982; Dosi, Nelson and Winter, 2000). Routines are an organizational concept. This implies that symbolic interaction among individuals in an organization forms a shared reality with respect to what should be done and how.

The tacit dimension (Polanyi, 1966) of organizational routines entails a cognitive limitation; “we know more than we can tell” prevents us to assess the reasons of our behavior as well as to consider alternative options other than the taken-for-granted script. In this view of organizational routines, organizational change is a process of learning new routines (Levitt and March, 1988); forgetting old habits and acquiring new ones. It is a slow process. As Cohen e Bacdayan (1994) showed in their experiment, tacit knowledge used to perform routines are stored in the individual’s procedural memory and they are hard to forget. On the other hand, individuals who learn new routines show performance improvements, but are seldom aware of what they have learnt (Cohen and Bacdayan, 1994). Organizational change through development of new routines is an inertia-loaded process, because it is dependent on past behavior. According to Kogut and Zander (1992), because learning is local, close related to today’s practices, firms tend to act in the future in the same way they have acted in the past.

A burgeoning capability related literature argues that the intrinsic contents of organizational routines are important sources of stability and also change (Feldman and Pentland, 2003; Feldman, 2000). Individuals are found to be agents of reflexive and purposeful actions (Feldman, 2000) and knowing in practice makes possible to enact capabilities (Orlikowski, 2002). While we share these views, we are interested in the rationality behind the action of routine performance.

4.1 Routine as the Weberian notion of social action

The concept of organizational routines is intrinsically associated to the concept of bounded rationality (Simon, 1945; March and Simon, 1958; Cyert and March, 1963; Nelson and Winter, 1982). And, in Organization Theory, March and Simon (1958) clearly relate bounded rationality to the Weberian notion of formal rationality. Rationality is undoubtedly one of the most important themes found in Weber writings (Kalberg, 1980). Even to Weber himself, rationality is complex and ambiguous, and for this reason, is present in all his work (Brubaker, 1991). Despite its complexity, one may identify distinct types of rationality proposed by Weber. One of them, it is the formal rationality, defined by the calculation of means in relation to ends (Kalberg, 1980; Brubaker, 1991; Weber, 2000). The criticisms of the rationality underlying the classical
Economic Theory precisely concern the limited ability of calculating the most efficient means to achieve desired ends. In order to act rationally they assert that all alternatives of action are given, that their consequences are known and that the rational man is able to rank by utility all possible consequences (March and Simon, 1958). The lack of any one of these conditions imposes limits to economic rationality and the incapacity to maximize in the neoclassical economic sense (Nelson and Winter, 1982). Individual actions become routines because of the bounded rationality. It is a way to economize on the information processing involved in calculating means to an end. Therefore, organization routines only make sense if one understands them in a search for efficiency and efficacy.

The analysis of the rationality in routine performance is central to any attempt of integrating institutionalist arguments into the Resource- or Capability-based view. In Oliver (1997), such integration is found occurring in three levels: individual, firm and inter-firm levels. She discusses the concept of rationality at the individual level to argue that while in the RBV managerial choices are bounded-rationality oriented, in an institutional perspective they are non-rational, bounded by social judgment, habits and organizational history. She then associates economic rationality to efficiency and efficacy, and normative rationality to choices influenced by historical precedents and social justification. Oliver (1997) treats these two types of rationality as two distinct concepts that coexist, each one bounding choices in their own way, but without any connections between each other. The problem, in our view, is that such separation hampers the dialogue between the RBV and the institutional theory. To avoid this problem, we adopt a dialectical reconciliation approach (Astley and Van de Ven, 1983), under a Weberian perspective, to relate formal and substantive rationalities in the social action. Despite the analytical divide of two the types of rationality, we consider that, in practice, a given social action can be referent to ends, if oriented by formal rationality, or referent to values, if oriented by a group of values. The action is the same, but the rationality underlying the action may change. Following Weber, we take social action as the unit of analysis, instead of individual choices or decision making.

In our institutional view of organizational capabilities, organizational routines are social actions. Therefore, they may be oriented, not only by the traditional concept of formal rationality but also by the concept of substantive rationality. These two types of rationality relate to each other in routine performance. Since this is central to our argument, we concentrate in analyzing the Weberian notions of rationality and the relationships among them, as interpreted by Kalberg (1980). Weber (2000) defines a social action as the actions whose subjective meanings take account of the behavior of others and it is thereby oriented in its course. Two types of social actions are of especial interest to us: the value-rational social action and the instrumentally rational social action. Two other types found in Weber’s work, the affectual and the traditional social actions are not conscious patterns of rational action (Kalberg, 1980). The first is driven by emotions and the latter is driven by habit (Swedberg, 1998). They will not be considered here.

Rational social actions are related to Weberian types of rationality (Kalberg, 1980). Weber defines four types of rationality: theoretical, practical, formal and substantive (Kalberg, 1980). Formal rationality involves means-end calculation but it is referent (by
reference back) to universally rules, laws and norms. Efficiency is the sole criterion to choosing the means to achieve an end. Science, technology and legal system defines the notion of efficiency (Brubaker, 1991). Differently from the practical rationality, in which means are chosen as function of personal interests, the formal rationality seeks universal criteria in choosing the most efficient means; that is why it is the type associated to economic, scientific and legal matters (Kalberg, 1980). Substantive rationality is not associate to efficiency in means-end calculation, but it is “a matter of values” (Brubaker, 1991, p. 36). An action is said to be rational if it is coherent to a group of values, otherwise, it is said to be irrational. Of these four types, theoretical rationality is not associated to action. The second one, practical rationality, even though it is associated to the instrumentally rational social action (Kalberg, 1980) is not oriented by efficiency but rather by personal solutions to everyday problems. This gives it a diffuse and subjective character that makes difficult the introduction of a methodical way of life (Kalberg, 1980). For these reasons, we focus on the formal and substantive rationality, linked to the instrumentally rational social action and the value-rational social action, respectively.

In his work, Weber tried to show the regularities of conduct of the actors to comprehend social action (Aron, 2002). But he target broad themes like economic structures and ethical doctrines (Kalberg, 1980). Nonetheless, we believe that, as organizational routines are also described as regularities in the conduct of actors, they can be understood through Weberian lenses. Four remarks concerning Weber’s perspective need to be made. First, Weber uses his ideal-typical concept as a method to describing his ideas of rationality (Kalberg, 1980; Weber, 2000). In fact, a given social action does not orient itself exclusively by a specific rationality type (Weber, 2000, p. 16). Second, Weber affirms that patterns of social interaction based on formal rationality are less stable than the ones based in substantive rationality (Brubaker, 1991). While formal rationality is oriented by criteria of efficiency and efficacy, it is possible that it gives some support to a specific social action. However, it would have difficulties in creating and maintaining a pattern of social interaction as it faces everyday problems, not directly related to rational formal decisions, but ones that question the efficiency of the means in use, such as arising from conflict among different interest groups (Kalberg, 1980). Third, according to Weber, regularity in social action is maintained for several reasons (Kalberg, 1980) and the transition among the supporting reasons is fluid (Weber, 2000). Finally, an action considered rational in reference to a group of values may be considered irrational from the reference of another group of values (Brubaker, 1991). Having these four remarks in mind, we can proceed to analyzing organizational routines as Weberian social actions.

Organizational routines are social actions because they are oriented in reference to others. They are social actions that appear as a result of the organizational pursuit for efficiency and efficacy. They have a strong formal rationality orientation and, thus, they are instrumentally-rational social actions. Due to the costs and the calculability limits of the means-end relationship, individuals transform actions in routines. That is, limits to rationality confer regularity to these actions (March and Simon, 1958). Efficient routines reduce costs and yield superior firm performance (Nelson and Winter, 1982). However, they still oriented by a formal-rational reasoning. According to Weber (2000), formal rationality has difficulties in creating regularities because it is vulnerable to the
judgment of what it is considered efficient by science and technology (Brubaker, 1991). Organization routines are then continually open for questioning. Every time their efficiency is questioned, it is necessary to prove that they generate efficient results to the organization. This vulnerability yields costs and possibilities for change. If an organizational routine has been originally identified as an instrumentally rational social action, there are no impediments for the routine to change its orientation towards values. Kalberg (1980) cites the example presented by Weber of the Prussian civil servants of the 19th century who efficiently performed their tasks following the values of the so-called “bureaucratic ethic”. In this case, means to achieve efficiency was not questioned, since servants were oriented by values. Substantive rationality oriented these social actions, which would be classified as instrumentally rational (Kalberg, 1980). An organizational routine that becomes oriented by values is not anymore vulnerable to efficiency criteria. Therefore, its maintenance would less costly compared to a routine oriented by a formal rationality. Substantive rationality is a relational concept and the definition of what is rational is derived from only one group of values, not by any other (Brubaker, 1991; Weber, 2000). This makes value-laden routines more stable.

5. Capability Dynamics in its Entirety

The mainstream capability theory has narrowly focused on efficiency aspects overlooking the benefits of a more holistic approach of the role of values. When values are considered, literature does not explicit how different rationalities behind capability performance relate to each other, nor the role of the institutional environment. Previous attempts to introduce institutional arguments into the RBV framework (Oliver, 1997) hampered the dialogue between the two theoretical perspectives. Therefore, we posit that capability dynamics must be understood in its entirety. By entirety we mean analyzing values occurring at three levels: (a) from institutional fields at the environment level; (b) at the organization level; and (c) in the social action at the routine level. At the environment level, we take into account the pressures emanating from the organizational fields upon organizations. These pressures may vary in type, according to in which fields a specific organization participate, as well as in its intensity. At the organizational level, we assume that individuals share, to a reasonable level, beliefs and values (Schein, 1991) to form collective interpretive schemas (Ranson, Hinings and Greenwood, 1980). At the action level, we define routines as a social action in the Weberian sense. Routines are performed through rational social actions either referent to ends (formal rationality) or referent to values (substantive rationality) (Weber, 2000).

The three levels for analyzing capability dynamics in its entirety relate to each other recursively. Each level influences and is influenced by the other two in a dynamic relationship. The relationship between any two levels is said to be congruent if the mutual influences point to the same direction. For example, an organization may suffer pressures from an institutional field towards natural environment responsibility. If its values and beliefs also favor such responsible behavior, then that is a congruent behavior. If they do not, then incongruence exists. It should be noted that congruency does not necessarily imply equal values as in the above example. It is possible that environmental pressures do not correspond to the same organizational values and the
relationship environment—organization is still congruent. In the same example, if the organizational values and beliefs do not favor an environment protection, but responsibility towards the local community, this relationship is congruent to the extent to which avoiding polluting a river, that would damage the local area in which the organization operates, parallels broad issues of environment protection. If we thought of each level as a vector pointing to a direction, the resulting congruency level is the correlation between these two vectors. For more than a ninety-degree angle between the two vectors, there is no congruency.

The existence of routines in organizations only makes sense if they serve to seek for the most efficient way to perform a task or to meet specific efficiency objectives. However, both pressures from institutional legitimacy and related concepts, such as values and beliefs, play an important role to understand the capability phenomenon. As routines and capabilities suffer pressures from the organization and the environment levels, they may pass from an efficiency-orientation to a value-laden, substantive rationality orientation. This possibility has important implications. Recall that organizational routines oriented by formal rationality are less stable than routines sustained by substantive rationality. Therefore, when, at the action level, a routine is congruent to organizational values and to the pressures of the institutional environment, it becomes a value-laden routine, oriented by substantive rationality. It becomes even more reinforced and stable than its original status. When a routine that has achieved an overall congruency with the other two levels is used to perform a specific capability, the encapsulating capability is what we call a hardcore capability. Consider the firm in the previous example, whose values of being responsible to the local community was reasonably congruent with the institutional pressures towards natural environment responsibility. Let us assume that it has developed an efficient production capability that generates less residual to the environment. Thus, we can say that this organization has achieved, for that specific capability, an overall congruency among the three levels: the action, organizational and institutional levels. The congruency fosters the passage from an efficient-orientation to a substantive-rationality orientation for that capability. It becomes a stable hardcore capability, immune to the ongoing test of efficiency and efficacy. We then present the following propositions.

P1: The overall congruency among routine, organizational values and institutional pressures is both necessary and sufficient condition for an efficient-based capability to become a hardcore capability.

P2: The probability of an efficiency-oriented capability to become of a hardcore type is positively associated with its congruency level.

According to P1, if overall congruency for a given routine is no longer possible, the routine gets back to the original efficiency orientation and its capability is not anymore of a hardcore type. The lack of overall congruency occurs when congruence is lost in at least one of the possible combinations of two-level relationships. As a result, the underlying routine is perceived as irrational at the level where congruency is broken; and, for its maintenance, efficiency and efficacy criteria come into play again, reducing its stability level and open a way for change. The third proposition follows.
P3: The lack of overall congruency for a given routine makes possible the transition of its hardcore capability to an efficiency-oriented capability.

The possibility of a two-way transition between formal and substantive rationality orienting routine performance has implications for firm performance. We then return to the mainstream literature to show the implications of our institutional view of organizational capabilities. The efficiency-driven economic reasoning of mainstream capability theory explicates superior firm performance through rent generating processes from valuable superior capabilities. The value of a superior capability is exogenous to the RBV framework (Barney, 2001; Priem and Butler, 2001a, 2001b) and it is given by the extent to which they protect the firm against threats or capitalize opportunities (Barney, 1991) mostly concerning to the technical environment (Meyer and Rowan, 1977). Thus, how would the concept of hardcore capabilities fit in? We advance two corollaries of our previous propositions to show how hardcore capability affects firm performance in distinct technical environment conditions; first, stable environments and then dynamic ones.

In stable environments, specific investments needed to develop a regular and sustained pattern of capability change may not payoff (Winter, 2003). Hardcore capabilities are then the most preferred because they are less costly to maintain than efficiency-based capabilities. Firstly, because the investments needed to stabilize the pattern of actions are reduced. As their underlying routines are based on the substantive rationality (Weber, 2000), they are hardly questioned by organizational constituents. Secondly, because their taken-for-granted institutionalized moral values confer stability to one’s relative role vis-à-vis those of others (Galunic and Rodan, 1998). As a result of this role consistency, interpersonal uncertainties are reduced, trust is enhanced and the potential for opportunist behavior among individuals in a social system is minimized (Floyd and Lane, 2000). Moreover, hardcore capabilities possess intrinsic isolating mechanisms that sustain superior rents (Lippman and Rumelt, 1982; Peteraf, 1993; Barney, 1991). Since overall congruency is highly contextual and firm idiosyncratic, if a valuable routine is transferred to or imitated by other firms, it is less likely that overall congruency will follow naturally. The competitors would need to invest in developing an equivalent routine aligned to firm values and institutional pressures. Competitors would face path-dependency and causal ambiguity problems, and the fact that striving for a congruency is a socially complex problem (Dierickx and Cool, 1989), not only a matter of willingness. Therefore, if a hardcore capability and an efficiency-based capability have both equal market values, for the output they produce, the former would yield (and sustain) greater rents than the latter. From propositions P1 and P2, if we take as truth that there is such thing as a hardcore capability, then the logical implication follows.

C1: In stable technical environments, sustained superior efficiency is achieved if valuable low-order capabilities (or operational capabilities) become hardcore capabilities.

The feasibility of a dynamic capability would be the evaluated by the future payoff of the specialized investments needed to deploy it, compared to investments in ad-hoc problem solving (Winter, 2003). This suggests that capability development and change
in a regular basis may also occur in less dynamic environments (Zollo and Winter, 2002). When dynamic or higher-order capabilities are needed to efficiently change operational or low-order capabilities problems may arise. Managerial role conflicts are more likely, due to divergences about the expected role and the difficulty to detach of a specific role and to perform more than one role (Floyd and Lane, 2000). The system of beliefs that influence managerial cognition may be an important source of inertia in constraining and directing learning in new technological projects (Tripsas and Gavetti, 2000), specially when the value assigned to new projects is not aligned with traditional values (Leonard-Barton, 1992). Political pressures, bargaining, negotiation and conflict resolution among interest groups also shape the new capability outcome (Lavie, 2006). Markham (2000) found that individuals playing the role of champions in R&D projects act politically and do not necessarily act as a function of the technical merit of projects; instead they defend their department interests, specifically when there are divergence of goals and scarcity of resources.

The advantage of hardcore capabilities over efficient-based capabilities applies also for the case of dynamic technical environments, but with a slightly difference. Amburgey, Kelly and Barnett (1993) showed that when organizational inertia occurs in higher-level routines, organizational change is likely. According to the authors, this “momentum inertia” is produced when modification routines are established over time in way that successful changes made in past are likely to be repeated in the future. Thus, we propose that hardcore capabilities are preferred over efficient-based capabilities if the former is on a higher level than latter. They economize on the maintenance of the “momentum inertia”, generate a rather indisputable meaning for change that would make sustained new product development legitimate (Dougherty and Heller, 1994), and would attenuate also internal political disputes (Lavie, 2006) and cognitive divergences (Dougherty, 1992). Identity (Kogut and Zander, 1996) to high-level capabilities would attenuate role conflict, as multi-role assignment would not be questioned or misperceived (Floyd and Lane, 2000). If we accept Propositions P1 and P2, the logical implication follows.

**C2: In dynamic technical environments, sustained superior efficiency is achieved if valuable higher-order capabilities (or dynamic capabilities) become hardcore capabilities.**

For hardcore capabilities to generate superior efficiency in a dynamic level, one can argue that all zero-order or operational capabilities need to be non-hardcore ones. If not, as hardcore capabilities are more difficult to change, their presence would reduce the “working area” of dynamic capabilities. They would not be so efficient in matching the requirements of a changing technical environment. However, the theoretical assumption of the non-presence of operational hardcore capabilities in dynamic environments, of course, hardly holds in practice. Then, firms would face the challenge of changing no-longer valuable (in the technical environment) hardcore capabilities. We suggest that the two-directional transition between efficiency-oriented and value-oriented routines may solve for this problem. Indeed, from proposition P3, changing an undesired operational hardcore capability is possible if overall congruency is lacking. That is, if congruence lacks for at least one of the three levels. The routine and its capability would be questioned by its efficiency and efficacy and they would be opened to discussion and
change. Assuming proposition P3 as valid, and using the notion of level of congruency proposed in P2, we can estate the last corollary.

C3: The efficiency of a higher-order capability (or dynamic capability) in changing a given operational capability is negatively associated with the congruency level of the latter.

6. Conclusions

We developed an institutionalist view for organizational capabilities around the concept of values. Central to this view is the analysis of capability dynamics in its entirety. By entirety we mean accounting for the values occurring in three levels: the institutional environment pressures, the organizational values, and the social action at routine level. We first considered the environmental pressures emanating from what we called institutional fields. Organizations act to strive for legitimacy according to field pressures. At the action level, organizational routines were viewed as social actions. We took the Weberian concepts of substantive (value-laden) and formal (efficiency-oriented) rationality to understand the interactions between two types of social action: value-rational and instrumentally rational, respectively. Following Weber, we allowed for a two-directional transition between the types of rationality underlying routine performances. Environment, organization and routine levels recursively influence each other. We called attention to the concept of congruency of the mutual influences for any two-level relationship. If a routine has overall congruence, that is, if each relationship with each one of the other two levels is congruent, then its encapsulating capability becomes a hardcore capability oriented by a substantive rationality. The lack of congruency of any one of the two-level combinations reverses the aligned, hardcore capability to its original efficiency-based orientation.

The analysis of capability dynamics in its entirety and the concept of hardcore capability opened up for new interpretations of capability change and its implications to firm efficiency and performance. We showed that if a hardcore capability and an efficiency-oriented capability are both equally valuable in the technical environment, the former yields sustained superior efficiency than the latter. This is so because social action oriented by substantive rationality is more stable and less costly to maintain, since it is not subject to proofs of efficiency. While hardcore capabilities are preferred at the operational level in stable technical environments, in dynamic contexts they have positive impacts on efficiency if they are higher-order capabilities. The notion of overall congruency and the two-directional transition between rationalities supporting a social action also contributes to the understanding of the efficiency of dynamic capabilities. Since hardcore capabilities are harder to change, a dynamic capability would be efficient only in changing non-hardcore operational capabilities. However, an induced lack of overall congruence facilitates the changing of hardcore capabilities, as they become efficiency-oriented and subject to efficiency tests.

We gave some indications for the logical next step of finding empirical support for the propositions we developed here. Rather general operational definitions for the two central concepts are provided: (a) overall congruence: a composite of the correlation levels of all combinations of any two-level relationships. We give some suggestions to
generate data for each level. For the environmental level, the definition of institutional fields helps to empirically identifying pressures for legitimacy. Literature on identifying organizational values abound. Finally, although routine performance is less observable (Winter, 2003), capability output and objectives are rather identifiable (Dutta, Narasimhan, and Rajiv, 2005); and (b) hardcore capability: they are identified by the presence, and the level, of overall congruence of its underlying routine. However, some aspects of this institutional view need further development. Future research would explore the process of achieving and breaking congruency. Questions concerning the type and pace of this process remain. The concept of Institutional fields needs also more refining. How to set their boundaries and how to isolate each influence is worth researching.

We argue that our propositions and corollaries have broader implications for research. We suggest two additions to the RBV framework of sustained competitive advantage (Barney, 1991; Peteraf, 1993). First, the introduction of the “maintenance costs” an organization incurs to holding the pattern of action in routine performances. We showed that for two equally valued capabilities, the lower maintenance costs of hardcore capabilities makes a difference in generating superior rents. This is complimentary to the notion of “stock and flow” of resources proposed by Dierickx and Cool (1989) and parallels the idea of rent dissipation due to ex-ante competition (Barney, 1986; Peteraf, 1993). Second, the “overall congruency” concept provides important isolating mechanisms. They are akin to the concept of social complexity (Dierickx and Cool, 1989), but in a broader scope, since it considers the difficult-to-manage institutional pressures and the causal ambiguous, highly idiosyncratic, multiple relationships among the three levels involved in value analysis.

Our propositions also inform practice. Managers would be aware of the institutional pressures they face and how these affect organizational performance. The concept of institutional fields may help in setting boundaries for appraising the content, the intensity and the direction of such pressures. The diagnostic of congruency levels for valuable capabilities pertaining to a firm may help managers to protect their hardcore capabilities in stable environments, as well as to conduct change in dynamic environments. Finally, without this enlarged view and the possibility of change from an induced lack of congruency, the “working place” of dynamic capabilities would be reduced to only operational non-hardcore capabilities. Changing would be inefficacious.

References


