

**"FROM INTENT TO OUTCOME:
THE EVOLUTION AND GOVERNANCE
OF INTERFIRM PARTNERSHIPS"**

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Abstract

This paper proposes a framework - rooted in the organizational learning perspective - to analyze the sources and the persistence of information asymmetries between the parties in interfirm partnerships. The impact of the partnership task, of the interface between the partners, and of the partners' goals and organizational processes on how well they learn about the environment of their partnership, about their joint task, about each other, about the process of collaborating, and about their partner's skills is analyzed. The consequences of differentiated learning, between partners, and across the environment, task, partner, collaboration and skill dimensions of the partnerships are then reviewed and discussed, using the proposed framework.

INTRODUCTION

Partnerships between firms receive a great deal of attention at the time of their formation, from both managers and researchers. (For a summary review, see Oliver, 1990.) This attention is directed by the common belief that the careful crafting of collaborative intents and the initial conditions of a partnership largely determine the partnership's outcome. Consistent with this belief, researchers come to the study of collaboration between firms armed with institutional economics theories, and more specifically transaction cost economics (see, generally, Williamson, 1975, 1985). Transaction cost economics predict quite usefully when partnerships will be selected by transacting firms over other arrangements (Hennart, 1988a, 1991; Kogut, 1988). In summary form, transaction cost economists argue that repeated transactions of highly idiosyncratic assets, under conditions of uncertainty, and small number bargaining are best governed by hierarchy because it solves many of the problems stemming from the risk of opportunistic behavior by the parties. This drives management towards internalization, and usually ownership of the assets and hierarchical coordination. This would lead complementation of assets between firms to take the form of mergers and acquisitions. In addition though, the existence of information asymmetry between the transacting firms makes partnerships and joint ventures an efficient solution, especially in comparison to acquisitions, because they decrease the risk of adverse selection (Pisano, 1989; Balakrishnan & Koza, 1993).

However, transaction cost economics stop short of analyzing the sources of information asymmetry at the beginning of the partnership and during its implementation, and the mechanisms by which information asymmetry is reduced, or maintained in the course of the interorganizational relationship. While transaction cost

economics recognize that partnerships are useful when the contracting parties face alterations to the initial conditions within which they reached agreement, they mostly provide a static theory of partnerships (Hennart, 1988a). Therefore they are less useful to predict how effective or ineffective cooperation will be over time (Ring & Van de Ven, 1994). For example, we believe that the transaction cost economics frameworks can be extended and complemented to "explore repeated transactions, the dynamic evolution of governance and transactions, and the key roles of trust and equity in any interorganizational relationship" (Ring & Van de Ven, 1992), as pointed out already by Williamson (Williamson, 1975: 106).

Empirical observation of alliances over time and of the behavior of the partners towards making their relationship efficient has also shown the limits of the transaction cost paradigm in explaining the behavior of the partners (Gulati, Khanna & Nohria, 1994, Gulati, 1995; Parkhe, 1993), in particular in the face of "changes in alliance partners' internal and external environment" (Parkhe, 1993: 822). Empirical managerial studies also suggest that due diligence at the outset is not sufficient to eliminate information asymmetry, and thus that the managerial emphasis on the planning and design of partnerships at their inception may be misplaced, unless complemented by ongoing attention to partnering processes.

Therefore, despite the insightful development of transaction cost economics theories, we believe they have dealt mainly with only part of the story: why alliances are created, not how they evolve over time. In addition there are several simplifying assumptions that researchers borrow from economics: organizational plasticity, rationality of collective action, self-interested opportunistic behavior (Barney, 1990: 384; Bromiley & Cummings, 1991; Hill, 1990), to name but some of the clearest, that when applied

to partnering processes may well become misleading. This article attempts to provide a substantial extension, and a managerial application of the transaction cost economics frameworks by explicitly addressing the issue of the collaboration process, as a source of reduction, or maintenance, of information asymmetry between the partners over time.

To the simple causal model adopted by most researchers steeped in institutional economics, and managers too exclusively preoccupied with the inception of alliances, we need to add two sources of complexity (Figure 1a, b). First, the external environment of the collaboration process keeps changing, generating new information that may add to existing asymmetry or alter the initial conditions at the inception of the relationship. Examples of elements of the partnership's external environment are markets, competitors, technical knowledge, and the broader strategic context of corporate priorities for the partner firms. This creates an exogenous adjustment need for the partners and for their partnership. This need is all the stronger in alliances addressing very uncertain markets and relying on uncertain technologies, where initial conditions are unlikely to hold for long. Second, the collaboration process itself, and the unfolding interactions between the partners it triggers, play an important and relatively unexplored role in shaping actual outcomes, as well as further expectations about future outcomes, and thus in loosening or even decoupling the link between initial intents and outcomes, and in allowing, or not, the partners to overcome early information asymmetry.

[Figure 1 about here]

This article is an attempt to explore conceptually the evolutionary processes within partnerships that allow adjustment to both changes in the external environment and to the interactions between partners, and enable, or not, the partnership to be efficient.

We first argue that evolutionary processes in partnerships are best described using an organizational learning perspective, as a series of learning subprocesses, responding to evolutionary forces and leading to a periodic revaluation of expected outcomes and readjustment of the collaborative behavior, through a series of iterative cycles over time. We thus outline a process model, and develop some propositions about the determinants of rates of learning and frequency of revaluation and readjustment in partnerships.

Second, learning and revaluation are dependent processes, themselves conditioned by three sets of factors. First, the characteristics of the task(s) undertaken in the partnership influence the need, opportunity for, and difficulty of the learning and revaluation processes. Second, the initial partnership interface structure, and the boundary-spanning activities it allows or constrains, influence both the learning by the partners and their revaluation of the partnership. Third, partners project into the partnership strategic objectives and organizational characteristics that enhance or impair their ability to learn from the partnership, the adjustment of their expectations about its outcome, and their assessment of its value.

Third, we consider the difficulties which may arise when the ambitions, frames of reference, management structures and processes of one partner firm are very dissimilar from that of the other partner firm(s). We suggest that, when partners differ on these dimensions, mismatches in relative rate of learning or revaluation capabilities are

commonplace and yet unsuspected as systematic sources of partnership instability. We hypothesize that the structure of the interface such as the extent of interactive decision making, renegotiation, bargaining and balancing of outcomes plays a role in determining whether these mismatches lead to negatively-viewed recurrent misunderstandings and premature dissolution or whether they become positively viewed and adaptive mechanisms in overcoming partner firms' organizational inertia.

Finally, these hypotheses and our process model invite further discussion, conceptual development, and imply directions for future empirical testing.

I. FROM INTENT TO OUTCOME: OVERVIEW OF A PROCESS MODEL OF PARTNERSHIP EVOLUTION

Evolutionary forces

The initial collaborative intents of the partners - the expectations they have at the outset about what the partnership is going to contribute to them, jointly or separately - seldom capture the whole range of potential benefits. Only a partial set of benefits and risks are clearly recognized by each partner, and an even smaller set is probably shared and communicated - i.e., mutually and explicitly recognized - between the partners. Thus, outcome expectations are not given at the outset nor static: their scope may widen or narrow down as the partnership proceeds. One's understanding of the other partner(s)' unshared expectations also evolves over time, depending on how the partner(s)' behavior is interpreted. Further, the confidence in the true feasibility of expected benefits, in the partner's goodwill, or in the true value of the outcomes, also

shifts over time. Possible outcomes - good and bad - are therefore discovered, evaluated, reassessed, and discounted in an evolutionary fashion as the partnership proceeds.

Second, the initial design of the partnership is not necessarily stable either. The definition of the partnership's task and of how to perform it are not given once and for all. Both the task definition and the arrangements selected by the partners to perform the task may shift. The commitments of the partners, and how these commitments are implemented also vary as a result of the learning taking place at the interface between the partners, and as a function of their heightened or reduced expectations about the partnership's benefits. The way in which partners project their own organizational routines into the partnership, or protect it from them, may also vary over time, based on the learning they gain on the efficiency and effectiveness of the partnership, and on their own organizational routines, as reflected back to them by the partner organization or by the partnership process.

Third, partnerships do not take place in a vacuum; the external environment, or at least its perception and understanding by the partners, also keeps changing. This is particularly true when distant partners (geographically speaking, as well as in terms of activities and history) bring complementary, co-specialised but distinct capabilities to the partnership, and start with very different "readings" of the partnership's environment. The fact that many partnerships are used as vehicles to address uncertain needs and to explore emerging technologies also suggests that the environment of many partnerships is intrinsically unstable and hardly predictable. "Cultural distance" only adds to the difficulty.

Learning Processes

As the partnership unfolds, therefore, partners have to keep learning about the environment of the partnership, about the tasks to be performed, often jointly, to meet the partnership's objectives, about appropriate and realistic objectives, about each other, and about how to work together efficiently. Such learning is genuine action-learning: it cannot be accomplished before entering into the alliance, hence the insufficiency of initial due diligence for practitioners and the limits of transaction cost economics for scholars. In new uncertain markets, the "environment" may not be amenable to analysis. It responds to actions being taken by the partners, for example the introduction of new products. The true difficulties of the task can reveal themselves only through trying to perform the task. How to work together successfully may also be an evolving process through various interface arrangements as the partners try to improve the efficiency and effectiveness of their alliance. Learning new skills to make the partnership successful, or at least to use it as a conduit for internalizing new skills, is also typically a "learning by doing" process, where the partners discover and deepen new skills together, or where each uses the other(s) as a "mentor" in specific areas of skill. Goals may not be clear from day one, one's own may evolve over time, and the collaboration process may more easily unveil those of the partner(s) than the initial negotiation process. We therefore consider five learning processes as cornerstones of the collaboration process in a partnership between firms:

1. Environment learning results from a better understanding of the environment of the partnership. Beyond the partners having to share and mutually understand, at least partly, their initial "readings" of the environment, environment learning may just result from actions eliciting feedback from the environment, or from

sharper observation and analysis, leading the partners to tighten or to revise their initial assumptions. Learning also comes from perceiving and understanding changes in the environment in the course of the partnership, rendering some of the partners' initial assumptions obsolete. Further, the internal environment of the partnership, in the context of each partner firm, may also change as a function of other opportunities developing or closing, and of organizational and political realignment, resulting in the partnership gaining or losing powerful sponsors and other sources of momentum for reasons independent of its evolution. In sum, environmental changes, external and internal to the partners, constantly test the suitability of the partnership and question, or reinforce, its viability.

2. Task learning. Engaging into cooperative activities leads to learning about the partnership task, in particular when the task was broadly defined at the inception of the partnership, and/or when it is complex and/or uncertain. As the cooperation proceeds, partners are thus likely to learn about how to perform the task better, and to define what needs to be done more precisely. Task learning tests and conditions the feasibility of the partnership.
3. Process learning. Learning about how to cooperate more effectively with the partner organization is another dimension of learning. As the cooperation proceeds, partners discover each other. Recognition of their respective structures, decision processes, action routines, beliefs and norms may lead these partners to overcome, or even to exploit these differences in the collaboration process. Some of the noise and ambiguity which are inherent to collaboration between different organizations may be eliminated over time as

the partners learn to relate to each other more confidently and to cooperate more effectively. The efficiency and effectiveness of the collaboration hinge on learning about the process itself, and being more attuned to each other (Axelrod, 1984).

4. Skill learning. Partnerships also often provide "windows" into the partners' respective skills and opportunities to learn skills from each other (Hamel, 1990, 1991; Doz, Hamel & Prahalad, 1986; Hamel, Doz & Prahalad, 1989; Badaracco, 1991; Westney, 1987). Skill learning may allow the partners to cooperate more effectively as their respective skills converge, but skill convergence also makes the value of further cooperation decline, and may make the partnership rife with tensions if skill learning is asymmetric between the partners (Hamel, 1991). The balance, and durability of the partnership thus hinge on skill learning capabilities.
5. Goal learning. The evolution of the partnership process allows the partners to clarify, revise and refocus their own goals. It also reveals the partners' goals to each other, as the behavior of each partner may provide the other(s) with clues about hidden agendas and the preferences and motives beyond, or besides, the explicitly shared goals of the collaboration. The goal congruity between the partners is thus reassessed over time, as goal learning takes place.

These five learning subprocesses are not independent. Progress in each subprocess conditions further progress in the others. Perhaps most critical is progress on the task learning process, insofar as task learning usually conditions value creation in the alliance: if little or no progress is made towards accomplishing the task mapped out for

the partnership, the partners are likely to quickly decrease their outcome expectations, and the partnership may terminate quickly with no tangible results.

Task learning does not proceed in a vacuum. A high degree of embeddedness to the task makes process learning a prerequisite, or a pacing factor, for task learning, unless the partnership involves mainly the setting up of a new completely separate joint entity quite distinct from its "parents".

Task learning may not be instrumentally dependent on environment learning, in contrast with its dependence on process learning. However, task learning without environment learning may go astray in the face of changes in the environment, or of a poorly understood environment at the outset of the partnership. The suitability of task learning may thus need to be periodically reassessed in light of changes in the environment, to remain attuned to external requirements, and avoid an unsuited outcome.

We can label task and process learning "performance processes" in the partnership: the feasibility of the partnership outcomes depends on these. Environment learning can be conceived of as an external governance process, conditioning the continued suitability of the partnership task - its ability to create value for the partners over time, in the face of environmental changes. Goal learning is also clearly a governance process, insofar as clarification and revision of one's own goals, and a careful monitoring of the partner(s) behavior for clues as to possible hidden or shifting goals, is an important aspect of the evolution of the partnership. It conditions how the partners are going to adjust their expectations from the partnership and their commitments and actions towards it.

Skill learning can be conceived of as both a performance and a governance process. Skill learning faces an interesting paradox in partnerships: some is usually needed for success in task learning (particularly when the task involves extensive, partly tacit skill complementation and combination between the partners), yet too much skill learning undermines the partnership. Skill equalization between the partners nullifies the value of future skill complementation between them. On the other hand, unequal skill learning between the partners undermines the balance of the partnership and may lead the partner(s) who learn(s) the least to reconsider the continuation of the alliance before becoming too dependent on the partner(s) who learn(s) the most (Doz, Hamel & Prahalad, 1986; Hamel, 1990, 1991). So there is a fine line. Sufficient access to each other's skills is needed for successful co-specialization between partners. But too much access tends to undermine the partnership, whether or not that skill learning is balanced.

Revaluation

Learning on any, or all five of the learning dimensions outlined above, in turn leads to a revaluation of the partnership outcomes expected by each partner, and therefore of the efficiency and effectiveness of the partnership.

Revaluation of expected outcomes may merely change the level of existing expectations, adjusting upward or downward, as a function of the learning taking place, or perhaps shift the very nature of expectations. For example, a partner may discover that important new skills can be learned in a partnership, the economic and competitive environment of which becomes less enticing than expected at the

inception, leading the partner to emphasize skill learning outcomes, and to play down, in its expectations, the economic and financial benefits from the partnership.

The revaluation of expected outcomes may also lead partners to unilateral changes in the extent and nature of their commitments to the partnership and in the ways in which such commitments are implemented. Faced with disappointing learning, or with learning blockages - for example in the face of task complexity, or of an increasingly incomprehensible partner - a firm may just decrease its commitment to the partnership, as a reflection - sometimes self-fulfilling - of discounted expectations. A decrease in commitment can take many forms, such as delays, cuts in dedicated manpower, cuts in coordination efforts, or the pursuance of (other) alternative options as a safeguard against failure. Conversely, greater and/or wider benefit expectations may lead to deeper and more irreversible commitments over time, for example by accepting skill co-specialisation with the partner, by widening the scope of the partnership to more tasks and more opportunities, or simply by increasing the resources devoted to the partnership. The way in which the resources are combined between the partners may also change, reflecting task and process learning, and perhaps also skill and environment learning, and occasionally goal learning (e.g., if learning skills becomes a key goal in an alliance, structuring the interface so as to allow for an effective "window" into the partner's skills becomes key, with a likely impact on the interface structure and the task definition).

Revaluation may also lead to explicit renegotiation of the partnership agreement, for example to reflect a shifting balance in the relative criticality of the partners' contributions, or a higher level of mutual confidence between them. The former might

lead to a renegotiation of cost and revenue sharing formulae, while the latter would typically provoke a shift towards a more informal cooperation process.

The Process Framework

At the heart of our framework lies the collaboration work, which triggers the five key learning processes - about the environment, the task, the process of collaboration, the partner(s)' skills, and one's own as well as the partner's goals - which result in the periodic revaluation of expected outcomes leading to changes in expectations and commitments, and, possibly, partnership renegotiation.

Initially, as a function of their own strategic context and environment, each partner may seek an alliance strategy and a partner, and establish initial partnership objectives. As the interaction between partners starts, so does learning. Testing the initial objectives against the outcome expectations that result from the learning processes may lead to revaluation, on the part of each partner. Depending on the outcome of the revaluation by each partner, (in particular whether the new valuation is discrepant with the previous one) and possibly on an assessment of their relative dependence within and on the partnership, renegotiation of the partnership may take place explicitly. Otherwise, partners may just tacitly adjust their private expectations, or make adjustments to how they manage the relationship without explicit negotiation, for instance by decreasing or increasing their contribution. In any case, revaluation triggers feedback towards how the partners behave in the partnership, for example in terms of their learning priorities and behaviors. The new, adjusted, valuation is then used as a base level for the possible next revaluation process. This makes the process iterative. One can thus conceptualize the partnership process as a series of iterative

loops in which learning takes place along five dimensions (environment, tasks, partner, skills, outcomes) through the interaction between the partners. This periodically triggers a revaluation process (on the part of at least one partner), leading to a readjustment of outcome expectations (through adjustment of expectations, renegotiation, or commitment change, or a mix of these). This in turn, may feed back into the learning processes and serve as a base level from which to measure discrepancy in expectations triggering revaluation in the next learning-revaluation cycle. This model is summarized in Figure 2.

[Figure 2 about here]

In summary, partnerships, like other organizational processes, undergo an iterative, ongoing feedback and adjustment process (Normann, 1985; Mintzberg & Waters, 1985). Partners test the implementation of initial goals or plans and react, respond and learn from the interim outcomes.

II FROM COLLABORATION WORK TO LEARNING PROCESSES

Recasting the interfirm partnership phenomenon away from an exclusive reliance on institutional economics to incorporate a dynamic evolutionary perspective based on learning and revaluation can enrich our understanding of alliances. In order to achieve this, however, recasting must establish a different, and important set of variables which explain not only why partnerships are formed but also how effectively they evolve over time.

It is unrealistic to expect to capture the full empirical richness of a phenomenon as complex as interpartner learning in partnerships between firms in a few categories. We nonetheless believe that the nature of the task, the way in which the interface between the partners is structured, and the organizational characteristics of the partners go a long way towards explaining why some partnerships result in effective organizational learning and others do not.

The Task

With few exceptions¹, progress in the performance of the agreed upon task is seen as an essential precondition for a partnership meeting the expectations of its partners. Yet, task learning may proceed at very different speed according to the task. In particular, task complexity may block learning.

Task complexity stems from the number of non-sequential interdependencies between the work of the partner organizations (Thompson, 1967). The intrinsic variety within the task - for instance the number of separate technologies to be combined to perform it successfully - is a source of complexity. This is especially true if the task cannot be made modular, or if the feasibility of a modular approach is unclear (for example, because of considerable application-specific work and of common core skills and technologies across applications). Skill differentiation between the partners - normally a corollary of the very reason why many alliances are started, i.e., skill complementarity and co-specialisation - also makes task interdependence more difficult to handle successfully.

In summary:

P1a High levels of task complexity (numerous non-sequential interdependencies between the partners' tasks, when the partners' skills are differentiated) may impede task learning.

Second, the context within which the task is performed also matters. Paradoxically, task criticality may also impede task learning. Organizational slack, and buffering from tight early deadlines and performance pressures may give members of both or the several partners involved in joint tasks the transition space and time required to learn to work together. In other words, process learning may condition task learning, as task performance is embedded in the action and interaction processes of the partners. A high level of task criticality, reflected in urgency and top management attention may slow down task learning, by not allowing process learning.

P1b The relationship between perceived task criticality (urgency and top management attention to the task) and task learning is curvilinear: little criticality results in little learning, very high levels of criticality also result in little learning, moderate levels of criticality result in greater task learning.

The Interface

The partnership interface (the set of formal and informal linkages and interactions between the two partnering firms) plays an essential role in stimulating and facilitating internal organizational processes of learning and reevaluation. It forms a new and often

unanticipated channel for information flow and transfer of tacit know-how (Polanyi, 1967; Nelson & Winter, 1982; Doz et al., 1986; Teece, 1987; Badaracco, 1991).

Companies, in the course of usual business practice, have little occasion to develop interdependent interfaces and linkages with firms which may be competitors or outside their primary industry. Except occasionally for key suppliers, distributors or customers directly implicated in the firm's value chain, other firms tend to be held at arm's length through formal contracting. As such, most firms do not find themselves closely involved with and influenced by another firm's environment, culture, organization, management system and firm-specific "ways".

The establishment of a partnership interface and of interfirm dependencies acts as a "membrane" or conduit through which information passes. The amount and nature of information passed through the partnership interface varies greatly with each partnership. The openness or "permeability" (Doz et al., 1986) of the partnership interface is an important determinant of what types of learning processes and valuation take place and with what speed. Beyond task and skill learning a more open interface facilitates process learning, by revealing the internal workings of the organization to the partner firm. It may also allow to understand the partner's logic vis-à-vis the partnership and thus to facilitate goal learning.

Task learning as well as skill learning can be impeded by a highly impermeable and closed partnership interface. We hypothesize that the openness of the partnership interface is influenced by proximity of the project members as well as the number of informal and formal meetings which take place. The number of meetings directly influences the flow and nature of information communicated between the two firms,

even if certain information is labelled as proprietary by management. Formal linkages, written communication and meetings provide the regularized occasion for information exchange and often the type of information exchanged can be regulated. In contrast, informal linkages and meetings play a role in giving project members the personal and individual motivation and incentive to share information and build trust. Informal exchange and personal relationships are much more difficult to regulate and yet are often the vehicle through which tacit information and skill are transferred. "Gatekeepers", whether managerial monitors or technical disseminators, become influential factors in screening and changing the rate of interfirm communication across the partnership interface.

P2a A narrow formal interface restricts learning opportunities to specified task learning.

P2b A broad informal interface will facilitate all forms of learning, provided the partners can communicate informally.

Indeed, establishing a broad, unstructured interface from the outset of a partnership may not facilitate successful outcomes. The relevant information is often "codified" in firm-specific ways and the transfer of information across firm boundaries suffers from this semantic noise (Allen, 1986). A prerequisite to learning through the interface may be a certain level of familiarity with the partner so as to correctly translate and interpret the information and actions of a partner-firm.

If these learning interdependencies exist, the implication is that the importance and necessity of developing, building and continuing learning about the partner's

organization, culture and ways is underestimated as compared to other types of more explicit and measurable learning. Insufficient process learning can be a hidden factor undermining the communication and interaction of firms at the partnership interface and leading to misleading and negative interpretations of partner actions and events.

The evolution of the interface structure therefore has to match the evolution of process learning. Setting up an unstructured interface that favors informal broad contacts early may not result in actual learning. Semantic noise, ambiguity of behavioral clues, and a tendency to avoid conflicts in uncertain situations might lead to distance, to the formalization of communications, to avoidance behavior, and ultimately to the undiscussability of the very aspects of the partnership that would be most critical to successful learning. "Defensive routines" would be triggered by individuals in each organization, blocking learning (Argyris, 1985). Similarly, forcing "jointness" early, e.g., by creating joint task teams, might result in formality and block joint problem solving and conflict resolution, thus impeding learning.

The above discussion leads to two key propositions on the influence of interface structure on learning processes.

P3a In the early phases of partnership, the "openness" of the interface structure has to match the level of process learning if a broad informal interface is sought.

P3b Successful partnerships are likely to evolve towards broader and more informal interfaces over time.

The Partners

The partners may differ in their ability to learn, and the way they learn may also be sufficiently similar, or different, to facilitate or hinder cooperation.

First, not all firms are equally able to learn. While organizational learning takes place in many ways (see generally, Huber, 1991) processes of information distribution and sharing seem to be the most general key to organizational learning (Levitt & March, 1988, Huber, 1991; Cohen & Levinthal, 1990; Nonaka, 1991, Hedlund, 1994). Organizational fragmentation, is thus likely to impair all types of learning processes.

Handling task complexity and urgency is more difficult to a fragmented organization which lacks the speed and intensity in the sharing of information needed to deal with interdependence, uncertainty and urgency simultaneously. Fragmentation creates information deprivation in processes where analysts of successful complex innovative projects stress the need for information redundancy (Nonaka, 1991). Fragmentation also hampers the learning of skills, in particular when complex system-embedded skills are to be learned (Hamel, 1990). Similarly partner learning is made more difficult: a holistic understanding of the functioning of a partner, and the discovery of its objectives and policies, become more difficult if only specialized fragmentary perspectives are provided, and if each perspective develops independently from the others. Fragmentation also prevents outcome learning, since the overall consequences of a partnership on the partner company cannot be perceived. This encourages parochialism and politicization in the relationship with the partner.

Second, not all firms learn in the same way (Levitt & March, 1988, March 1991). Cultural, institutional and organizational differences are likely to be reflected in how firms learn, and in particular in how they learn in partnerships (Lyles, 1988; Parkhe, 1991). For example, companies may learn fast, but in incremental ways, potentially leading to inferior or limited learning (March, 1991, Weick, 1991) or in deeper but slower ways (March, 1991). Communication patterns and the extent to which fragmentation is overcome also vary greatly from firm to firm.

Learning Requirements vs. Learning Capabilities

The nature of the tasks undertaken in the alliance, and the context within which these tasks are performed (in particular their criticality to top management in the partner firms) set the learning needs of the partnerships. These learning needs may vary greatly across partnerships, depending on the nature of the environmental and interpartner complementation uncertainties being faced in the alliance.

Partners find learning, separately, and jointly, more or less difficult, based on characteristics of their own organization (such as fragmentation, decision making style and speed, and incremental or deeper learning modes). Their joint learning is helped or impeded by their organizational similarity or dissimilarity (Parkhe, 1991).

The interface the partnership creates between the partner firms, is also more or less conducive to learning. A narrow formal interface constrains learning, a wide informal one may foster learning, but only insofar as the quality of communication and mutual understanding between the partners is sufficient to exploit such a broad informal interface.

The nature of the task sets the learning needs in the partnership, while the characteristics of the partner organizations and the features of the interface process they put in place constrain the learning capabilities of a partnership.

Individual partnerships may thus be seen as being in a "learning surplus" situation (capability to learn greater than the need to learn), a "learning deficit" situation (need to learn greater than the capability), or perhaps be in a learning balance (where capability and need to learn are equal).

III FROM LEARNING TO REVALUATION

Objectives and Assumptions

Although, as we argued at the beginning, the expectations of partners evolve over time, partners nonetheless enter the relationship with some specific objectives. Beyond the partner's objectives, initial partnership agreements make a series of assumptions about outcomes and hence, about the balance of costs and benefits for each partner, whether such assumptions are part of the explicitly reached agreement or remain privy to each partner. Without such initial assumptions, an agreement would be difficult, since partners would lack a valuation framework and expected valuation of outcomes.

The initial valuation frameworks of the partners may be more or less easily reconcilable. Although the compatibility of objectives is influenced by many situational factors specific to an individual partnership, we attempt to develop below a broad set

of propositions that can be expected to hold true despite the diversity of conditions affecting individual partnerships.

First, we can categorize partners' intents as symmetrical or asymmetrical. In a symmetrical situation, partners share broadly the same intent (e.g., both wish to lower the cost of their product). In an asymmetrical situation, partners have different objectives (e.g., one wishes to develop new capabilities while the other wishes to maximize the return on existing capabilities). Broadly, one can hypothesize that in scale-driven partnerships intent symmetry facilitates collaboration, i.e., the partners can agree on performance criteria for measuring the joint task. In a skill-driven alliance, however, having symmetrical objectives may hamper the exchange of skills, in particular when the partners are competitors, since they may be reluctant to share and transfer skills which the partner can use to further its own position (Hamel, 1990).

P4a Intent symmetry facilitates task, partner, and outcome learning in scale-based alliances, but hampers skill learning, particularly in skill-driven partnerships between competitors.

Intent and valuation logic asymmetry initially facilitates collaboration between the partners in skill-based alliances. However, such asymmetry, particularly if it is largely left part of hidden agendas, may give rise to a growing concern, on the part of one or both partners, about the "balance" of the relationship, i.e., the respective values of contributions and outcomes to each partner. Intent asymmetry makes understanding of the partner's perceived balance more difficult, as it is difficult to understand the partner's valuation logic and to establish the likely boundaries of the partner's hidden agenda (Hamel, 1990).

P4b Intent asymmetry makes the initial valuation of the partnership easier, on the part of each partner, but makes revaluation more difficult over time as the partners share no valuation frame.

Frames of Reference

In addition to specific objectives and valuation logics, that may or may not be shared between partners, partners also bring a broader frame of reference for the relationship. By frame of reference we mean a categorization, or labelling, of what the alliance is to be, that can be used as a shorthand to evoke a series of expected characteristics of the relationship. For example, a "joint venture" frame of reference does not evoke the same characteristics as a (partial) "acquisition", nor does either of the two evoke the same as a "supply agreement" or a "joint project". Frames of reference are likely to be inherited from earlier experiences, the nature of which may or may not match the needs of the current situation. Different starting frames of reference create compatibility problems, for example when one partner conceives the partnership primarily as a buyer-supplier relationship, and the other sees it as a quasi acquisition of the partner. Because they provide an integrative categorization, frames of reference are unlikely to be easily modified or shed through usual, incremental, adaptive learning processes. Further, their inadequacy to the actual situation may block learning or take learning in a spurious direction by filtering and rearranging perceptions to fit the (wrong) frame. Frames of reference may not be changed without cathartic "unlearning" and reconceptualization of the situation. This may be particularly true when a very precise and complete "a priori" definition of what the partnership is, of how it will operate, and of what results it will bring, leads to "determinism", i.e., the blind commitment on the

part of the partners to make reality turn out according to plans (Jemison & Sitkin, 1986; Haspeslagh & Jemison, 1990).

P5 Similar frames of reference facilitate partner and outcome learning and reassessment processes.

Organizational Fragmentation

Fragmentation not only affects the revaluation process indirectly, through its impact on learning processes, but also hampers it directly: not only does the failure of goal learning prevent a revision of the basis for revaluation, fragmentation makes revaluation decisions more difficult. Fragmentation slows down both the perception of a discrepancy between previous objectives and current expectations, and the response process.

P6 Organizational fragmentation, within the partners' organization impedes both the learning processes and the revaluation processes.

Horizontal fragmentation, i.e., disconnects between layers of management complicates the partnership process even more than vertical fragmentation. In particular revaluation processes are affected. Task specialists and managers at the interface between partners are likely to develop a clear sense of how the partnership is evolving, and to revise their expectations, almost in real time, accordingly. In a horizontally fragmented organization such revisions are unlikely to be shared with top management. Further, role constrained learning is likely to take place at lower or intermediate levels of management, bringing the risk of escalation of commitments. The fact that the

merits of the partnership may have been sold on different bases to different stakeholders in a politicized and fragmented organization further complicates the adjustment of expectations. A gap may thus widen between the expectations at lower levels in the organization (where the stress of working on "problems" with the partner may have excessively lowered expectations) and at higher levels in the management where the initial perhaps excessively optimistic, expectations remain intact.

Finally, fragmentation makes the handling of "surprises" in partnerships difficult. Because the real-time adjustment capabilities of a fragmented organization are quite limited, "surprises" may be interpreted negatively, and crises avoided. Fragmented organizations will see the "danger" side of crises, more unitary organizations may see their "opportunity" side. Unexpected ambiguous outcomes are thus likely to be considered negatively by managers in fragmented organizations. This makes fragmented organizations fall more easily prey to "determinism", i.e., the blind attempt to implement the initial objectives of the partnership, even in the face of changed conditions or of new evidence learned, but not integrated into organizational knowledge.

Figure 3, below, presents in summary form the complete framework.

[Figure 3 about here]

IV DISCUSSION AND IMPLICATIONS

Complementing the usual transaction cost economics perspective on interfirm partnerships with a process framework rooted in organizational learning processes opens a number of additional perspectives.

1. Learning Need vs. Learning Capability

First, the explicit consideration of evolutionary and learning processes suggests that the very value of a partnership, as an initially incomplete contract to be developed over time, as seen by transaction cost economics is justified. However, the contract can be made more complete only insofar as the learning capability in the partnership, on the part of the partners, exceeds the learning needs of the partnership task.

P7 For a partnership to address successfully the information asymmetry issues over time, its learning capability needs to be greater than its learning needs.

2. Connected Dissimilarity

Second, our analysis suggests that the learning capacity of a partnership is not maximized by the partners becoming increasingly similar. Similarity in cognitive maps, for instance, might well reduce environment learning, while similarity in management process limits task learning, and similarity in skills undermines the very logic of complementation and co-specialisation in the partnership. Cognitive, organizational, and competence distance underlie value creation in most partnerships, with the

significant exception, perhaps, of raw material exploitation and industry restructuring partnerships.

Connected dissimilarity between the partners thus is key: the ability to learn together, in a connected fashion, while retaining distinct, and dissimilar, identities. The quality of the interface design, structure and process, therefore is essential to learning between the partners.

P8 The overall pace of learning in a partnership is conditioned by the preservation of cognitive, organizational and know-how dissimilarities between the partners, bridged through an effective (wide, frequent, informal) interface.

3. Punctuated Equilibrium vs Incremental Adjustments

Partner companies move through the iterative cycles outlined on Figures 2 and 3 at different speeds. As discussed already, organizational unity vs fragmentation plays a key role in defining that speed. Further, the ability to change one's commitment to the partnership in small increments, and to engage in more sophisticated, and more cooperation inducing, signalling behavior than crude "tit for tat", as well as, obviously, the ability to recognize small incremental changes on the part of another partner, also leads to frequent revaluation, and more rapidly iterated cycles.

In other words, based on the features of the task, of the interface, and of the partners' organization, we expect partnerships to differ in how fast they go through the loops outlined in our process model. Some partnerships will cycle through these in a fast, incremental fashion, in a continuously adjusting process. Others will exhibit

periods of apparent stability, with little tangible change in interface and commitment, punctuated by relatively infrequent crises, leading to major revaluation and major shifts in commitments and interface, and perhaps complete renegotiation of the cooperative agreements.

Implicitly we have assumed, in the discussion above, that the partners had a similar "cycle time", i.e., that they were moving at equal, or at least comparable speed, through the loops. There is no particular reason for that to be true in practice. Smaller companies may move faster than bigger ones, for example (Doz, 1988). Yet, a "fast" and a "slow" learner and revaluator are likely to find cooperation difficult. In particular they are not likely to be able to discuss and resolve issues in their partnership in ways, and at times, that are mutually satisfactory.

P9 Compatibility in "cycle time" of learning - revaluation - readjustment loops between partners is a condition for overall alliance adjustment.

4. Does Process Matter?

The five learning processes we discussed are not equally critical in all alliances. Not all partnerships call for equal amounts of learning. Some of the more traditional joint ventures, for example in raw materials, or for entry into known markets, where transaction cost analyses are at their best (Hennart, 1988b; Buckley & Casson, 1988) call for relatively little learning. Their environment may be uncertain, but sources of environmental uncertainty are well known, and the complementation of skills between the partners is limited and non-problematic, the interface is simple, the opportunities for skill learning are minimal, and the partner goals are clear and stable over time.

A contingent view of the importance of process is therefore necessary. Not all partnerships will face the same levels of external change, not all call for an equal amount of task learning.

5. Research Implications

The first major implication is the need to understand how the persistence of information asymmetry in a partnership affects the evolution of the partnership. We have argued that information asymmetry cannot always be removed in the initial negotiation, and that some amount of information asymmetry, about the environment, the task, and the objectives of the partnership, as well as about the skills and goals of the partner, is not necessarily detrimental to partnership success. But the interface between the partners has to be constructed and managed so as to exploit that asymmetry rather than suffer from it.

The framework proposed here provides a starting point for research on the evolution of partnerships between firms.

In an empirical analysis, the framework could be disaggregated to the level of each learning subprocess: environment, task, process, skill, and goal learning. Learning in each of these subprocesses can be impacted differentially by the nature of the task, the features of the partner organizations, and the design and structure of their interface. Skill learning, for instance, is critically dependent on the microstructure of the interface, and on the separate absorptive capacity of each partner (Hamel, 1991; Cohen & Levinthal, 1990). Process learning is conditioned by organizational unity and by a

relatively informal interface which allows partners to observe and compare how they are functioning. Conversely, a very modular task, with few well-specified interfaces does not call for much process and even task learning, but may still call for much environment learning if it addresses uncertain market opportunities with unproven technologies and know-how.

In sum, it is possible, by disaggregating the analysis of the interaction between task, partners, and interface to the level of individual learning subprocesses to establish a learning need and a learning capability profile for each partnership researched. This makes it possible to establish where the partnership starts with a learning deficit or a learning surplus, and whether, and how, deficits are remedied over time. (The identification and resorption of surplus is also relevant, but less critical from an effectiveness standpoint, although still important in terms of efficiency.)

Each of the various propositions, as well as the linkages outlined in Figure 3, could be operationalized and tested individually. More specific theoretical insights could be used to operationalize and test these propositions and linkages. For instance, game theoretic models (Axelrod, 1984; Axelrod & Keohane, 1986; Milgrom & Roberts, 1991) can be used to test the determinants of incremental vs. punctuated cycles, and the speed at which these proceed. Insight from the organizational learning literature could also be used to analyze in greater detail the learning capabilities of the partner firms, and of partnerships.

From an applied standpoint, the framework points to the need for more research on the design, structure and process characteristics of various types of interfaces between firms in partnerships. Interface characteristics clearly play a key role in allowing

learning, revaluation and adjustment or in blocking one, or several, of these processes, and in balancing, or not, learning along the various key dimensions.

A more detailed understanding of the contingencies affecting partnerships, and thus an assessment of the relative contributions of static theories and dynamic models is also useful.

Finally, a further conceptual and theoretical refinement could be brought to link the transaction cost economics frameworks and the organizational learning model proposed here. The two could be reconciled in a model of multiple bargains over time, where a simulation model could be used to study the evolution of trust, opportunism, asset specificity and unilateral commitments, and cooperation in a game theoretic framework.

V CONCLUSION

In this paper we propose an extension of the transaction cost economics frameworks frequently used in research on interfirm collaboration and partnerships. These frameworks explain extremely well why partnerships can overcome adverse selection issues rooted in information asymmetry between the contracting parties, and thus partnership creation. However, we found them less useful to explain partnership evolution over time. The framework presented in this paper attempts to complement the transaction cost economics models by focusing on the dynamic processes within partnerships over time.

¹Some partnerships are not meant to succeed operationally or may imply no operational task. The announcement value of a partnership may sometimes be enough to justify it, for example if the announcement stifles other potential partnerships or is enough to improve substantially the credibility

and reputation of one, or several, partner(s). Some partnerships may also involve pure task juxtapositions between the partners, calling for no common tasks to be performed.

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Figure 1
Determinants of Partnership Outcomes

Figure 1a: A Simplified Causal Model

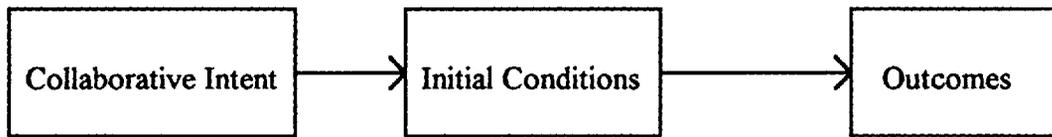


Figure 1b: An Evolutionary Model

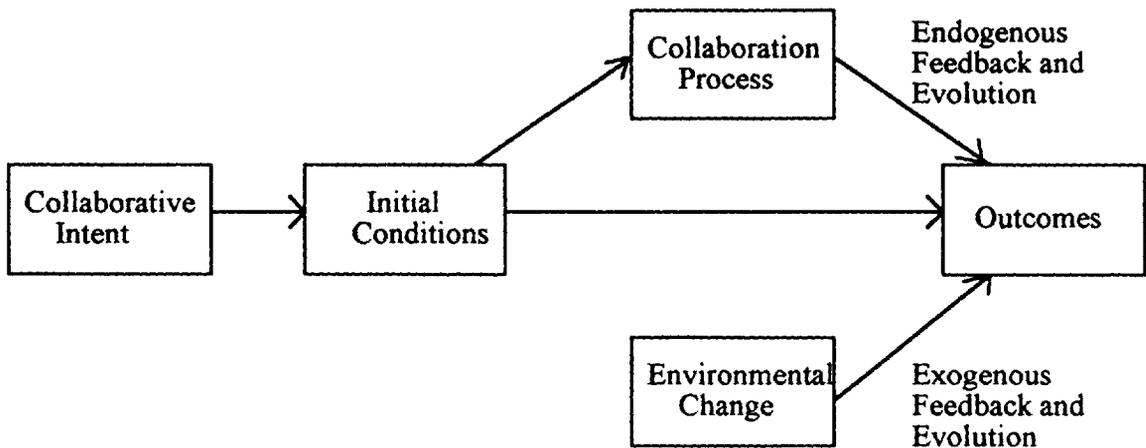


Figure 2
Partnering Processes

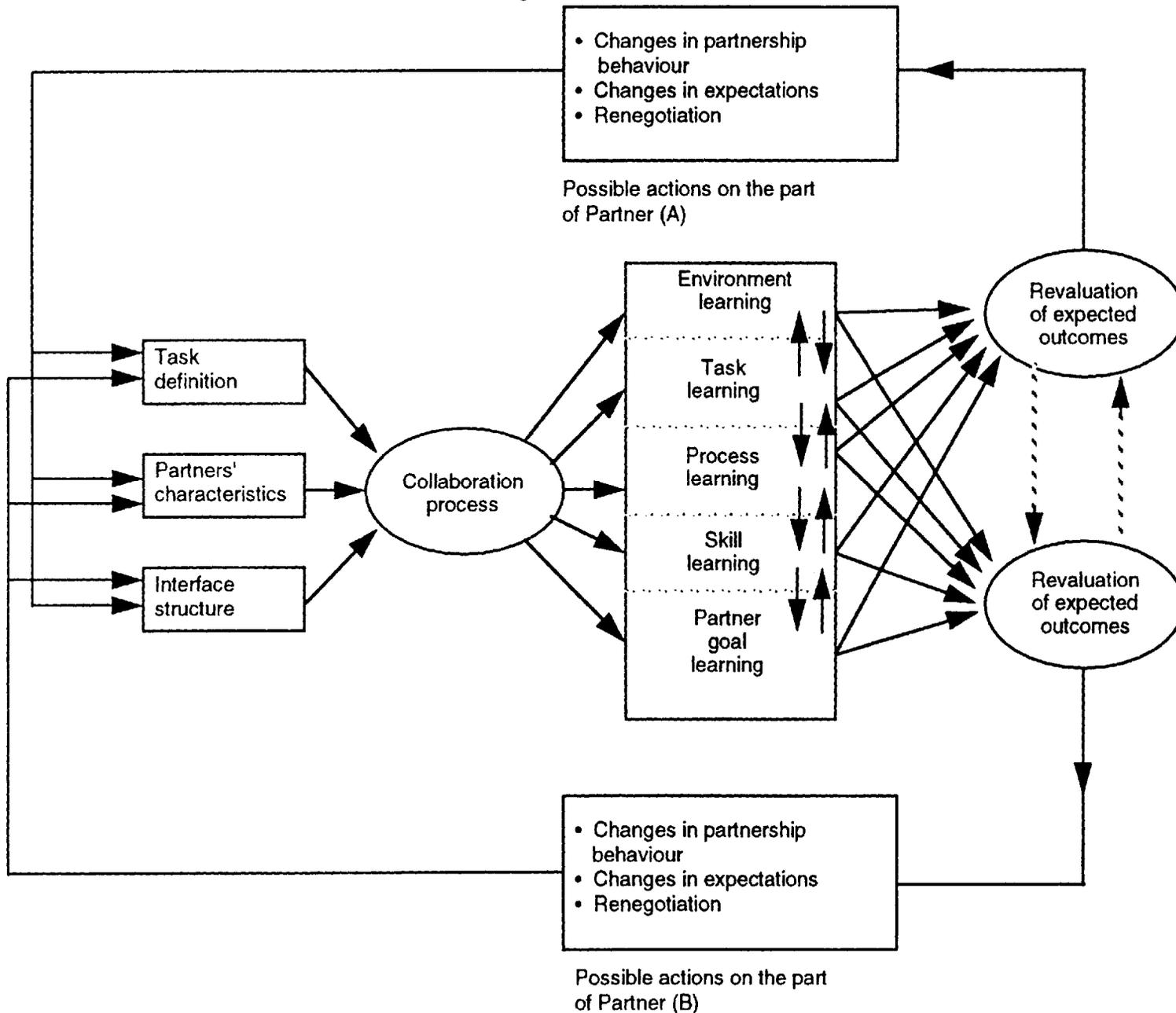


Figure 3
From Intent to Outcome: An Evolutionary Model

