

Corporate Renewal Through Internal Venturing and Spin-offs: Perspectives from Organizational Economics

by

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Abstract

We address the closely related phenomena of corporate venturing and spin-offs in the context of organizational economics, for example, agency perspectives and the evolutionary perspective on firms. These perspectives allow us to say something about both the amount and nature of variety creation inside firms. For example, there are strong arguments that firms will tend to produce too few and too “narrow” venture ideas. Moreover, organizational economics is helpful in deriving propositions about the occurrence of spin-offs, which we separate into “vicious” and “virtuous” ones. The former type refers to ventures that could have helped bringing corporate renewal, but where overruled venture managers left the firm in frustration. The latter type refers to ventures that are too far away from the firm’s core business(es) to assist in corporate renewal, but where their spin-off is tantamount to a learning experience to the firm.

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I. Introduction

Many scholars have emphasized the importance of internal corporate venturing for corporate renewal and for shaking up “core rigidities” (Burgelman, 1983; Leonard-Barton, 1992). However, it is a quite common phenomenon that many venture ideas are either killed by higher-level management, or, if the ideas are allowed to blossom, are followed by spin-offs. In both cases, corporate renewal may be jeopardized.

In this paper, we address the relations between internal corporate venturing, spin-offs and corporate renewal. In particular, we will be taken up with discussing under which circumstances spin-offs are “virtuous” in the sense that they assist, or at least do not harm, corporate renewal, and under which circumstances they actually harm corporate renewal, that is, are “vicious”.

Spin-offs are normally defined as an individual or an organizational unit leaving an existing firm to start as a new firm on the basis of his/her knowledge and competences. While much may be said in favor of spin-offs on the societal level as they help disseminate knowledge and in general promote technological dynamism¹, to the individual firm confronting a potential spin-off, the situation may be different.

¹ Historically, numerous large firms have grown from small spin-offs and the importance of spin-offs to technologically progressive regions such as Silicon Valley or Route 128 is generally recognized.

For example, spin-offs may be the result of lack of internal support and approval to pursue the perceived opportunity – a lack of support and approval that may produce a number of harmful effects, such as the inability to update resources and capabilities through effective venturing and a general negative effect on the entrepreneurial climate in the organization. However, spin-offs may also have beneficial effects (Ito, 1995; McGrath, 1995). Thus, a spin-off of internal ventures (e.g., by management buy-out) may provide the firm with a learning experience about its strategic capabilities, it may help keeping the firm focused on its core business, or it may help creating a powerful incentive for intrapreneurs to seek and exploit productive opportunities.²

Despite some similarities between the two types of spin-offs – for example, both reduce intra-firm diversity – they play quite different roles in the internal corporate venturing process and have different implications for corporate renewal. The interplay between corporate venturing, spin-offs and corporate renewal need to be investigated in more detail.

For that purpose, we rely on arguments from *organizational economics*. We emphasize that we do not offer a finely honed theory, but an explorative discussion that rely on organizational economics arguments for pragmatic reasons. We follow Barney and Ouchi (1986) and think of organizational economics as composed of a diversity of streams of thought on economic organization. Among these are *agency theory* (Alchian and Demsetz, 1972; Holmström, 1982, 1989; Jones and Butler, 1992; Aghion and Tirole, 1997), *transaction cost theory* (Williamson, 1996), *incomplete contracts theory* (Hart, 1995),

² This virtuous character is, however, controversial. For example, in Hoskisson et al. (1994) spin-offs and management buy-out are treated as the result of mistakes, due to inadequate strategies and inappropriate governance structures. In addition, according to Burgelman (1983, 1991) successful internal ventures play a crucial role in changing the strategic direction of the firm and thereby adapting itself to the new environmental conditions. In a similar vein Leonard-Barton (1992) has argued that successful internal ventures are agents for renewal. Obviously, when these successful ventures are spun off, they can play no role as change agent.

evolutionary economics (Nelson and Winter, 1982), *team-theory about information structures* (Sah and Stiglitz, 1985; Sah, 1991), and *the resource-based approach* (Penrose, 1959; Richardson, 1972; Wernerfelt, 1984; Rumelt, 1987, 1995; Foss, 1997a).

This is admittedly a broad menu of perspectives.³ However, what is important in the present connection is that they all capture *aspects* of the firm, *and* that they are helpful in connection with understanding spin-offs.⁴ In an explanatory sense, the relevant perspectives are therefore complementary; we obtain additional knowledge of corporate venturing, spin-offs, etc. when we examine them with the lens provided by each of the different perspectives. Thus, as we will argue, a conceptualization of the firm as, for example, a nexus of contracts that embodies property rights and incentives is helpful for understanding spin-offs; thus, some agency costs may be reduced by a spin-off, because management no longer have to control activities with which they are basically unfamiliar. However, a conceptualization of the firm that emphasizes resources and capabilities and views the firm as a learning entity may certainly also be helpful. In this perspective, spin-offs may be beneficial, for example, because incorporating new unrelated ventures in the corporate portfolio would stretch learning domains too much.

The design of the paper is the following. We begin by briefly discussing the literature on internal corporate venturing, and make the point that spin-offs

³ And the menu could be even broader. For internal corporate venturing and spin-offs are issues that relate intimately to the debate (in both economics and management studies) on the innovative potential of small versus large firms, to technology strategy, and to the theory of real options. Since we do not want to further complicate an already complicated issue, we abstain from drawing on these streams of thought, however.

⁴ For the more ambitious argument that these theories are generally helpful in the context of theorizing corporate strategy, see Mahoney (1992) and Seth and Thomas (1994). For inquiries into the relations between these diverse perspectives, see Fransman (1994) and Foss (1997c). For contributions that also apply to both resource-based/evolutionary perspectives and transaction cost/agency perspectives, see Rumelt (1987, 1995) and Teece et al. (1994).

are often outcomes of the internal corporate venturing process. In fact, spin-offs may be seen as failures of the venturing process (Section II, *“Internal Corporate Venturing and Spin-Offs: The Context”*). These failures are, of course, failures of the parent company – they may be seen as missed opportunities or inability to develop sufficient exploratory search routines looking for possibilities to renew the capabilities of the firm.

Thus, the study of spin-offs as special cases of internal corporate venturing is intimately related to the key strategic management issue of corporate renewal. In order to arrive at a fuller understanding of internal corporate venturing and spin-offs, we place these phenomena in the context of organizational economics (Section III, *“Internal Corporate Venturing: Perspectives From Organizational Economics”*, Section IV, *“Implications for Spin-Offs”*), and derive a number of propositions about these phenomena. For example, we argue that there may be an inherent conservative bias in many organizations, particularly strongly hierarchical ones, that operates against new venture ideas.

II. Internal Corporate Venturing and Spin-Offs: The Context

A. Exploration and Exploitation

A first convenient perspective on internal corporate ventures and spin-offs is to situate these phenomena in the context of 1) the variation-retention-selection scheme associated with evolutionary economics and organizational ecology perspectives (Nelson and Winter, 1982; Marengo, 1995; Levinthal, 1995), and 2) the exploitation-exploration trade-off investigated by Penrose (1959),

Wernerfelt (1984) and March (1991). The variation-retention-selection scheme and the exploitation-exploration trade-off are closely related ideas.

In this context, corporate venturing is an aspect of firm-specific variety creation, and spin-offs may be seen as one result of the operation of the firm-specific selection mechanism.⁵ The process of creation of variation and the later selection among this variation is, in the context of the theory of the firm, increasingly often related to the exploration/exploitation trade-off. This is the idea that a key corporate level strategic challenge concerns the search for a proper balance between the exploitation of existing resources and exploration, that is, the sort of experimenting that may lead to the creation of new skills, capabilities, resources, and products.

Although both are needed for long-term survival, exploitation is more short-term and oriented to improve current operating efficiency, while exploration is aimed at finding new sources for growth. March (1991) stresses the necessity of balancing these, and implicitly assumes that exploitative and explorative efforts may go on simultaneously within a firm. However, others have emphasized the difficulty of combining them, and have concluded that they are in reality mutually exclusive (e.g., Ghemawat and Ricart i Costa, 1993). Essentially, this is because each mode requires the development of specific and distinct capabilities, commitments, modes of cognition and incentives. In this context, the problem is not so much a matter of balancing both modes, but more of how to change from one mode to another, for example, when the industry product/process life cycle moves from its “fluid” to its “mature” phase.

Quite a number of scholars have examined how firms have reconciled these conflicting orientations (e.g., Volberda, 1996; Volberda and Baden-Fuller, 1996), how they have moved from one orientation to another (Baden-Fuller and

⁵ Herbert Simon (1962) first suggested that these evolutionary mechanisms can be taken inside organizations, as it were.

Stopford, 1994; Leonard-Barton, 1992), and what are the drivers for firms to change the relative importance of each of those two orientations. Concepts from the corporate entrepreneurship and renewal literature have been helpful in improving our understanding of these questions. In particular, research on internal corporate venturing and strategic alliances have given some insight into ways of dealing with the paradoxical demands of maintaining and renewing the distinctive capabilities. Thus, Leonard-Barton (1992) has shown how ventures can function as agents for renewal, and Lorenzoni and Baden-Fuller (1995) provide evidence that capabilities derived from strategic alliances may help renewing the core capabilities of the firm.

B. Spin-offs and Corporate Venturing: A Framework

In order to examine the role of spin-offs in the internal corporate venturing process Elfring, Meeusen-Henniger and Volberda (1996) developed a framework for analyzing the venturing process. It is characterized by three features.

First, ventures are assumed to be how somewhat separated from the main line of business,⁶ where the degree of separation differs from totally independent skunkworks to projects which are headed by line managers. A key issue is the degree of autonomy of the venture. Some claim that they should have substantial autonomy, while others have suggested that failures can be linked to too much autonomy (e.g., Venkataraman, 1992).

Second, three levels of management are distinguished. Besides top management and the management of the business units it is important to recognize the level of venture managers. Each has a particular role and responsibility

⁶ In reality, this is not necessarily the case, but making the assumption allows to highlight problems that would not exist under less extreme assumptions.

and it is difficult to discuss only one, because they are strongly interrelated. Quite different views about the role of the various levels of management are put forward in the literature, and we will also contribute an opinion here. For example, we will argue that how the process of rejection or approval of venture projects is actually organized influences the rejection/approval rate.

The *third* feature is the recognition of three stages, namely an *idea generation stage*, a *selection stage* and a *consolidation stage*. In the idea generating stage, it is important that there is sufficient exposure to other environments, such as scientific, technological or market fields that are new to the firm. Venturing begins with the activation of some person or persons to sense or seize new opportunities (Kanter, 1990) . The individual willingness to exercise alertness (Kirzner, 1973) to perceived opportunities depends to some extent on the willingness of the firm to support such a potential venture. (In fact, we will take it as a basic assumption that the more often venture managers are overruled by higher-level management, the weaker their incentives to engage in explorative efforts). At this point the selection of venture proposals is of importance, and we will identify a number of mechanisms that underlie and influence this process. Finally, new venture ideas that have survived the internal selection mechanisms are candidates for acting as agents of renewal through being integrated with the firm's existing operations. Spin-offs may, however, also take place during this consolidation phase.

There can be *three outcomes* of the internal corporate venturing process. One outcome is a failure to turn the perceived opportunity into a profitable business proposal. The second possibility is the success of the venture, as measured by its profitability and growth potential. In this case, the integration of the venture organization into the main line of business is the main concern. The third potential outcome of the venturing process is a spin-off, which, as we will argue, can be either virtuous or vicious to the firm.

C. Types of Spin-Offs

As explained earlier, a spin-off can be an individual or an organizational unit leaving an existing firm to start as a new firm on the basis of his/her knowledge and competences. This definition thus includes both individuals breaking away from existing companies to create their own business and the divestiture of a business unit, support activity or project group. We deal with both cases in the following.

An obvious key question is, Why would individuals leave relatively secure positions in established firms in order to run their own, normally rather risky, start-up company? The two most common explanations appear to be frustration with one's present employer and the perception that greater financial rewards can be earned by running one's own company (Garvin, 1983). This type of spin-off can thus be seen as a failure from the point of view of the parent company. The parent company for some reason or another was not able or willing to exploit the opportunities perceived by an intrapreneur.

The second category of spin-offs relates to an organizational unit instead of to an individual. This type of spin-off is usually seen as more favorable as, in most cases, it does not compete with the firm it originated from. This category may again be sub-divided into two distinct groups. One group concerns internal units that produce goods and services for internal use. Empirically, quite a number of these internal units have gone through a gradual process to become more autonomous, and some have also taken the final step and have been spun off. The other group includes successful ventures which are divested by the parent company because the latter wishes to

concentrate on its core business, or perhaps because the firm may not control the complementary assets that are necessary to bring the fruits of the venture to the market (Richardson, 1972; Teece, 1986).

Because the venture is successful, but the firm has a parenting disadvantage in managing it (cf. Goold and Campbell, 1987), the venture has a higher market value (value to another firm or stand-alone value) than the value it has to the firm. In some cases, it may be preferred to maintain some kind of relationship between the parent company and the shedded unit, for example a minority ownership by the parent company (Ito, 1995).

These two latter two types of spin-off can be beneficial to the original firm and can therefore be labeled as “*virtuous*” spin-offs, quite in contrast to the first category, which will be referred to as “*vicious*” spin-offs.

The trouble with the existing literature is that there is 1) a lack of ability to consistently distinguish between virtuous and vicious spin-offs, and 2) that work on corporate venturing has not been extensively tied to the spin-off phenomenon. As a result, it is hard, from existing perspectives, to address and satisfactorily answer questions such as, What insights can spin-offs give with regard to which venture strategies are the proper ones? Do these strategies provide sufficient possibilities to reduce the number of vicious spin-offs and account for virtuous spin-offs? Etc.

However, in the 1990s a number of studies (Burgelman, 1991; Galunic and Eisenhardt, 1996; Miner, 1994) appeared on the development of intraorganizational phenomena from a population ecology point of view – studies that at least have the potential of addressing these questions. Instead of taking a population of firms as the level of analysis, these studies focus on a population of internal initiatives, and conceptualize changes in such a population as a result of the interplay of various mechanisms of evolutionary

change, such as variety, heredity/retention and selection. In such studies, the units of analysis have been tailored to this approach.⁷ These studies signal the emergence of a viable intraorganizational ecology tradition. It is a novel and interesting use of the ecological perspective, and we will refer to this perspective, too, to frame our analysis of corporate venturing and spin-offs.

III. Internal Corporate Venturing: Perspectives From Organizational Economics

Long-run survival and growth requires that the firm is able to update and expand its productive opportunity, that is, “...all of the productive possibilities that [the firm’s]entrepreneurs see and can take advantage of” (Penrose, 1959: 31). It is a shared conviction in a large and heterogeneous literature (e.g., Penrose, 1959; Ghemawat and Ricart i Costa, 1993; Levinthal, 1995; Marengo, 1995) that accomplishing this requires that the firm controls two basic organizational capabilities, namely an adequate variation generating mechanism, and a selection mechanism that select adequately among different ventures.

We want to add a third capability: *the capability required to secure a steady availability of intrapreneurs motivated to “champion” ventures.* The venturing process is highly dependent on individuals who want to take risks and have the stamina to explore new possibilities. In much of the literature on venturing and renewal, the availability of these individuals is essentially taken for granted. But clearly, this assumption is not warranted in general, and it is desirable to make the availability of intrapreneurs endogenous to the analysis.

⁷ For example, in Burgelman (1991) the unit of analysis was the internal corporate venture, and in Galunic and Eisenhardt (1996) it was “charter losses”.

In fact, the very existence of vicious spin-offs is a signal that entrepreneurs are leaving the firm. It takes a deliberate policy of providing sufficient incentives to be attractive for entrepreneurs. Virtuous spin-offs may be an incentive instrument that can foster such a policy. Further research is needed to detect the underlying mechanisms.

In this section, we address internal corporate ventures and spin-offs in the disciplinary context of organizational economics *and* in the specific context of the Elfring, Meeusen-Henniger and Volberda (1996) framework that was described in section II.B.

A. Overall Perspective

In order to throw light on the phenomena of corporate venturing and spin-offs, we begin by adopting a basic resource-based perspective on the firm. Thus, firms are seen as bundles of heterogeneous resources, particularly knowledge resources (e.g., capabilities), that are operated by a management team for a strategic purpose (Penrose, 1959; Rumelt, 1987; Foss, 1997a). In this context, a spin-off can be translated into a reduction of the corporate resources and capabilities portfolio, perhaps because the resources and capabilities underlying the venture that is being spun off are thought to be too “dissimilar” (Richardson, 1972) relative to the firm’s core resources and capabilities, and therefore too hard to manage. Conversely, one of the objectives of corporate venturing is the extension of the frontiers of corporate capabilities – that is, the creation of new resources – by providing means and incentives for a process in which members of an existing firm bring into existence products and markets which do not currently exist within the repertoire of the firm (Venkataraman, 1992). Thus, corporate venturing is clearly an explorative and experimenting process – but it is still a process that takes place within an organizational

context consisting of firm-specific information structures, norms, and incentives.⁸

In fact, as we argue later in more detail, the importance of this context derives from the fact that it both co-determines the generation of new corporate venturing and helps selecting among new ventures. In order to understand this process, we will draw on both ideas from evolutionary economics and population ecology, such as the scheme of variation-selection-retention, and on transaction cost and agency theory perspectives. The table below summarizes our overall perspective.

Conceptualization of the firm	Corresponding theory	Relevance for corp. venturing/spin-offs (examples)
Bundle of resources	Resource-based persp.	Are the resources underlying the venture related to the existing resource portfolio? Will they help us achieve sustained competitive advantage?
Learning entity	Evolutionary econ./ Intraorganizational ecology	Does the venture/spinn-off further organizational learning?
Bundle of projects	Team-theory	How does the information structure of the firm influence the probabilities of acceptance of projects/ventures?

⁸ Ten years ago, Richard Rumelt (1987: 138) observed that “...it would be good to have more precise understanding of the types of structural and contractual arrangements that facilitate or impede entrepreneurial activity”. Our emphasis on contracts, incentives and information structures may be seen as a partial response to this.

Bundle of specific and governance mechanisms	Transaction costs theory/incomplete contracts	Do we possess the complementary assets that are necessary for commercializing the fruits of the venture?
Bundle of contracts and incentives	Principal/agency theory	Are incentives adequate to produce a steady flow of new ventures?

Before we begin the more analytical discussion, it is necessary to state and restate a number of underlying assumptions:

1. Ventures are somehow separated from the main line of business (e.g., spatially). This separation is normally necessary due to the forces of dominant logic (Prahalad and Bettis, 1986), which may easily kill new ideas and efforts (if the dominant logic is oriented towards the development of mainframes, this may kill ideas that are related to PCs).
2. Ventures are a) risky, b) unpredictable (in the sense that not all future contingencies associated with the venture can be foreseen), c) long-term and multi-stage, d) labor intensive, and e) idiosyncratic in the sense that there are substantial information costs of comparing venture projects to other (venture) projects (cf. Holmström, 1989).
3. There are venture managers who will often act as champions, that is, individuals who will try to affect some change in the organization. Their motivations are a mix of personal gratification from running their own project, improved career possibilities, expected direct bonuses if the venture turns into a success, etc.

4. Ventures have to be approved of by at least one manager who is higher placed in the organization than the venture manager.
5. Ventures may be analyzed in a three-stages framework, consisting of an idea generation stage, a development stage and a consolidation state. We concentrate on the first and the third of these.
6. Because of the properties under 2), venture managers are likely to have private information about the return potential of ventures.

Among other things, these assumptions have the implication that venture projects cannot be understood as simple investment projects. For example, it may be unclear what their internal returns are, how they fit with existing activities, which real options they imply, etc., etc. In the following section, we discuss such complications in the context of the Elfring, Meeusen-Henniger and Volberda (1996) framework.

B. Analyzing Corporate Venturing

Generating Ideas for New Ventures

The issue of generating ideas for new ventures implies several sub-issues. For example, there is the issue of generating the right *amount* of new ideas, and there is the issue of generating the right *kind* of new ideas.

In an evolutionary economics/intra-organizational ecology context, the creation of new ventures amounts essentially to the creation of new variation, and spin-offs amounts to a reduction of variation. As contributions to these streams of thought recognize, an important aspect of the variation generating mechanisms is organization structure (Marengo, 1995). For example, it has been argued that new ventures should be separated from the main line of business:

to help new ideas blossom, they need to be unburdened by the organization's past successes, commitments, cognitive constructs,⁹ incentive structures, information channels and routines. Spatial separation may be one mechanism to help safeguarding the creation of diversity. A second mechanism to promote the generation of new ideas is to rely on a bottom-up mechanism: Those who are close to the markets or the technologies should be able to come forward with new perceived opportunities, and top-management should be willing to enter into a learning process with respect to new the venture proposals (Prahalad, Doz and Angelmar 1989). A third mechanism is simply to institute a large degree of freedom (in terms of work hours) to experiment, for example, as in the practice in much technology management where researchers can spend, say, 15 per cent of their time on their own projects

One problem with these mechanisms is that while they may stimulate diversity, and perhaps bring the firm closer to an optimal exploitation/exploration trade-off, there is no guarantee that the right *kind* of ideas are being generated.¹⁰ It is, of course, in the nature of things that what is the right kind of idea is hard to tell *ex ante*, and sometimes ideas that seemed initially completely unrelated to the firm's capabilities, resources, and cognitive constructs may turn out *ex post* to have been important agents for change and corporate renewal. But venture managers that are concerned about their careers may nevertheless be sensitive to higher-level managerial pressure to not put forward too many too unorthodox ideas. Thus, we may suggest the following proposition:

⁹ When we talk about "cognitive constructs" here and in the following, we intend this to refer to a diverse range of concepts such as "culture", "dominant logic", "managerial heuristics", etc.

¹⁰ This suggests that we really need a more fine-grained analysis of what "exploration" means.

Proposition 1: *There may be a strong bias in favor of venture ideas that are “close in” to the firm’s existing base of resources, capabilities and cognitive constructs. In this case, too little exploration is produced.*

In fact, as long as a firm is successful, there may not be much incentive to introduce changes or to initiate internal ventures which differ from the successful core business (Levinthal and March, 1993). The generation and introduction of new variations will often be triggered by declining performance.

Sometimes a change in top management due to weak performance results in an increase in diversity, as new top-managers bring in new people, new ideas and other criteria to judge new perceived opportunities. This reactive pattern is, however, not always successful, since often it comes too late to redress the declining trend. A main question must therefore be how to move from a reactive to a proactive policy concerning variation generating mechanisms.

There are different ways to achieve such an objective. One is a committing strategy of open’ness to new ideas and willingness to experiment a bit. This approach assumes that management is capable of distancing themselves from the dominant logic while judging new venture proposals.

Another mechanism that may support the generation of new ventures is the presence of a corporate entrepreneurship culture. One aspect of such a culture is the incentive system designed to stimulate intrapreneurship (Jones and Butler, 1992). We take a look at this in the following paragraphs, drawing on principal/agent theory.

In the basic principal/agent model, the risk-neutral principal (manager) is unable to observe what the risk-averse agent (venture manager) does, but he can observe (and write a contract over) the outcome of the agent’s efforts

(which are costly to the agent). However, this outcome is also influenced by a stochastic variable (the mean and variance of which principal and agent may have the same, correct knowledge), so that there is a stochastic project return. The principal's inability to observe the agent's effort is what gives rise to the incentive problem. A contract that specifies payment to the agent in term of the outcome only solves the incentive problem, but not the problem of risk allocation. The design problem essentially is to encourage effort without overly burdening the agent with risk. The solutions to the problem conform to intuition: the agent's share is larger, the lower is his risk aversion, the risk of the project, and the agent's cost of action.

Proposition 2 (Principal/agent): Assuming a positive relation between the number of venture ideas and the efforts of venture managers, there will be more venture ideas, the higher is the agent's share (pecuniary, reputational) in the project, and the lower his risk aversion, the risk of the project and his cost of action.

One way to make the basic model richer is to introduce some monitoring variable, which is a signal that may allow the principal to infer something about the agent's real effort (for example, it could be the agent's efforts under other projects). Typically, the more risky a project is, the more monitoring on the part of the principal is needed. This is because the more risky a project is (and therefore the more risky the agent's payment), the less effort a risk-averse agent will mobilize. He would therefore need to be more closely monitored. Since new venture projects are much more inherently risky than standard investment projects, this would seem to call for much more monitoring than in the case of standard projects.

To the extent that this is not what is observed, this may be because the firm implicitly trades off the higher incentive and monitoring costs associated with a venture project against its potentially higher returns (Holmström, 1989).

However, the other side of the coin is, of course, that more risky projects may be suppressed precisely *because* of their known high incentive and monitoring costs (whereas the future returns are uncertain). Moreover, because letting the agent work with similar or overlapping projects provides the principal with better signals for inferring his real effort (Milgrom and Holström, 1991), there may be a strong tendency to promote similar venture projects and suppress novel types of venture projects.

Proposition 3 (principal/agent): *Because of the risk properties of venture projects, and the resulting high incentive and monitoring costs, there may be a tendency to conservatism in idea generation: agents are basically only allowed to work with a narrow set of ideas, and too dissimilar ideas are suppressed.*

Thus, we find that basic principal/agent considerations is a force pushing towards conservatism, specifically too little production of variation, to many new ideas that are too similar. Of course, this is merely a mechanism/tendency that may be counteracted by managerial action. For example, the best of all worlds is the one in which management succeeds in creating an entrepreneurial culture that *both* keeps agency problems at bay *and* promotes a willingness to experiment.^{11 12} However, not all firms are blessed

¹¹ This is hard to interpret in the context of principal/agent theory, because this theory takes preferences as given, and organization culture is very much about influencing preferences and not just incentives.

¹² This idea to stimulate employees to seize opportunities may be more easily realized in a proactive learning environment. The Miller and Chen (1994) study gives some clues on how to shape a proactive learning environment. They made a distinction between reactive and proactive learning. The former is based on rewards and punishments, and often poor performance signaled the need to act. Proactive learning is motivated not by performance problems or crisis but by provocative information, market diversity, and the desire to realize opportunities. Such proactive learning is driven by the forces that inspire rather than threaten managers to act. Diversity in markets or customers can be a route resulting in a wide number of opportunities. The openness of top management (Burgelman, 1996), and its ability to provoke, or, in the terms of Bartlett and Ghoshal (1993), to shake up the established status quo may alert and inspire managers to seize those opportunities.

with such a management (or culture), and many firms must reckon on incurring substantial agency costs in connection with their exploration efforts.

Another solution is the one employed by 3M. Top management sets an overall goal that, for example, the company's existence depends on whether in 5 years time 25 per cent of the turnover will come from products which are presently not in the portfolio. This puts pressure on the intrapreneurs to search for new opportunities and also commits management to funnel the funds to finance the internal venturing process. It is somewhat akin to the joint forcing contract discussed in Holmström (1982), where all team members' full effort is necessary for anybody being paid.

In the context of agency problems, further complications are introduced when managerial mobility is explicitly allowed for (cf. Rumelt, 1987: 153-154). If venture managers maximize the present value of their future earnings, and there is a probability that a part of these earnings will be obtained later in other firms, a venture manager's representation of the earning potential of his venture may be twisted by his ability to leave the firm in favor of other firms if his excessive representation of the earnings potential of a venture does not live up to expectations. This may bias venture ideas in favor of ideas with short-run gains and long-run losses, because venture managers hope for personal advantages associated with early gains and reckon on being able to leave the firm in the case of later losses.

Proposition 4 (*principal/agent*): Because venture managers are mobile, there is a tendency towards generating venture ideas that have a bias towards short-term gain and long-term losses.

The upshot of this section essentially is that both the number and the nature of new venture ideas are influenced by considerations that relate to both principal/agent theory and to theories that stress more evolutionary and

knowledge-based aspects of firms. Moreover, the two sets of theories allow us to identify a fundamental trade-off associated with the generation of new ideas for ventures:

Proposition 5 (modified exploration/exploitation trade-off): While the creation of diversity/variation through new venture ideas may be conducive, and even necessary, for long-run survival, intra-organizational variety creation is unavoidably associated with agency costs.

Thus, organizational learning through experimentation is inherently costly, not just because it is in the nature of things that not all new ideas can be profitably used by the firm, but also because of the agency costs that are inherent in the process.

Selecting among ventures

As we have seen, there are several reasons why the wrong amount and the wrong kind of ideas for new ventures may be produced. Intuitively, the later process of selecting among ventures may produce further harm. Basically, two mistakes may be committed here: wrongly promoting a malign venture or wrongly rejecting a beneficial venture. However, the process may also be beneficial, first, in the sense that it selects in favor of the right venture, and, second, in the sense that it selects away malign venture ideas, for example, those that do not harmonize with the firm's underlying resources, capabilities and cognitive constructs. In this case, the managerial act of selecting against such a venture may lead to a beneficial spin-off, for example, by frustrated, overruled venture managers.

Evidently, top management has an important role in creating, shaping and influencing the selection environment. They can intervene directly by

deciding on the approval or disapproval of proposed internal ventures; this is the role of *judge*.

Top management's indirect influence is important as well: they have the ability to establish or change the rules, procedures and culture which constitute the selection mechanisms to help better sorting out the most promising venture proposals. In this case, the role of top management is not one of judge but rather a more limited one, that of *orchestrator* (Galbraith, 1982) of the selection environment. For example, management may decide on the "organizational architecture" that is used in connection with evaluating venture ideas.

Following Sah and Stiglitz (1985) and Sah (1991), consider a team-theoretic set-up (so that we suppress all incentive problems) with two stylized selection environments consisting of two organizational architectures, a "*hierarchy*" and a "*polyarchy*". Each consists of two managers. In the hierarchy, a venture idea is first evaluated by a lower-level manager, and if he approves of the idea, it is evaluated by a higher-level manager who has the final decision on rejection or acceptance. In a polyarchy, a manager can reject or accept a venture idea independently of the other managers. The managers can basically commit two types of mistakes: they can reject a good project or they can accept a bad project.

In this simple setting, suppose the two managers have the same probabilities of accepting a given project, that is to say, the same probability of committing mistakes. Then, a polyarchy will accept a larger fraction of all types of ventures, bad ones and good ones. This is because the managers in a polyarchy together have a larger probability of accepting any given project than either of the two alone. In a hierarchy, the situation is the opposite. Which one of these two architectures is most profitable depend on the nature of the projects they are evaluating and on the managers' probabilities of committing mistakes. For example, if a manager's approval of a bad venture idea is a less

frequent problem than its rejection of a good venture idea, then a polyarchy is more profitable, because obviously it will then pay to give the venture ideas a second chance (as in a polyarchy) rather than giving it a second hurdle (as in a hierarchy).

Now, consider these ideas in the context of the characterization we have given of venture projects as a) risky, b) unpredictable (in the sense that not all future contingencies associated with the venture can be foreseen), c) long-term and multi-stage, d) labor intensive, and e) idiosyncratic in the sense that there are substantial information costs of comparing venture projects to other (venture) projects. Given these characteristics, it seems reasonable to suppose that an individual manager, who has to approve or reject a given venture project, will exhibit a high probability of rejection of good venture projects. This implies that a hierarchy (in the sense used here) may be a too harsh selection environment.

Proposition 6: *The selection of new ventures is sensitive to how the process of approval or rejection is organized. Specifically, a hierarchical system of approval and rejection may suppress too many new venture projects.*

There is indeed evidence (Galunic and Eisenhardt, 1996) that in order to counteract this tendency, firms in high-tech environments have back-up mechanisms: When a venture proposal is being rejected by a higher-level manager, the venture manager can go somewhere else within the firm, for example, to another division (this is possible when the charters for division are flexible) or to an internal venture capital group that may finance projects which are denied funding by their division managers.

Consolidation

In the consolidation phase, it is assumed that most malign ventures have been selected against. Thus, in this stage the central questions are: Is it still

worthwhile (given our increased knowledge about the venture) to keep the venture, and if so, how to integrate it into the main line of business, and if not, how to spin it off. As research in evolutionary economics (Marengo, 1995) has clarified, it is not just important to generate new intra-organizational variation; the new knowledge also has to somehow be absorbed by the rest of the organization. In evolutionary terms, this issue has to do with the mechanism of retention.

According to Miner (1994), the crucial concept underlying the retention process is that of consistency. Management seeks to maintain consistency between the content of the venture proposals and their strategic vision of the future of the firm. When ventures possess sufficient relatedness to the other activities of the firm, they become candidates to be integrated. However, if new ventures are too close to these, the firm will not learn from the venture; it will simply be an incremental addition to already existing ongoing learning processes (Prahalad, Doz, and Angelmar, 1989).

On the other hand, as research on diversification from resource-based and evolutionary perspectives (e.g., Teece et al., 1994) has clarified, ideas that stretch learning domains (existing organizational learning as it relates to markets, products and technologies) *too much* are malign: they simply don't mesh with the resource, capabilities and cognitive constructs of the firm. The logic may be cast in terms of information costs (cf. Casson, 1997): because of differing cognitive frames, it is costly for venture managers and other agents involved in the new venture idea, to communicate the idea and therefore also its return potentials. In fact, much of the relevant knowledge may be tacit, which further adds to the information costs of transmitting and digesting knowledge about the new idea.

Proposition 7 (evolutionary/resource-based): *Ideas for new ventures should lie within the right learning domain, that is, not too far away and not too*

close to the firm's existing resources, capabilities, and cognitive frames.
Ventures that are outside the right learning domain should be spun off.

What is “the right learning domain” may, however, depend on the specific firm (Christensen and Foss, 1996). Relatively unrelated ventures can lead to a favorable strategic change of the company as they are integrated (see Burgelman (1994) on Intel).¹³ Spinning off such a venture is clearly what we have called a “vicious” spin-off. We pursue these implications further in the next section.

IV. Implications for Spin-Offs

The importance of internal corporate venturing for strategic renewal has often been noticed. Bottom-up processes and autonomous strategic initiatives create diversity in the initial stages of the venturing process. A selection process characterized by intrafirm competition, peer review and retrospective sensemaking from the top creates the opportunities for firms to adapt without relying on extraordinary foresight of corporate executives. Under particular circumstances the successful ventures can act as agents for renewal.

In this paper we have conceptualized the internal venturing process (and also the spinning-off of ventures) as phenomena that relate to the periphery of the firm.¹⁴ Internal ventures are viewed as experiments, and from a bundle or

¹³ To incorporate strategic renewal, Christensen and Foss (1996) develop the concept of dynamic corporate coherence, which they see as the capacity to exploit and explore synergies or new combinations from competences and strategic assets.

¹⁴ The idea to conceptualize a firm consisting of two distinct but changing parts has been put forward in the literature by economists (Langlois and Robertson, 1995) as well as by organization theorists (Singh, House and Tucker, 1986). The former, associated with the resource-based approach, stresses the idiosyncratic, synergistic, inimitable, and non-

“swarm” of experiments a number of successful ventures emerge. From the “swarm” of venture start-ups, only a limited number will be successful. Moreover, in practice only one or two of these are chosen as renewal agents. A number of successful ventures will be scrapped or deprived of sufficient resources in the development, selection and even in the consolidation stages. For example, there may be a managerial perception that the venture proposal is “out of tune” with the resources, capabilities and cognitive constructs of the firm. In economic terms, the proposed venture induces too many information and coordination costs, and may be spun-off for this reason

Moreover, the very organization of the selection process may influence the rate of spin-offs (as in Proposition 6). For example, in the context of the framework of Sah and Stiglitz (1985), vicious spin-offs may occur when beneficial venture ideas are rejected, for example, by a hierarchy (which, we argued, will often be biased towards this mistake). Overruled and frustrated venture managers leave the company with their idea. Clearly, there is a feedback-loop from the process of venture idea selection to the perceived incentives of the involved intrapreneurs. However, the nature of this feedback-loop is certainly not unambiguous.

The first thing to note is that the internal process of survival of the fittest is usually not a very nice process, and involves much political maneuvering. There may be negative consequences for the internal entrepreneurial climate flowing from this process – consequences that will not be felt immediately; only some time later the number of new venture proposals might be lower due to lack of intrapreneurs. Moreover, a very harsh selection process that turns

contestable character of the intrinsic core of the firm. The capabilities in the core cannot be duplicated, bought or sold. The periphery of the organization consists of capabilities that are contestable and may be not unique. The contribution from the organization theory field to the core-periphery distinction has emphasized the propensity for change. Core changes are difficult to accomplish and are thought to be more disruptive, while changes in the periphery can be more easily described by an adaptive process.

down a lot of venture proposals may influence the internal entrepreneurial climate in a negative way simply by diminishing the *expected* personal pay-off associated with putting forward new venture ideas. These are clearly mechanisms that hinder corporate renewal through venturing. A number of potentially successful ventures will be scrapped or deprived of resources – a process that is typically very frustrating for the involved intrapreneurs. As a result the entrepreneurial climate may deteriorate and the future number of venture proposals might substantially drop.

On the other hand, spinning off ventures may not only have negative incentive consequences. On the contrary, knowing that the firm provides overhead in connection with developing new venture ideas, and that one may later commercialize the venture if its spun off (possibly with the financial assistance of the “mother” company) may indeed be a forceful incentive to put forward new venture ideas. Thus, allowing some venture ideas to blossom and then spinning out some of the successful ventures seems a proper alternative for at least two reasons.

First, as already mentioned the option of spinning off may be a good incentive mechanism for intrapreneurs. This contribution to the incentive structure of the firm might be of crucial importance to the availability of a sufficient number of intrapreneurs. And the availability of intrapreneurs, who are eager to pursue opportunities is considered to be the backbone of variation generating mechanisms. However, spinning out all successful ventures is no solution, as some of those ventures might be crucial as agents for renewal. Therefore it is a fundamental managerial challenge to find the proper rate of spinning out successful ventures.

Secondly, a firm can *learn* from failing ventures and spin-offs. Increased awareness and understanding of which activities and capabilities that are *not*

consistent with the firm's core competences arguably help to identify the capabilities which *can* provide the firm with a competitive advantage and which activities and capabilities should be added to make this competitive advantage sustainable. Guarding consistency in order to assure corporate coherence is an important task for top management, and "failures" of ventures can be helpful in that process.

However, in these cases, the contribution to renewal of the corporate core is only indirect, namely through the incentive effect and through the learning effect. Moreover, a snag with the incentive effect is in fact that it may become too attractive to be spun-off: The champions of the successful ventures may prefer to be spun-off, instead of entering an uncertain (and perhaps less remunerative) process of integrating and renewing core capabilities. In that case, the spin-off may be considered vicious, as the venture possibly could have been a factor contributing to corporate renewal.

To repeat, a crucial issue therefore is how the organization of the whole process of corporate venturing affects the rate of vicious spin-offs. We can distinguish two extreme positions. One of the extremes can be typified as a (or a number of) top-manager(s) putting restrictions on the sort of venture ideas that can be tolerated and afterwards examining alternative venture proposals, choosing those ventures with the highest probability to meet the goals and finally assuring their implementation. This is basically the classical rational planning model (Miner, 1994). The opposite extreme is one in which management encourages variation with almost no control and no direct involvement in its content.

It is intuitively clear that in the first case the amount of vicious spin-offs will be substantial. Many venture proposals are turned down, without giving the intrapreneurs any possibility to undertake some exploratory actions to check its feasibility. This may substantially harm the incentives of

intrapreneurs to put forward new venture proposals. Thus, tight control is here combined with dull incentives.

The opposite extreme may go some way towards solving the incentive problem; however, because control has been strongly relaxed, it creates new problems, which might be just as destructive for the future of the firm. Large cost overruns is one likely problem to appear in the short-term. In the medium-term, a second problem might arise. This concerns the risk of ending up with a very diverse and unrelated set of activities.

These two problems are closely related to the issue of autonomy granted to the venture. "Autonomy" is here a measure of the formal decision rights that management concede to the venture. Obviously, the more autonomy in this sense, the larger the risks associated with lack of control and the possibility to end up with a wide array of new technologies or products which do not fit into the main line of business. On the other hand there are forceful arguments to grant the venture autonomy. Thus, the venture should not be burdened by the existing routines and commitments of the core business¹⁵. Venture managers often value autonomy both for its own sake and because it may boost their reputation and thus the value of their human capital. To the extent that management is very unfamiliar with what the venture is doing, this is a force pulling towards giving venture managers autonomy (see Aghion and Tirole 1997).

It is clear that a balance has to be found here. The rate of spinning out successful ventures will be a critical instrument in the realization of a certain

¹⁵ The literature is divided about this issue. Day (1990) strongly supports complete autonomy for new venture initiatives. By contrast, others discovered that failed venture teams did so because of too much autonomy (Venkataraman, 1992). There are a number of ways to resolve that issue. Some argue that the degree of autonomy should correspond to the extent a new venture is a discontinuity from the existing business (Olleros and MacDonald, 1988). However, this does not really "solve" the control problem and does add the problem of estimating the degree of discontinuity.

degree of adaptability or renewal of the firm on the one hand and creation of sufficient incentives for intrapreneurs to pursue opportunities on the other hand.

V. Concluding Comments

In this paper we have discussed the role of internal corporate venturing and spin-offs as means to corporate renewal. Using reasoning derived from organizational economics, we have argued that firms may be liable to produce both the wrong amount and the wrong types of venture ideas, and that the net effect of this may in practice often be that the exploration/exploitation trade-off tips in favor of exploitation.

Moreover, we have also been able to put forward some new ideas on spin-offs. The conventional view is that spin-offs of internal ventures and management buy-outs are the result of mistakes in the past, due to inadequate strategies and inappropriate governance. Our more positive interpretation of these spin-offs is related to the underlying notion of a “swarm” of ventures and the selection of the most favorable ones on the basis of actual results. In an uncertain world, it is very difficult to ex ante assess the future results of innovative ventures. It might be necessary to go ahead with the venture and to monitor the initial results. Those results may give some indication of the potential benefits of the venture. From the “population” of venture start-ups a limited number will be successful. Of the successful ventures only few are selected out to be able to renew the core of the firm. They can act as agents for renewal.

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