

# Middle-Level Managers and New Capability Development

## A Corporate Entrepreneurship Framework

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Middle-level managers are “where the change and inertia collide” (Floyd & Wooldridge, 1999: 124), and they play critical roles in the entrepreneurial process (Burgelman, 1983) and strategic renewal in organizations (Kuratko, Ireland, Covin, & Hornsby, 2005). However, this work seems to have not paid sufficient attention to the entrepreneurial nature of middle-level managers in the organizational life, only restricting their behaviours as an implementer of the prefigured organizational renewal strategy, a key organizational outcome of which is the new capability development.

Organizational capabilities (OCAPs) are the know-how that enables an organization to perform certain activities, and an important type of firm capabilities that contribute to the heterogeneity in firm performance in the Resource-based View (Barney, 1991; Dosi, Nelson, & Winter, 2000; Helfat, 2003). In a dynamic view, an OCAP follows a life cycle of founding, development, maturity and declination or renewal (Helfat & Peteraf, 2003). For a firm at early developmental stages or adopting new strategic initiatives, new OCAPs are constantly developed to substitute for old ones in order to adapt to the changing internal and external environments (Eisenhardt & Martin, 2000; Teece, 2007; Teece, Pisano, & Shuen, 1997). Although prior studies have offered useful understanding of the process of firm capability development and renewal (for example, Crossan, Lane, & White, 1999; Zollo & Winter, 2002), there is an identified need of more research on the microfoundations of capability changes that calls for bringing context and agency into the theorizing attempts, and addressing critical lower-level mechanisms and interactions among individuals, structures and processes (Felin, Foss, Heimeriks, & Madsen, 2012; Gavetti, 2005; Jacobides & Winter, 2012; Teece, 2007).

In this article, I focus on the microfoundations of organizational capability development, and outline the roles of middle-level managers in a system of intertwined agents and processes by emphasizing these managers’ entrepreneurial nature. Renewal of organizational capabilities involves organizational learning and is a multilevel process (Crossan et al., 1999). We therefore embed the argument of the middle-level managers’ roles in the overall entrepreneurial process that encompasses the entire enterprise, including active entrepreneurial agents on the upstream and downstream along the organizational learning routes as well as routine agents. At the micro-level, what agents do are important to explain capability development and its heterogeneity (Jacobides & Winter, 2012); different individuals may have different attributes and, thus, get into new ideas in quite idiosyncratic trajectories (Felin et al., 2012; Floyd & Wooldridge, 1999), or pursue them with different methods and effectiveness (Gavetti, 2005); various contexts (e.g.,

different organizational levels of an enterprise) provide different opportunities to individual agents and set boundaries for their actions (Welter, 2011). It is important to understand when, how, and why entrepreneurial actions happen and who gets involved in those actions in what way to understand capability microfoundation as well as to identify the roles of individual agents at each level.

In the following section, I first analyze the theoretical gaps that exist in the current capability development literature; I then propose a holistic theoretical framework outlining the interactions of middle-level managers and other organizational agents that facilitate new capability development in organizations.

### **The Gap in the Entrepreneurial Process Research**

Two gaps identified in the current entrepreneurship and capability literatures justify the proposal of a new capability development framework that is presented in this section.

An entrepreneurial process involves new opportunity identification and pursuit under the forward-looking leadership (Covin & Miles, 1999; Jacobson, 1992; Lant & Mezias, 1990; Mintzberg, 1998). In some cases, leaders set the tone and bring in new initiative from the top (Grant, 1996a). In other cases, entrepreneurial processes within existing organizations (i.e., corporate entrepreneurship (CE), or the case of developing new capabilities/initiatives) can follow the variation, selection and retention of new opportunities (Burgelman, 1983), in which multiple individuals commit to different and nested activities to collectively contribute to this process (Floyd & Wooldridge, 1999). An ideal model of CE involves three levels of agents who interact: Operational level individuals bring up autonomous strategic initiatives, middle-level managers implement the selection rules to determine they align with the strategic context, and corporate level management retroactively rationalizes the initiatives that have survived the selective effects of the structural context.

However, in this model middle-level managers are largely described as rule-followers, mainly conducting behaviors that “endorse, refine, and shepherd entrepreneurial opportunities” and “identify, acquire, and deploy resources needed to pursue entrepreneurial opportunities” (Kuratko et al., 2005). Imagining in an innovation-based enterprise, these behaviors may only facilitate the pre-set strategic objective of undertaking innovation, whereas they could not address the further explorative, double-loop learning that may revise the way of innovation (Argyris & Schon, 1978).

Routines that charge the change of existing ways of conducting certain tasks (substantial routines) are meta-routine (Nelson, 1982) and may contribute more essentially to dynamic capabilities (Teece, 2012) in an organization that is required to adapt to the changing task environment (Zollo et al., 2002). In the case of new product development (NPD), for example, the certain NPD process is a substantial routine, while setting back to decide what new product to develop or assess/improve the effectiveness of the NPD process is a meta-routine. Meta-routines may change to ensure the decision and processing of the NPD to be better conducted in a changing environment. The change of meta-routines, challenging the existing routines’ goal or methods (Argyris & Schon, 1978), requires a higher level of cognitive skills and resource combination capability.

### **The Gap of Entrepreneurial Agents in Capability Research**

Although differentiated in the entrepreneurial process research into three levels (corporate, middle, and operational), entrepreneurial agents are largely undifferentiated in the

existing capability development theory. Entrepreneurship is an aggregate construct affecting the introduction of new opportunities in capability development (for example, Lipparini & Sobrero, 1994; Zahra, Kuratko, & Jennings, 1999), or bringing in new ideas to facilitate knowledge increase (for example, Lant & Mezias, 1990; Minniti & Bygrave, 2001; Zahra, Nielsen, & Bogner, 1999; Zahra, Sapienza, & Davidsson, 2006). Furthermore, the current undifferentiated approach does not fully taking into account of the heterogeneity and idiosyncrasy of different individual agents (regardless of their levels) in the process. Concrete and various activities conducted by individuals of different propensity in different contexts will induce differentiated organizational consequences (Felin et al., 2012; Gavetti, 2005). Lacking necessary differentiation, this approach therefore falls short of the edge to examine micro-level mechanisms and interactions revolving entrepreneurship and, in turn, only produces a less nuanced understanding of capability development.

Not only are the heterogeneity of different agents not discerned, but also the multiple entrepreneurial activities of these agents are not explicitly discerned in these capability development models. Activities of opportunity identification, resource assembling and forward-looking leadership are yet to be articulated in the capability development process. For instance, entrepreneurial learning facilitates new opportunity discovery or search of creative ways of problem solving (Ahuja & Lampert, 2001; Minniti & Bygrave, 2001; Politis, 2005; Wang & Chugh, 2013); it is necessary to articulate how entrepreneurial learning of different natures performed by different agents – such as exploitative learning explorative learning and improvisation – facilitates capability development. For resource assembling, different entrepreneurial agents may present different accessibility (Ireland, Hitt, & Sirmon, 2003), alertness to accessible sources (Kirzner, 1997), and skills (Guth & Ginsberg, 1990), and may vary in the use of bootstrap, social cooption and social exchange (Baker & Nelson, 2005; Lipparini & Sobrero, 1994; Starr & MacMillan, 1990). Some may be well able to gain resources through intra-organizational networking (Kelley, Peters, & O'Connor, 2009) or be more adept at acquiring support by leveraging the formal managerial mechanisms (for example, the encouraging organizational structure, employee empowerment, or managerial intervention) and the entrepreneurial culture (for example, a corporate value for new ideas) (Burgelman, 1983; Salvato, 2009). Similarly, entrepreneurial leadership might not be applicable for all levels of agents in promoting the implementation of an opportunity identified (Gupta, MacMillan, & Surie, 2004).

The entrepreneurship literature also has identified three primary activities entrepreneurial agents undertake and contribute to the renewal and change of an organization: (Covin & Miles, 1999; Jacobson, 1992; Lant & Mezias, 1990; Mintzberg, 1998). The compounded effects of the missing differentiation of entrepreneurial agent characteristics and activities lead to a thorough discussion of the possibly nested activities and interactions of these entrepreneurial agents in an organization, which, in turn, misses the chance of an enriched capability development theory with detailed process parameters integrated. Multiple levels of entrepreneurial agents vary in how they identify and respond to a change need, and complement with one another so as to be integrated into a network of entrepreneurial activities and interactions that push the organization to accomplish new knowledge and activities.

Addressing these two theoretical gaps – overlooking middle-level managers' role as meta-routine champion and the differentiation of entrepreneurial agents in the capability development process, a framework of new capability development is proposed below. This

framework focuses on entrepreneurial agent differentiation and integrates the entrepreneurial nature of middle-level managers who can play important roles in meta-routine change in an organization.

### **Middle-level Manager as Entrepreneurial Agent**

Entrepreneurial agents are “champions” who bring into existence what do not currently exist within the repertoire of the firm (Burgelman, 1983; Lumpkin & Dess, 1996; Venkataraman, MacMillan, & McGrath, 1992). Entrepreneurial agents contribute to the firm’s innovativeness, proactiveness, and risk-taking orientation (Miller, 1983). Ordinary members in an organization can initiate new ideas and be agents of change that is incremental and moderate at a time (Feldman, 2000; Salvato, 2009), while key figures may be able to commercialize breakthrough innovation or directly adopt revolutionary new practices (Grant, 1996a). In addition, entrepreneurial agents differ in the key drivers of entrepreneurial activities: Some are driven by their individual personality, background, and interpersonal skills, whereas others rely more on an organizational system and culture that can facilitate aligned collective efforts of individuals at different organizational levels (Hitt, Ireland, Camp, & Sexton, 2001; Wang & Chugh, 2013).

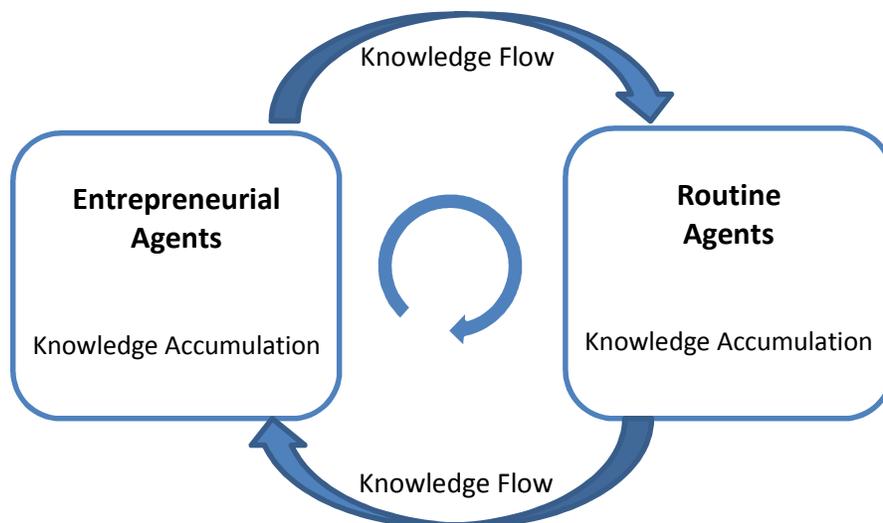
Middle-level managers, reflecting the above micro-level variety, have dual roles in the corporate entrepreneurship (CE) process. First, they act as gate-keeper who exercise the pre-determined selection rules in a regular CE process and implement the change in organizations (meta-routine implementing agent, a type of routine agent); second, they may also bring new ideas of change as input to the selection system (meta-routine altering agent). Both contribute to corporate entrepreneurship; however, the potential entrepreneurial attributes of these individuals reflected in the second role are not much discussed in the CE framework as well as the capability development theory.

To illustrate the roles of middle level managers in new capability development, in particular their interaction with other agents, we develop a distinction between three types of entrepreneurial agents in an organization: Types A, B and C. These agents vary in their positions in organizational hierarchy and their degrees of innovativeness, proactiveness, and risk-taking propensity (Gavetti, 2005; Howard-Grenville, 2005), and pursue changes at three *interfaces* of an organization: 1) the interface between an organization and its environment (Interface 1, Type A); 2) the interface between an organization’s substantial capabilities (equivalent to routine following the literature) and its meta-capabilities (meta-routine) in charge of upgrading the substantial capabilities (Interface 2, Type B); 3) the interface between a single (substantial) routine’s operation and performance (Interface 3, Type C) related to the flexibility of the routine (Feldman, 2004). These interfaces are the contexts where change needs with regard to a firm capability may arise, and these needs arise in light of the *misfits* between the two parts crossing at an interface, indicating the sources from which entrepreneurial agents identify the change needs. For example, the misfits between an organization and its environment indicate gaps to be filled by some organizational improvement and change (Cyert & March, 1963; Katila & Shane, 2005). Similarly, at Interface 3, routine changes can result from the misaligned routine performance (Feldman & Pentland, 2003). At Interface 2, a substantial capability (for example, old HR practices that emphasize employee retention) that is too stagnant to match the requirement of a firm’s dynamic capabilities (for example, the ability to innovate that requires constantly refreshed, energized workforce) indicates the need to redesign the substantial capability (for example, a better HR practice) or lower the requirement in the dynamic capabilities (for example, a milder level of innovation).

In addition, the lower-level interfaces are managed within the boundaries and rules set by the higher-level interfaces. For example, minor adjustments about how to practice an existing routine (Interface 3) still aim to support the operational function and effectiveness of the routine; and major changes in substantial capabilities (that is, new routines; Interface 2) are made within the pre-set rules about organizational effectiveness and learning goals. Nonetheless, Interface 1 gives rise to changes beyond pre-set organizational rules or constraints, and entrepreneurial agents Type A may conduct non-routine search for idiosyncratic opportunities beyond the internal rules.

At each interface, entrepreneurial agents identify misfits and, in turn, capability change needs (problems or opportunities with regard to the current capability); then, they assemble resources to pursue the changes, and lead the changes through coordinating with routine agents to establish a new or renewed capability (Figure 1). Routine agents operate and maintain routines without bringing changes to an organization at a given point of time. According to the agent variety argued above, we view ordinary organizational members who contribute to flexible routines (Feldman, 2000) as a specific type of change agents (Type C) and being entrepreneurial too, varying in degrees of these characteristics. As a result of the cyclic agent coordination and interaction process (Figure 1), knowledge and knowhow that defines a capability is enacted, accumulated, and modified (Nonaka, 1994; Crossan, 1999). Table 1 summarizes the three types of entrepreneurial agents and their projected sets of activities in idea identification, resource assembling, and leading.

**Figure 1**  
**Interaction and Knowledge Dynamics between Routine and Entrepreneurial Agents in OCAP Development**



**Table 1 There types of entrepreneurial agents and their activities**

<b>Entrepreneurial agents</b>	<b>Type A</b>	<b>Type B</b>	<b>Type C</b>
<b>Interface</b>	Organization-environment	Low-high levels of routines	Structure-performance of single routines
<b>Idea source</b> (misfits with respect to the preset aspiration level)	Organizational level results	Meta-routine results	Substantial routine results
<b>Identification action</b> (how to identify ideas)	External scanning External networking Boundary spanning Experimentation	Internal scanning Rule interpretation Idea twisting and matching	Personal mindfulness Real-time analysis and reflection Small-scale trial and error
<b>Resource action</b> (how to put resources in place)	Directing Dictating Re-combining	Internal supporting Internal network cultivating Internal brokering	Self-sustaining Small-scale coordination
<b>Leading action</b> (how to mobilize other agents and resource holders to achieve the goal)	Visioning Context creating	Strategy implementation Sub-context creating Temporary context creating	Ownership and identification to a routine Understanding of the corporate strategy
<b>OCAP consequence</b> (what is brought into the OCAP system)	Aspiration adjusting Major meta routine change Major substantial routine change	Minor meta routine change Major substantial routine change	Minor substantial routine change

We therefore propose an interface-based, multilevel framework that integrates the three types of entrepreneurial agents and routine agents in an inter-related mode (Figure 2); in this framework, middle-level managers represent the Type B entrepreneurial agent and contribute to the implementation of the opportunities of capability change identified through both interfaces 1 and 3.

Type A agents excel in identifying opportunities or problems at the interface between the organization and the environment, such as those related to new or potential markets, technologies, and competitors. This task is highly cognitive and tacit, and requires complex, idiosyncratic creative and analytical skills of individuals. Besides the personal social capital, experience and skills possessed, external-oriented activities help these agents to keep an outward looking perspective and strong alertness to the happenings in the environment (Floyd & Wooldridge, 1999); opportunities are therefore identified through spanning the boundaries to transfer information and knowledge from the external for the focal organization's use (Aldrich & Herker, 1977). External oriented, explorative entrepreneurial learning occurs through non-routine search that induces path-breaking opportunity identified and allows to overcome organizational inertia (Floyd & Wooldridge, 1999).

Insert Figure 2 about here

As a result, Type A entrepreneurial agents may identify the change needs that affect all levels of the OCAP system, from low to high including: the detailed structure of a specific routine, the constituents of substantial capabilities, and meta-routines. If the previous aspiration level remains, major changes in meta-routines have to occur, and trigger the changes in the deployment and structure of a large number of substantial routines in the organization, beyond the predicted by the existing meta-routines. Examples of such meta-routine changes include re-setting the initiative selection rules (Burgelman, 1991) and re-designing the control system such as policies of evaluating and rewarding (Mintzberg, 1998).

Some Type A agents may hold a central position and leading power, which allows them to facilitate a dedicated resource assembly process to pursue the identified change needs (Floyd & Wooldridge, 1999; Wolcott & Lippitz, 2007). They instill the newly identified concept to the organization (Nonaka & Teece, 2001), create strategic intent to penetrate the whole organization (Hamel & Prahalad, 1989), encourage risk-taking behaviors in other organizational agents (Lumpkin & Dess, 1996), or alter the aspiration level of organizational learning (Winter, 2000). Such activities create for other agents a new context of urgency, understanding, and even directives of the change needed in the organization, and devote the organizational members to a course of actions (Grant, 1996a). Other Type A agents at less central positions in the organization may have to rely on a formal, arm's-length system to justify the feasibility of the initiative and seek resources allocated for it. Examples include the opportunities related to champions' specialty technology domain or personal background. In this case, opportunities identified by non-central Type A agents go through the meta-routine interface managed by Type B agents (Figure 2).

Similarly, at the substantial routine level, Type C entrepreneurial agents depart from being a rigid routine performer but actively employ minor adjustments to a routine (Feldman, 2000; Salvato, 2009). Working at the interface of the routine operation and routine performance, these agents may be conscious to adjust the routine operation, hoping to improve the performance. The adjustment is small and incremental in nature within the structure of the established routine, so that it does not fundamentally change the identity of a routine, although at the micro level, the operation of the routine changes. In an example of such a flexible routine, academic recruiters adapted a single-department hiring routine to a joint-department one through a series of trials over an extensive period of time, and the old and new routines resemble each other for these two highly-related hiring tasks (Feldman & Pentland, 2003). This change does not necessarily influence the organizational capability for "hiring", but does improve the fit between this capability and the slightly changed context.

In the sense that any routine to some extent consist of a part of an inter-coordinated organizational knowledge base (Becker, 2004; Grant, 1996b; Kogut & Zander, 1992; Nelson & Winter, 1982; Winter, 2000), deviation from the existing structure will cause other related parties to necessarily adjust their routines accordingly. Resources needed for small adjustment could be minimal, which may be easily marshalled at a scale without having to solicit many actors' collaboration in the organizational hierarchy. Organizational consequence of small adjustments may be limited to the specific group who undertakes the routine, unless the change is large enough to require the coordinated change in other related routines. Excessive resource

requirements and/or organizational consequences can cause the Type C agents to hesitate to pursue it due to a perceived failure of the empirical test (Floyd & Wooldridge, 1999). In this case, local changes may need to intersect with the Interface 2 of the organization and solicit the formal managerial intervention of Type B agents (Salvato, 2009), similar to the case for non-centrally-positioned Type A agents.

Type B agents evaluate and substantiate new ideas of change coming from both the Type A (non-central position) and Type C agents, facing the variety of new initiatives from them. The job essentially is to bring change to the existing substantial capabilities through a relatively routinized way, that is, meta-routines, for example, new project decisions aiming to achieve strategic adaptability that involves a series of steps of evaluation and selection. Type B agents possess the characteristics of both Type A and Type C agents in that 1) similar to Type A, Type B agents are authorized with a certain level of power (within boundaries of the meta-routine structure) to determine the change direction of the organization (the selection step); 2) similar to Type C, Type B agents may have room to adjust when implementing the meta-routine and exerting the power.

Differently, however, Type B entrepreneurial agents have idiosyncratic alertness to new opportunities. The alertness is driven by their information-rich position and the deep understanding of the organization. On the one hand, Type B agents face a legitimately “manageable” internal environment and are located in the hub position of internal information; being “where the change and inertia collide” (Floyd & Wooldridge, 1999: 124), new initiatives beyond the ability of the Type A and C agents will have to go into the filter (Interface 2) managed by Type B agents to get evaluated and implemented. On the other hand, these agents, as meta-routine performer, have developed a fairly good understanding of the overall organizational goal and establish the connection to it by performing the meta-routine (Feldman & Rafaeli, 2002). Rich information is therefore well received by these agents of strategic mind, and is processed, analyzed, and synthesized to produce complete knowledge about the situation and solid drive for change (Ahuja, Lampert, & Tandon, 2008). Compared to lower-level routine performers, middle-level Type B agents are more likely to exercise the entrepreneurial learning, recognize and bring up novel ideas regarding their tasks, that is, to implement meta-routines and facilitate the adaptability of the organization.

The nature of meta-routines also facilitates entrepreneurial behaviours in Type B agents, that is, to allow the alteration of meta-routine occurring. As a higher level routine addressing flexibility and change, meta-routines can be equivocal (that is, may be interpreted in multiple ways short of full codification), equifinal (that is, different paths achieving the same end) (Eisenhardt & Martin, 2000), and amorphous (for example, the definition of “novelty” or the degree at which to put a brake on risk-taking may differ upon different needs) (Kuratko et al., 2005). More room may exist in meta-routines compared in well-established substantial routines. Therefore, implementing meta-routines can as well be a creative job requiring a high level of cognitive skills. Loosely guided by the meta-routines, Type B agents may carefully scan potential initiatives, re-interpret the meta-routines, examine the quality and potential consequences of the initiatives, and monitor the fit between the meta routines and the performance of new initiatives generated under these routines (Table 1).

This way, Type B agents may influence what initiatives are finally retained to be pursued. By re-interpreting or adjusting the meta-routine, they can increase or decrease the variety of ideas, and relax or tighten the selection criteria. For example, when a meta-routine tends to restrict a desired level of flexibility accomplished in an organization, more initiatives may be

encouraged through Type B agents' inspiring interpretation of the policy and relaxing the rules as needed; they may also help twist the idea to allow it passing the selection criteria (Kuratko et al., 2005). Aligning with the ultimate goal of a meta-routine, Type B agents may adjust the way performing it to accommodate the ever-changing, nuanced requirements of fit between the internal and external environment. Type B agent look for sound rationality-based justification on the one hand, and stay ready to refine and re-enact the rationality in order to trigger desired changes.

Furthermore, Type B agents help organize resources to support fitting initiatives, thanks again to their broad understanding of the organization, and the intersection position between the corporate and operational levels. Hence, in pursuing the selected initiative, Type B agents are adjacent to a broad range of organizational members, and advantageous in cultivating the intra-organizational network for themselves, or act as broker to provide direct connections between initiative initiators and resource holders (Kelley et al., 2009) should there be a match. In so doing, Type B agents create an entrepreneurial sub-context within the organization that is temporary and "on demand" (i.e., as needed) to support appropriate internal idea pursuit. In addition, these agents can work more directly on strengthening and communicating the selected initiatives to endorse its resource assembly; they are a main force to nurture new substantial routines by using the well-developed understanding of the organizational strategy, and help establish them to turn into a part of the organizational knowledge stock (i.e., attaining efficiency) (Adler, Goldoftas, & Levine, 1999). They are critical change agents in that their job is to facilitate change happening, but also that they try to be entrepreneurial and overcome the inertia that collides in their position when they exert the former responsibility (i.e., facilitate change happening). For example, they may go beyond the formal resources allocated to them to proactively pursue innovative solutions for change (Starr, 1990); based on the high proficiency and close attention to their meta-routine work, improvisation may be a frequently-used approach (Feldman & Pentland, 2003) when it comes to either building connection resources and people who need them, or providing endorsement mechanisms. Like in new initiative selection, Type B agents' alertness and creativity also plays a key role in the resource assembly process for selected initiatives.

Based on the above analyses, we propose the following to outline an interface-based, micro-perspective system of new capability development through the inter-related entrepreneurial activities of the three types of agents (Figure 2):

***P1:** Misfits at an interface drive the identification of OCAP change needs by a corresponding type of entrepreneurial agents.*

***P2:** Bootstrapped resources by entrepreneurial agents will support minor, local changes in routines.*

***P2a:** Bootstrapped resources by entrepreneurial agents Type C will support minor, local changes in substantial routines;*

***P2b:** Bootstrapped resources by entrepreneurial agents Type B will support minor, local changes in meta-routines.*

***P3:** Misfits that cannot be addressed by bootstrapped resources may drive the entrepreneurial activities by the Type B agents at Interface 2.*

***P3a:** Misfits at the interface of substantial routine (Interface 3) that cannot be addressed by Type C agents' minor local attempts will be presented at the*

*interface of meta-routine (Interface 2) and addressed by Type B agents' meta-routine process.*

*P3b: Misfits at the interface of organization (Interface 1) identified by non-centrally-positioned Type A agents will be presented at the interface of meta-routine (Interface 2) and addressed by Type B agents' meta-routine process.*

*P3c: Type B agents conduct entrepreneurial activities to address the intersected change needs initiated from Interfaces 1 & 2 by 1) creatively practice the meta-routines, or 2) altering the meta-routines to accommodate the emerging change needs.*

**P4:** *Type B agents' entrepreneurial activities are driven by 1) the deep understanding of the organization and its strategy; 2) the broad access to internal resources due to the intersection position at the middle level.*

## **Discussions**

The motivation for this research lay in the need to further our understanding of how organizational capability (OCAP) changes are practiced and pursued by entrepreneurial agents at the micro level. Entrepreneurial action is an idiosyncratic source of microfoundation underlying OCAP change through “calibrating opportunities and diagnosing threats, directing (and redirecting) resources according to a policy or plan of action, and possibly also reshaping organizational structures and systems” (Teece, 2012). Yet recent research underscoring the microfoundation of OCAP points out the need to dissect the entrepreneurial process and to explore the roles of agents and their interactions with organizational structure and process (Felin et al., 2012; Jacobides & Winter, 2012; Teece, 2012). In fact, existing research on capability development and organizational change has suggested critical roles played by individuals at different organizational levels (for example, Feldman, 2000; Gavetti, 2005; Kuratko et al., 2005; Salvato, 2009), contrasting to the traditional view of business-level entrepreneurs as dominant change agents. It is necessary to reconcile the new research needs and cumulate our understanding about entrepreneurship in driving the OCAP changes. The objective of this paper was to develop a framework for elaborating the differentiated roles of different entrepreneurial agents in identifying and implementing the OCAP changes when existing structures (of routines and meta-routines) fail to fit the performance aspiration at different interfaces of an organization (that is, misfits). In so doing, the study takes a further step to incorporate the process and practice perspectives into the research of capability development (Parmigiani & Howard-Grenville, 2011).

The major contributions of this study are three folds. First, as is already noted, the understanding of microfoundations is noticeably needed in the current research on capabilities that only produces incomplete and mixed observations. Integrating the entrepreneurship and dynamic OCAP literatures, the proposed framework (Figure 2) provides a nuanced understanding of who does what to facilitate the new capability initiation and establishment. Three types of entrepreneurial agents and their coordination and collaboration with the routine agents constitute a nested, contingent network of actions that result in multilevel change needs of OCAPs being identified and pursued. Radical changes about how an activity is conducted takes place after being brought in and initiated by central, powerful entrepreneurial agents who are more connected to exogenous sources of misfits. Other agents complement to work on the more endogenous and reflective sources of misfits due to their closeness to operation and more

constrained profile of resources and impact affordability. This understanding helps create an inclusive theoretical model to reconcile a much broader range of changes that occur in organizations than what the flexible routine or exogenously-driven dynamic capability approaches would address.

Second, the framework developed in this research further illustrates just how varied and complex entrepreneurial activities and interaction can be when key organizational capabilities are at stake. The framework echoes the demonstrated argument in the literature that different agents may behave differently due to their attributes in terms of hierarchical position, social capital quality, and personal skills (Gavetti, 2005). The focus on individual actors reveals that the corporate entrepreneurship process is not something that can be institutionalized, but “a reflection of the idiosyncratic nature of individuals or organizations” (Floyd 1999: 138). By differentiating entrepreneurial agents, I further this idea to show that an agent’s power (on resource assembly and result coordination) and the context differentiation (interfaces) will contribute to this idiosyncrasy and influence from where a new idea of OCAP change is initiated and how the idea is pursued. New OCAP changes therefore are pursued according to a ladder of the combinations of personal and organizational attributes.

Third, the proposed framework highlights that the role of middle-level managers goes beyond the meta-routine implementers to only support a pre-set strategic renewal process (for example, screening and endorsing a justified initiative to maintain a desirable pace of renewal) (Floyd & Wooldridge, 1999). Instead, they are also important entrepreneurial or change agents who use creative ways to interpret and adjust the meta-routine, help with the resource brokerage, and proactively balance the internal initiatives’ variety-retention relationship in supporting the dynamic capability. The role of middle managers as “manager” or “administrator” and the role of them as “entrepreneurial agents” and new idea “initiator” are distinguished, where they can initiate new ideas on meta-routines in charge by them, or ideas on resource assembly for others’ idea pursuing. The dissection of the activities of middle-level managers substantiates the claim in previous entrepreneurship studies about these managers’ critical roles. Furthering the prior research argument of middle managers being “where the change and inertia collide” (Floyd & Wooldridge, 1999: 124), I elucidate the process how the middle-level become the confluence of the various new ideas and problems that are not handled in their original levels.

The proposed theoretical framework indicates the directions for future research. The study proposes a system of multilevel entrepreneurial agents and their activities that may drive the development and renewal of organizational capabilities in a complementary and interlocking way. Besides directing our future empirical microfoundation research to different individuals’ activities at the three interfaces, and to how they interact to realize capability renewal, it is also argued that two contingency factors – resource requirements and anticipated OCAP consequences – determine how the pursuing of new ideas of OCAP changes may be distributed among different agents. Going beyond an aggregate level feasibility analysis for each new idea, this argument points to the importance of assessing the resources required and the consequences anticipated that a specific entrepreneurial agent will have in face of a variety of potential ideas. Future research should therefore incorporate resource and consequence assessments into more precise investigations on new capability development in the dynamics between different entrepreneurial agents, and between entrepreneurial and routine agents. These dynamics will reflect “that routine-based logics of behaviour are intertwined with more cognitive, calculative ones” (Gavetti, 2005).

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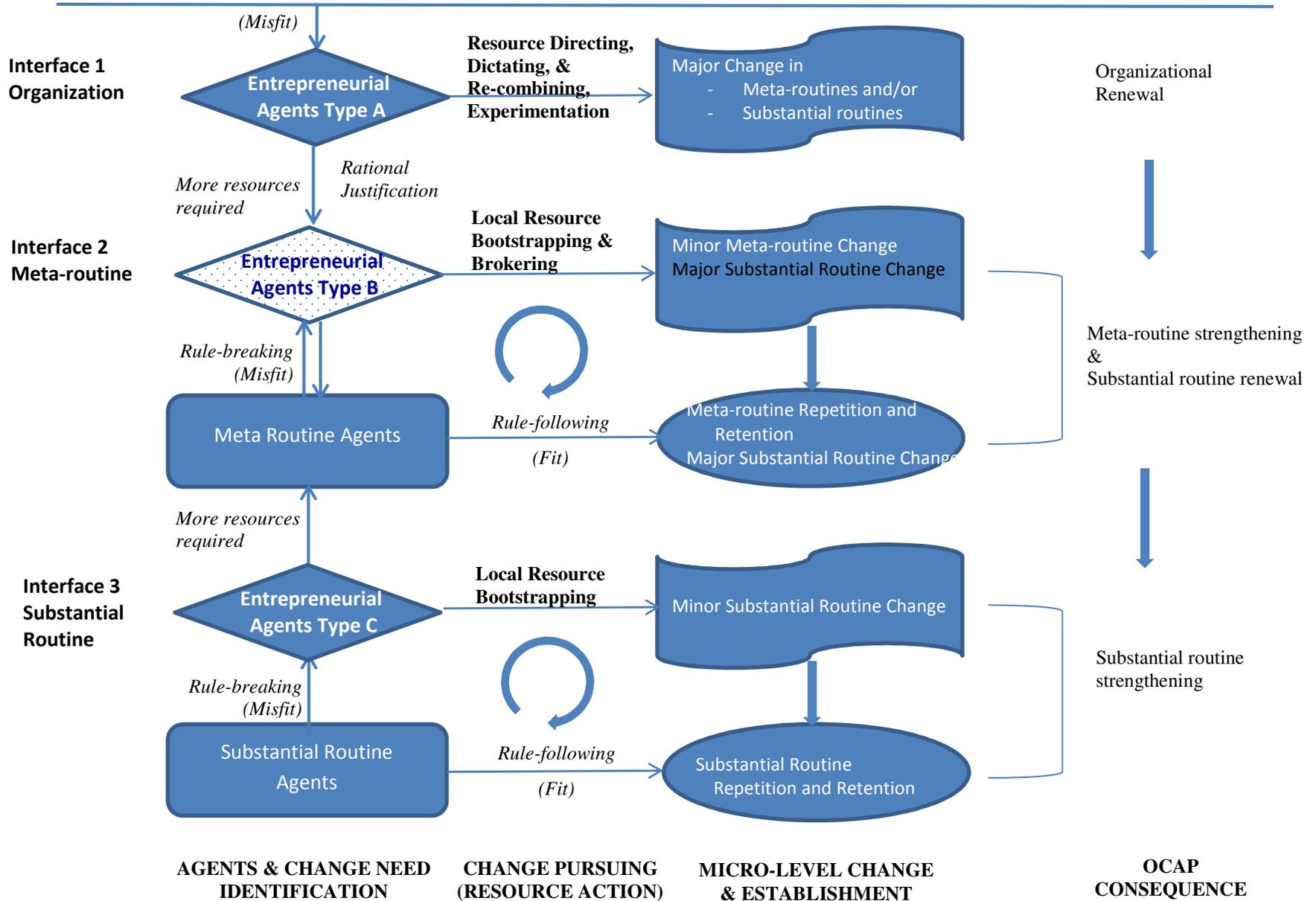
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**Figure 2. Agents, Processes, and Consequences of OCAP Changes**

External Environment: Other organizations, market changes, technology trends, regulations



Note: Routine agents differ from entrepreneurial agents in that the former are generally rule follower.

