



## Partnering to explore: The Renault–Nissan Alliance as a forerunner of new cooperative patterns

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### Abstract

While inter-firm cooperation is expected to pave the way for new innovative business opportunities, it has proved to be highly risky and difficult. This article analyses the emergence of the Renault–Nissan Alliance through the cooperative development of the first joint platform. In such collaborations, the relationships are as precarious as the potential synergies are uncertain. We argue that the building of a new collective identity requires specific managerial models to design simultaneously common purposes *and* collective identity. Several managerial implications are derived for inter-firm partnerships that aim at exploring new fields. But given the difficulties of managers, the paper also discusses possible legal implications and suggests a new type of contract, which would actually support the development of exploratory partnerships.

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In 1999, Renault caused a considerable stir by becoming Nissan's biggest shareholder. At this point, the partnership between Renault and Nissan was very precarious and, considering both the major economic and production crises Nissan was going through, and the problems encountered in other mergers in the automotive sector [cf. Renault's previous attempts (Bruner and Spekman, 1998); DaimlerChrysler (Waller, 2001), etc.], there were grounds for concern about whether it would last. But while Renault has since reinforced its position as the Japanese manufacturers' main share-

holder, the two brands have nevertheless succeeded in preserving their own identities. Yet, the "Alliance" between the two brands has not only made possible a number of joint projects, but has also led to the creation of institutional entities for strategic command and operational coordination. Once competitors, Renault and Nissan have become partners in new equity joint-ventures, and, notably, in Renault–Nissan BV. Other common structures have been set up, including Renault–Nissan Information Services (RNIS) and Renault–Nissan Purchasing Organization (RNPO). Although the brands are still fully autonomous from an operational point of view, Renault and Nissan have completely transformed their mutual expectations, the

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scope of their collaboration, and the very identity of their union.

In a context in which inter-firm cooperation is a growing concern among firms, this building of a new collective identity raises several questions: how has it been conducted and monitored? What were the conditions and the managerial levers that made possible the emergence of a real collective identity? What were the main factors involved? Was the process aided by the institutional environment and by legal devices? If so, what was the importance of their role compared to that of management? Does this success reflect institutional innovations or, rather, new managerial abilities?

An analysis of the Renault–Nissan merger can serve as a framework for a description of potential institutional or managerial innovations. While inter-firm cooperation is expected to create new business opportunities and new potentials for competitiveness (Hagedoorn, 2002; Powell et al., 1996), it is widely acknowledged that it is highly risky and fraught with difficulties. As previous studies have shown, most endeavours have failed: despite the enthusiasm for setting up inter-organizational relationships in innovative sectors, a large number of unproductive and prematurely terminated alliances have been reported (Barringer and Harrison, 2000). Consequently, the emergence of a successful collective identity, especially one in which the identities and strategies of the partners have been preserved, is of major interest. We have had the opportunity of observing the cooperative process from the inside when we carried out an in-depth analysis of the development of the first joint platform from October 1999 to December 2000. This study is part of an on-going research program on innovative design management, which aims at providing a description of network dynamics management as part of the innovative process.

This article argues that the building of a new collective identity requires specific managerial models: the challenge is to design simultaneously a common purposes *and* a collective identity. Decisional strategic frameworks need to be complemented by an understanding of design processes (Hatchuel, 2001; Aggeri, 1999). These considerations imply not only a discussion of the literature on hybrid organizations, but also raise the question for policy makers of what kind of entity the alliance between Renault and Nissan constitutes? The term “alliance” itself covers a very

heterogeneous series of realities and can engender legal and financial confusion (McCahery, 2001; Young, 2000). Hence, the real question is whether existing legal frameworks and available contractual tools are appropriate to this kind of entity.

The paper is set out as follows: in the first section, we attempt, in a brief survey of the literature on inter-organizational relationships, to isolate possible interpretative approaches to the Renault–Nissan Alliance and the managerial processes involved in it. In the second section, we present the case by studying the first joint platform development from a design perspective. As we shall see, this first common project was a means for both partners to explore the potential synergies of their alliance. In the third section, we will discuss the most important factors that, in our view, firms need to manage successfully in order to foster the emergence of successful partnerships. Finally, our conclusion will lead to a broadening of the discussion in which we will examine some of the implications of our analysis not only from the point of view of organization theory but also by suggesting possible modifications in legal institutions.

## **1. Literature review: how should the Renault–Nissan experience be interpreted?**

In the spring of 1999, Renault and Nissan’s CEOs negotiated a possible acquisition by Renault of the Japanese manufacturer. For Nissan, this became crucial, as the company had lost its competitive edge, and its production rate had decreased by 20% since 1992. For both companies, bringing their teams together meant much more than an acquisition: the Alliance, not yet a legal entity, was created to develop joint projects. And the vision was promising: not only did it create the possibility of a major rationalization of the manufacturing systems of both companies, but sales networks were very complementary and each manufacturer could benefit from the technical expertise and organizational know-how of its partner. Moreover, Renault was willing to implement a strategy frequently adopted by most manufacturers: the development of common platforms (roughly speaking, the wheel base systems), which could pave the way for substantial economies in developmental costs (design studies, prototyping, validation protocols), industrial equipment

and purchasing. It would also make it possible to preserve brand identity and vehicle diversity.

It was a context in which the nature of the relationship between the two manufacturers was rather ambiguous: they were still competitors in world markets, Renault was the owner of Nissan and, at the same time, the two manufacturers had set up the Alliance to support common projects. The potential challenges inherent in such a project are legion and, as a perusal of the growing literature on inter-firm relationships reveals, the case can be interpreted in several different ways.

### *1.1. Defining appropriate structures according to joint projects*

From an economic point of view, the Alliance between Renault and Nissan can be seen as a means of integrating two companies in order to improve coordination and achieve cost reductions (Contractor and Lorange, 1988). Even if they are competitors, manufacturers can profit from integration through additive alliances (Dussauge and Garrette, 1998), benefiting from economies of scale and increasing their bargaining power vis-à-vis suppliers. In this regard, the goal is to develop a relationship, which makes it possible to exploit such opportunities to the full. This analysis seeks to compare alternative governance structures and their efficiency according to the nature of the targeted projects (Ravix, 1996). It focuses on the risks of cooperation in uncertain situations in which actors have limited rationality and opportunistic behaviour (Williamson, 1983). The analysis mainly focuses on contractual arrangements, negotiation tactics and the regulation of exchange behaviour to protect transaction-specific assets and predict effective performance via contingent claim contracts and formal safeguards (Child and Faulkner, 1998). The contracts must be adapted to the joint projects in order to overcome contingencies and divergences of interests.

An initial interpretation would consist of an analysis of the entire process, from the setting up of the Alliance to the creation of a formal equity joint-venture in 2001 as a negotiation: the partners would need to evaluate their partners' equities, capabilities and willingness to cooperate before selecting the appropriate governance structure.

As a matter of fact, the companies had very little knowledge of each other. They had very different

corporate cultures and strategies (Boyer et al., 1998), and were not used to working with former competitors. In this perspective, the collaborative process can be a way to develop common ground and interest over time. The formal entity would result from various non-contractual mechanisms such as self-enforcing contracts (Dyer and Singh, 1998). The transaction cost economics approach stresses the importance of relational norms and social sanctions in reducing behavioural uncertainty and ensuring the successful fulfilment of joint commitments (Ring, 1997; Ring and Van de Ven, 1994). Of the governance mechanisms, trust is most frequently mentioned, playing a major role in minimising the threat of opportunism. Other methodologies hold that private authority (Ménard, 1998, 2002), reputation (Larson, 1992) and other social norms sustain cooperative efforts under uncertain conditions and encourage the parties' willingness to realise long-term benefits, thus providing a basis for reciprocal action.

Even if these approaches generate a thorough analysis of the nature of the relationships, they fail to describe adequately the processes at play in collective endeavours. They focus on behavioural uncertainties and on the form of the relationships, but they take "transactions" and possible collective actions for granted. Yet, how can the relationships be adequately known when potential collective actions are still undefined? In the case of Renault–Nissan, possible common projects were far from being specified upstream. Indeed, there were many potential synergies (and, consequently possible areas of cooperation), but their viability and feasibility could by no means be taken for granted and had yet to be demonstrated. In this respect, the creation of the Alliance could be seen as a means of avoiding having to define the governance structure prematurely: instead of focusing on mutual safeguards, the manufacturers were free to explore potential synergies and possible joint projects.

### *1.2. From interdependencies to the building of common projects*

"Knowledge-based theory" (Conner and Prahalad, 1996) takes a different tack from transaction cost theory. The former assumes that cooperation agreement between Renault and Nissan is a means of acquiring knowledge that is heterogeneous, distributed among various actors, and embedded in organizational

routines (Levitt and March, 1988; March, 1991). Given the absorptive capacity of a firm (Cohen and Levinthal, 1990), an evolutionist perspective would explain the Alliance as a means of bringing the engineering teams together and of sharing and developing knowledge. Thus, the form of the Alliance is necessarily akin to the nature of knowledge involved (Hamel, 1991). In this perspective, limits of integration are linked to the constraints of coherence within a portfolio of core-competencies (Dosi et al., 1990).

The development of a joint platform would, then, be a means of setting up joint organizational routines and coordination mechanisms that make possible the effective transfer of knowledge (Gulati and Singh, 1998; Saxenian, 1994).

Yet, here again, we observed that the engineering teams were not merged but, rather, worked independently from one another in the first years of the Alliance in order to limit coordination costs and avoid irreversible commitments. Moreover, the implementation of such coordination mechanisms was hindered by a high degree of uncertainty: did the partners know what they wanted to learn from each other? How could it be ensured that the collaboration would generate positive outcomes? And if a joint project was the most adequate lever to get to know each other, why would the parties be willing to involve themselves when the outcome of such a project was both fuzzy and risky? As long as there was no formal commitment, both manufacturers could refrain from collaboration if the threat of opportunism outweighed expectations concerning benefits.

### 1.3. *Combining learning and relational dynamics*

Hence, these well-known theories appear to be limited since they are based either on *identified* transactions or interdependencies, or on *well-known* objectives or interests. They fail to explain the dynamic evolution of both the Alliance's structure and projects. Yet, strategic analysis has gone far beyond the idea of given and pre-defined objectives to show that strategies are mainly developed in an iterative and adaptive way, especially in innovative and turbulent environments (Martinet, 1993; Ponsard, 1994). Instead of studying the forms of and factors involved in cooperation, the focus should be on the processes of cooperation.

More interestingly, some authors have analysed these processes in terms of the co-evolution dynamics of product qualification and collective identities. This problematic has been extensively addressed in the literature and important features of actual innovation processes have been highlighted. According to this approach, innovations stem from compromises resulting from controversies, negotiations and coalitions between heterogeneous actors (Callon, 1986). Thus, managing innovation means managing the transformations that contribute to the emergence of new compromises (Callon et al., 2001). Following this interpretation, some authors have examined the isomorphism between institutions and objects and the co-evolution of relational structures and strategic intents (Koza and Lewin, 1998, 1999). Doz has analysed successful alliances by concentrating on the iterative process of revision of initial conditions that enable mutual learning and, consequently, convergence (Doz and Hamel, 1998; Doz, 1996). It is our view that this approach is the one best suited to the problem of exploration. What is at issue is the scope of both the revision and the devices required to guide these dynamics effectively. More specifically, we intend to describe the means and levers that Renault and Nissan have used in order to construct a common identity.

## 2. **Research setting and methodology**

In September 1999, Renault's management was worried. The decision to develop a common platform had been taken a couple of months back, but it had proved to be problematic in many respects. As studies progressed, it became apparent that there were fewer shared vehicle components than initially expected. Various problems had cropped up that were threatening to disrupt the schedules of various vehicle projects. Moreover, the relationship between Renault and Nissan design teams was becoming tense and the interface was not working as well as had been hoped. The very legitimacy of the Alliance was at stake. An external study was therefore commissioned to analyse cooperation on the platform development. The study was designed with a view to understanding the perceptions of both teams and providing management with a number of recommendations.

This situation provided us with the opportunity of collaborating with the engineering teams in order to analyse their cooperative set-ups and processes. Our empirical analyses are therefore based on an intervention research methodology (David, 2001). As argued by Yin, this method makes it possible to monitor, in real-time, the evolutions, problems and changing interpretations of cooperative processes. Case studies methodology is acknowledged as a way of developing *grounded theories* (Glaser and Strauss, 1967). This methodology is especially helpful when problems cannot be evaluated from an external point of view, and when it is necessary to interact with the actors to analyse the problems, describe underlying logics, and monitor the implementation of experimental solutions. In this perspective, the methodology represents quite a unique way of challenging prevalent theories and defining new trends and innovations in a changing business environment, and is especially useful in drawing up a picture of the dynamic evolution of alliances and of their governance structures over time. Case studies actually represent “unique opportunities for empirical and theoretical interpretation, and a means of developing an evolutionary understanding” of inter-firm connections (Koza and Lewin, 1999).

The empirical observations concern the initial phase of the Renault–Nissan Alliance, from October 1999 until late 2000. They focus on the development of the first common platform for both Renault and Nissan’s new vehicles. Interviews were conducted with main managers, engineers and technicians who were in charge of developing or prototyping common parts. A further series of interviews was conducted with designers, architects and experts contributing to some critical parts of the platform, an area in which problems arose. Archival written material was also collected and the researchers attended meetings and strategic boards. French managers appointed in Japan were also interviewed. Several intermediary reports were written with a view to gathering reactions, checking the validity of the data and refining our interpretative framework. In the course of the study, an interactive process gave rise to further and more detailed questions. A Japanese team was asked to conduct additional interviews based on Nissan guidelines in Japan. The final conclusions were discussed and validated with both hierarchies.

In the following section, we present the case of the development of the first common platform.

### 3. A first platform development as a vehicle to explore synergies

When the decision was made to develop a common platform for the small–medium segment, the idea seemed promising and both manufacturers could anticipate the benefits from such a joint project. As mentioned above, the platform strategy was a means of getting the teams together and sharing knowledge. But it had other objectives that have been well documented in the literature: with the acceleration in product renewal rates, single manufacturer projects stood accused of wasting resources on solving recurrent problems and not gaining sufficient benefit from past experiences. A platform strategy aims at counterbalancing this single project focus (Cusumano and Nobeoka, 1998) and at multiplying product variations with shorter lead times. According to Cusumano and Nobeoka, this type of coordination involves the transfer of the “platform” from one project to another. Drawing on a comparative analysis, the authors demonstrate the effectiveness of the notion of transfer. For this type of strategy to be set up within an organization, suggested solutions combine matrix organizations, involving dual responsibility for engineers to improve information-sharing, and common development centres.

Naturally, when it comes to manufacturers sharing platforms, the strategy is more difficult to implement. But more generally, the main difficulty of platform development is probably underestimated in the literature: developing a platform actually has very little to do with a traditional project development. As recent studies on design activities have shown (Hatchuel et al., 2001), the term “project” is commonly employed to refer to the development of technical solutions to a list of predefined specifications. All the literature on project management deals with the issue of coordinating numerous actors to converge towards common targets and deadlines (Clark and Fujimoto, 1991). There are clear differences between traditional project management and the development of a shared platform: in the Renault–Nissan case, neither the concept of the platform nor its specifications were defined:

- Would a platform consist of a common architecture, in a series of shared, purchased subsystems? What would the parameters of this common system be? Would only jointly purchased components be used

by both companies? Or would they be developed in common, or even manufactured in the same plants?

- And if the scope of the platform were to be defined, what specifications would be adopted? In view of the very different features of the planned vehicles, as well as the different markets and regulatory systems involved, what would the common requirements for a shared component be?

In order to understand the actual processes and managerial methods Renault and Nissan adopted, we will distinguish three separate stages. The first consists of the launch of the collaboration project and the setting up of coordination devices. The second consists of design work undertaken by the engineering departments with a view to appraising the conditions necessary for using shared components. And the third refers to the way Renault and Nissan handled emerging problems and came to an agreement on technical specifications and joint working methods.

### 3.1. *First phase: planning a joint platform*

When the design teams first met in France, they presented the rough outlines of their planned projects to each other. Nissan had planned two small cars and detailed studies had already started for the first one. For Renault, three cars could possibly use the platform: their palling schedule was not as tight as that of the Nissan vehicles, but were rather bigger and targeted a rather higher level of performance than their Japanese counterparts. It rapidly became apparent that the wheel base that Nissan was developing was not appropriate to Renault's level of expectations. But there was not enough time to go back to the drawing board and start from scratch, so Renault's small and medium wheel base architecture was adopted instead. Within a few weeks, cross-functional teams (CFTs) were set up so that experts in specific subsystems could interact directly with their counterparts. These CFTs rapidly established a list of components that could potentially be developed in common.

However, the target was rather indicative. In fact, it was based on assumptions which were far from being validated. With memories of its problematic experience with Volvo still fresh, Renault was painfully aware of the precariousness of the Alliance. The French manufacturer was adamant that the project should be based

on free will rather than on the authority of the main shareholder. Hence, the collaboration had to be open-ended and to safeguard a sense of equality between the partners. These kinds of conditions, it was thought, would encourage both sides to contribute in their own fashion. Therefore, neither mutual commitments nor cost sharing rules were formalised; indeed, both companies were free to back out of the Alliance at any time should a serious divergence of interests ever come to light.

In these conditions, both organizational principles and requirements were limited in scope:

- In organizational terms, work was to be coordinated among distant teams, which had their own organizational systems, and their own methods, planning schedules and rules. Merging the teams was not an option. Both manufacturers wanted to maintain their autonomy and the Alliance was still too unstable to sustain a rapid process of integration. However, the question of the apportionment of tasks remained open. After some weeks of uncertainty, it was decided to share the work in a way that fit in with the schedules of both companies. Since the first components were set to be produced in Japan, it was decided that Nissan should be responsible for developing the world-wide shared components program. Meanwhile, Renault would be responsible for the shared components program for markets in Europe. This simple principle was agreed on for various reasons: it was acceptable because it was not based on an evaluation of competencies, and did not require a formal platform management team. Thus, it preserved a kind of fair balance between partners and maintained the autonomy of both manufacturers.
- In terms of functional requirements for shared components, the platform had to support distinct projects; it had to be a means rather than an end. Neither delays (Nissan) nor shortcomings in functional performances (Renault) to any project would be accepted. Therefore, any shared component would have to meet simultaneously the requirements of each and every one of the platform's vehicles. Such a stipulation generated major challenges from a design point of view: the specifications of the different vehicles were likely to be contradictory. For instance, the climate control system is generally expected to work continuously in Japan, with a relatively low rate of

air flow. Conversely, in Europe, the cooling system is expected to work intermittently, but silently and at a relatively higher rate of flow. Moreover, the amount of space in which to install the system varied from model to model. In these conditions, a common cooling system would have to meet conflicting criteria and fit into different, very constrained architectures. In other words, it would have to achieve the highest targets in a wide range of performance criteria (costs, volume, loudness, flow, etc.). Accommodating this raft of constraints called for an innovative design.

But this was only one of the challenges that the platform had to face. Obviously, the constraints were only partly known since the other vehicles had not yet been designed. The interdependencies could be difficult to anticipate and introduce additional complexity. More generally, designers had no clear idea of the targets to be achieved in the various projects. The platform was intended to be used for several consecutive projects spread over a period of several years: at this point, designers had to rely on relatively vague hypotheses concerning performance requirements and the characteristics of the various projects, and these hypotheses could still change quite significantly.

### 3.2. *Second phase: exploring common purpose and procedures*

Cultural differences, linguistic barriers and physical distances are often adduced to explain problems in emerging collaborative projects. Although these factors have played an important role in the alliance between Renault and Nissan, it is probable that the specificities of the design program were the main obstacle. An examination of the difficulties that arose led us to isolate three main coordination problems:

- Firstly, Renault and Nissan adopted a coordination model based on the concept of delegation. Yet, to be able to delegate, clear, stable and complete functional specifications are necessary, and as has already been stated, no such specifications had been outlined. Moreover, shared components had to meet the most stringent specifications and be validated according to several protocols. Consequently, the collaborative process was less a matter of “platform development” than a question of exploration: pre-conditions for commonality had to be thoroughly

examined. The teams had to provide answers to the following questions: what does common development require in terms of resources and is it appropriate to the different environments?

- Secondly, the specifications were difficult to transmit because they were ambiguous. When it is stipulated that a fuel tank be safely attached, how should the specification be translated into concrete solutions? In this context, the notion of safety can be considered from several perspectives.

(a) The case of the fuel tanks is instructive. The cross-functional team had agreed that having a common fuel tank would be advantageous. Although Renault and Nissan generally used tanks with different capacities, which were produced using different industrial processes, both parties arrived at a consensus about the appropriate technological process and a common shape. By looking for ways of overcoming their differences, they were even able to improve their respective solutions. But as the development process progressed, a problem concerning how the tank should be fixed in place arose. The manufacturers disagreed over the definition of a well-fixed tank and Nissan refused to accept the validation criteria proposed by Renault. In fact, the Japanese manufacturer wanted to add some straps to hold the fuel tank in place in the eventuality of an accident. Despite extended joint studies designed to measure risks and the quality of the way in which the component was fitted, Renault took the view that the straps were an expensive and useless addition to the basic nuts and bolts system, while Nissan continued to insist that they were necessary. No compromise was possible and the fuel tanks were finally developed separately. This episode demonstrates that particular functionalities can be appraised in different ways, and that validation procedures can be specific to individual manufacturers. Therefore, even when an agreement is reached on the functional specifications to be met, there can be divergences in the way that this should be achieved.

(b) This apparently minor incident reveals the enormous potential for problems to arise in cooperative design processes. When attempting to render their design methods compatible,

partners inevitably have to deal with contingency. Even when expertise has been established and appears to be built on firm foundations, it can appear inadequate when compared to other approaches. Here, both teams had to justify their method, especially in terms of their validation protocols. For instance, to limit the vibrations in the steering wheel, Renault usually defined a maximum dynamic rigidity (measured in N/m). Conversely, Nissan set a maximum frequency (in Hz): both measurements are valid and relevant. But defining a common specification on such a basis is a complicated business; in several cases, the partners had to apply a double validation process.

- Lastly, another problem arose in regard to burden sharing. Despite initial agreement, as design studies progress, differences in the nature of the work required to develop various components became apparent. As a result, the apportionment of tasks sometimes seemed unfair. In some cases, the fact that two manufacturers were working together made the development process much more complicated and used up a good deal of resources. For instance, the cooling system was not an issue in projects undertaken separately, but it proved to be extremely difficult to design one for the common platform. In this case, the manufacturer responsible for development was willing to go it alone. Conversely, for other components, a number of innovative technical solutions were developed. In these instances, both manufacturers wanted to develop the components separately so that they could assimilate the new technology more efficiently and replicate it on their other vehicles. The cross-segmental commonalities within particular models sometimes appeared to be greater than those between Renault and Nissan. Through the learning and design processes, both teams reached a deeper understanding of what was hindering the development of a common platform, and were finally able to isolate and eradicate the problems that were holding them back (shortage of resources, deadlines, interference from other interests).

As a result, the two manufacturers were gradually able to define specifications, validation criteria, resource requirements and technical solutions. Whereas, initially, the scope of the platform was uncertain, it

was now, little by little, taking shape. In other words, the decision to manufacture a shared component could not be taken upstream, but only after sufficient information and experience had been derived from learning processes. However, divergent points of view could emerge and call into question shared technical solutions, the apportionment of tasks, or even the economic viability of specific collaborative projects. In this last case, and if a shared component were to be dropped from the shared platform, then not only would the physical parameters of the platform evolve, but so too would those of the actors involved.

### *3.3. Third phase: tensions and evolutions of initial settings, drifts or adjustments?*

Finally, when compared to initial expectations, the final percentage of shared components may have appeared disappointing. But should the Renault–Nissan collaboration be evaluated according such criteria? In our view, the final diagnostic must be tempered.

- The decision to remove some components from the common platform can only be seen as a failure if the decision was perceived as being unfair or unjustified by one of the partners. Indeed, this did occur, especially when such decisions were taken late in the development process. Whenever one of the partners backed out of a shared component project, the process had to be started again from scratch, and any investment in prototyping, tooling and purchasing was lost. These episodes often led to quite fiery discussions, especially when one of the partners backed out late in the process, thus creating the impression of a waste of effort and resources.
- Conversely, the removal of a component from the scope of the platform could be justified when its development appeared too complex or too risky. Indeed, backing out could effectively constitute a wise decision in terms of avoiding unsatisfactory compromises. It should be noted that apportioning areas of the development process to either one of the two partners separately was not necessarily seen as a failure. After all, any analysis of the possibility of developing common components may produce the conclusion that risk and expense outweigh projected benefit and that it would be better to apportion tasks separately.

- Moreover, it was rare for either of the parties to back out of a joint project. We observed that both teams were willing to work with each other in the design process to find joint solutions. Indeed the design process was more complex than merely sharing development costs and required a good deal of time and effort. In some areas, there was clearly a shift from a delegation mode to either a co-development or separate development mode. But these approaches also created tensions. Various reasons can be adduced: firstly, in view of the fact that the initial justification of the joint platform was to make cost sharing possible, the co-development approach could have been seen as an unwarranted compromise, since, in some areas, it pushed up development costs considerably due to the complicated technologies involved and the double validation processes necessary to meet requirements. Secondly, when Renault wanted to apply its own validation procedures and asked to participate in discussions with suppliers, Nissan took umbrage, perceiving the move not only as being indicative as a lack of trust but also as an unwelcome form of interference.

How, then, should the results of the joint platform development be evaluated? Clearly, there were some positive elements. Whatever the success of the initial platform, the real purpose of the project was to serve as a vehicle for co-learning processes. Not only did each partner get to know the other one, but they also cleared common ground for further collaborations. For instance, purchasing methods have been standardised, and common procedures to share information set up. Furthermore, more often than not, Renault and Nissan developed joint research programs to harmonise their validation protocols, re-examine their traditional procedures and re-build their expertise in some critical domains.

Therefore, from the point of view of cooperation, the mere fact that one or other manufacturer backed out of certain specific projects implied neither the failure nor the end of the collaborative process. This was mainly possible thanks to managerial evolutions: each potential problem generated a number of revisions to the “initial conditions”; whenever a component was removed from the common scope of the platform, or the coordination model shifted from delegation to co-development, it became necessary to assuage

potential tensions. A Platform Management Team was set up in 2000 to facilitate these transitions and to find satisfactory compromises. But sometimes, the arbitration of the Global Alliance Committee (GAC) itself (which included top managers) was needed to endorse and confirm new shared orientations.

Finally, it seems that Renault and Nissan, apart some very rare crises, succeeded in managing the various evolutions and adapting both the scope of the platform and the governance structure in a consistent way. For instance, once the parties’ interests were better known, supplier selection rules were clarified. New structures were created (for example, RNPO and RNIS in 2001). Finally, the partners were able to jointly announce, on 30 October 2001, a new phase of their collaboration, strengthening their mutual involvement, with Renault increasing its share from 36.8 % to 44% and Nissan acquiring 15% of the French firm. The two manufacturers completely safeguarded their operational autonomy, but the strategic management side was reinforced through the creation of Renault–Nissan BV, a joint equity venture constituting the Alliance’s centre for strategic command and global coordination.

#### 4. Discussion

The Renault–Nissan joint platform development clearly differs from traditional projects (Hatchuel et al., 2001) in that its scope, its specifications, and the areas of expertise required were not identified in advance. On the contrary, they were generated by the process of collaboration, whose purpose was to define them. In that sense, traditional economic analysis is inappropriate: it would be almost impossible to compare the economic advantages or disadvantages of various governance structures in a project whose final parameters had yet to be determined. Simultaneously, an interpretation framed in terms of power, bargaining relationships and mutual dependency would be inadequate as a vehicle for describing the specificities of the actual processes involved. An interpretation based on relationships, stabilisation and trust-building would be also fall short. In fact, as we have seen, the decision to put an end to collaboration on specific projects can result either in joint development, in the termination of the relationship, or in new forms of cooperation based on research questions based further upstream.

Indeed, the way in which the collaboration developed is characterised by two different design processes. As Hatchuel (1996) argues, relationship dynamics and learning processes cannot be considered separately. On the one hand, collaboration results in the specification of common projects: in 2001, Renault and Nissan defined several issues, including joint projects and common research questions. On the other, it defines their relationship in terms of selected common goals.

#### 4.1. *A collective joint goal design process*

The platform was defined gradually: from initial projections, the scope of shared component design and manufacture was refined and functional requirements specified. Accordingly, coordination mechanisms were substantially revised: both the shared components and the joint development approach applied to them were developed and revised step by step in order to accommodate the interests of both Renault and Nissan. But, *pace* Doz's iterative analysis, modifications to initial expectations and conditions generated by the learning process are not the only fruit of cooperation. Active management also plays a crucial role, a role which we shall examine now.

The cross-functional teams were set up to map conditions for joint development. Each team was given the assignment of reporting on all factors necessary for making appropriate decisions concerning whether or not Renault and Nissan would collaborate on specific shared component projects. It should be noted that the result of these preliminary investigations was largely dependent on a raft of factors, including the way in which the feasibility study concerning shared components was conducted; the way in which coordination principles were defined; the technical options selected; the suppliers consulted; and, lastly, on validation protocols. The viability of shared components is not only confirmed or invalidated by the studies: shared components have no intrinsic value, but any value they do have will depend on the way in which the collaboration is conducted. In other words, the task of the CFT was not to evaluate the feasibility of various solutions, but to design the components according to a list of prerequisites. And when difficulties were encountered, the various options were discussed again and eventually revised in order to arrive at a satisfactory compromise. In design activities, there exists, as Hatchuel

(2001) has demonstrated, an “expandable rationality”; the task of the engineering teams was to expand the set of possible solutions. In other words, it is never intrinsically possible to develop a given component in common and it is never intrinsically advantageous to work in tandem. The success of a joint development project depends on all the design choices, including organizational choices, made throughout the development process (Segrestin et al., 2002).

Accordingly, a common approach to organization and emerging issues was gradually developed with a view not only to generating a list of shared components, but also to addressing a number of problems that could not have been solved within the parameters of the original development platform.

#### 4.2. *The construction of a collective identity*

Cooperation on the development platform did, however, produce another outcome. As a matter of fact, during the cooperation process, a collective identity emerged. This can be seen in two ways: firstly, a common goal was constructed; and, secondly, rules and regulation devices were set up.

- On the one hand, both Renault and Nissan have learned more about the advantages of collaborating with each other. Initially, the advantages were considered “virtual”, but by the end of the process, common purposes had been defined and both partners had a clear idea of the conditions required in order for their involvement in the platform to be beneficial. It was decided that certain components and areas of expertise were inappropriate to the co-development platform. However, the manufacturers were able to identify potential areas of development. For instance, the joint development program led them to analyse their validation procedures. In some areas, the cooperation process clearly provided an opportunity of reviewing and refining areas of expertise. In this sense, cooperation also contributed to defining both the group and its potential common interests by delimiting the scope of viable common projects.
- On the other hand, the legitimacy of joint action was not established from the beginning. Renault was always careful to invite Nissan to collaborate only insofar it was in line with its own interests.

The manufacturers agreed to take part in projects on a conditional, case-by-case basis, and it was stipulated that the collaboration would continue only if it continued to serve the interests of both parties. Yet, while there was no mutual liability in the early stages of cooperation, the process has, naturally, given rise to areas of conflict. After long and expensive studies, Nissan could not agree to Renault changing its requirements or deciding that a particular component would no longer be part of the joint platform: what is now accepted as legitimate behaviour has evolved over time. Here again, we observed that the process of rule building was actively managed; indeed, basing its approach on the results of the learning processes, management revised the rules step-by-step, leaning either towards a more explicit form of commitment or a more open framework. At each stage, the onus was on fostering the conditions of possibility necessary for collaboration to flourish. As long as there was no clear agreement on specifications and coordination procedures, the parties remained autonomous. Introducing explicit cost sharing rules probably would have created insurmountable difficulties in the early days of the Alliance. Yet, there came a time – i.e., when one of the partners committed itself to large investments – when these rules had to be clarified.

In this context, management had to be aware of all the specificities of the various parts of the platform and of the way the studies were progressing. A uniform management approach would not have been able to deal with such a highly volatile situation. Indeed, every time tensions emerged, it was due partly to the fact that there was a degree of incompatibility between the legitimising framework and the design problems encountered.

## 5. Towards a renewed analytical framework

Bearing these points in mind, how can we best define the identity of the Alliance? What kind of framework is best suited to preserving the identity of the two parties while at the same time encouraging the emergence of a new one? Which theoretical concept can take into account both autonomous activities and interdependencies? It appears that two factors must be considered in

any analysis of inter-firm collaboration processes. We will now examine these factors before moving on to a discussion of the managerial implications.

### 5.1. A dual framework

In order to understand the process of collective identity building, two interrelated design processes must first be taken into account. In our view, they are both related to the pioneering work of Chester Barnard on “formal organization”. What makes a group of individuals a group or an organization? Barnard defines an organization as “a system of consciously coordinated activities or forces of two or more persons”. This system depends on three elements: a willingness to cooperate, a means of communicating, and the existence of a “common purpose” regarded as legitimate by all the individuals involved. Barnard explicitly mentions two factors that managers should take into account.<sup>1</sup>

#### 5.1.1. Coordination

Most studies on management have addressed the concept of coordination in the sense defined by Mintzberg (1981), and, traditionally, managerial action refers to mechanisms of coordination to achieve a common objective. Basically, coordination reflects the object on which the process of cooperation focuses. Clearly, it refers to related knowledge and to efficiency criteria required to specify and concretise this object from a collective point of view (Hatchuel, 1996). Organizational mechanisms that support coordination are related to job sharing modalities, prescription, and reporting and control systems, as well as to interactions and collective learning devices.

But as an analytical tool, coordination in and of itself is inadequate, since it does not take into account either the willingness of the actors to participate, or the legitimacy of the “common purpose” in which they might or might not become involved. Using coordination mechanisms in isolation from all other factors, it would be impossible to distinguish a centralised firm from a centralised network of suppliers, or even from

<sup>1</sup> Other authors have suggested quite similar actors, e.g. Grandori (2001), Sobrero and Schrader (1998). Similarly, in a discussion of legal functions, Salbu makes a distinction between *coordination* functions and *control* functions (Salbu, 1997).

a sports team. Consequently, a second factor must be considered if the nature of relationships and what distinguishes a collective from a collection of individuals is to be properly understood.

### 5.1.2. Cohesion

The second factor, which we shall refer to as “cohesion”, has also been the focus of a substantial amount of attention in various academic fields. Economists study governance structures as a means of organizing incentives and aligning interests in accordance with a common goal. But more generally, as Barnard has pointed out, an order-giving or governance structure is effective only insofar as it is legitimate. In other words, it must be understandable and acceptable. Collective action requires a system of legitimacy, as defined by Laufer (2000), Laufer and Burlaud (1997): an agreement concerning acceptable means of settling possible disputes. Cohesion is therefore the framework that makes it possible for collective action to take place. In this respect, legal procedures play a dominant role: while it is true that there may be various sources of cohesion within a group, private regulation systems are not alternatives to the legal system, although they can be enabled and organized by it (Serverin, 2000). Moreover, from a methodological point of view, formal rules and legal devices are very often defined and studied as tangible instruments of cohesion: it is frequently assumed that the cohesion of partnerships can be schematically described in reference to the rules defining the conditions of entry into or exit from them, the rules defining results or opportunities and the analysis of sharing procedures or risk assumption, and the rules that define who is allowed to take what kind of decision.

At this stage, we can consider that any collective identity is likely to be analysed according to these two factors. They are summarized in Table 1.

### 5.2. The co-evolution of coordination and cohesion

Whereas in more traditional organizations or inter-firm relationships, at least one of the two factors described above is likely to be defined and stable, the Renault–Nissan Alliance is characterised by the fact that both are precarious.

Table 1  
The two dimensions of cooperation

Coordination	Cohesion
<i>Refers to:</i>	
Object, problems, concepts	Common purpose
Knowledge and competencies	Preferences and interests
Efficiency criteria	System of legitimacy
<i>Instrumented by:</i>	
Job sharing	Agreement on means to settle disputes
Prescription, monitoring, reporting	Entering and leaving conditions
Collective learning devices	Risks assumptions, results sharing
	Decision legitimacy

- The aim of coordination is to build common purpose (platforms, joint opportunities and related capabilities).
- The aim of cohesion is to create to conditions of possibility for collective action by building a common legitimate purpose and a system of legitimacy, which enables partners to agree on a common purpose and on the rules governing it, however open-ended they might be. Partners need some kind of framework, offering certain guarantees, before committing themselves. In the Alliance, the primary guarantee was the possibility of leaving the partnership. However, at the same time, both partners were aware that collaboration would give rise to a number of mutual liabilities.

The preceding section demonstrates that both design processes are interdependent and have to be managed consistently. Both factors have progressively been shaped and their evolutions characterise the Alliance’s cooperative itinerary.

- Initially (position 1 in Fig. 1), the creation of the Alliance was motivated by a willingness to exploit potential synergies. The joint platform project was launched to explore these synergies and the conditions in which they could be achieved. At this stage, cohesion was very open-ended and unstable: top managers from both Nissan and Renault continually stressed the importance of brand autonomy, and both firms were anxious to maintain their operational freedom. It was decided that the creation of a formal decision-making structure should be postponed. It

was only in January 2000 that a Platform Management Team was set up.

- As a result of the learning processes, coordination (the scope of the platform and the coordination mechanisms required to develop it) was modified to take into account the interests of both manufacturers. But at the same time, the joint project was a means of mapping the interests of both parties and identifying critical issues as new strategic goals emerged. Both common purpose and collective identity were shaped by the collaborative process. Different paths were followed:
  - i. Partners were able to find satisfactory solutions to the problems encountered in developing shared components, even if revisions to job sharing rules proved necessary. Rules governing risk analysis and cost sharing were established at the beginning of development phases. The partners then embarked on more traditional co-development processes (position 2, Fig. 1).
  - ii. Partners learned about the kind of areas of expertise and resources required for a successful co-development project. Whenever the use of such resources was incompatible with the strategy of one of the partners, the project for a particular shared component was abandoned and coordination and cohesion were modified accordingly (position 3, Fig. 1). But new issues that the partners wanted to explore jointly also arose (for example, model crash tests highlighting the quality of fuel tank fixtures). In such situations, the collective goal was not characterised by joint development, but became, rather, a joint research

program, with coordination reoriented towards more exploratory issues requiring a distinctive cohesion framework (position 4, Fig. 1).

In this respect, although it was very difficult to predict outcomes, the process was closely supervised and directed by the management: technical choices and decisions relative to coordination mechanisms were made according to perceptions about how the respective interests of Renault and Nissan would be served by collaborating on the platform. But no thoroughgoing evaluation of the interests of the two manufacturers was carried out upstream, and, in that sense, the purpose of the preliminary studies was to define potential problems as well as potential opportunities for each partner. Cohesion was then modified transversally in order to take coordination into account. At the same time, the joint project was a means of strengthening common purpose: the platform development helped to identify what was not relevant for the Alliance and to specify its legitimacy.

### 5.3. Managing the interplay between coordination and cohesion

In this context, how can we best interpret the role of management in the collective identity building process? The role of the Platform Management Team was not to define the kind of contribution the two manufacturers would make to the collaboration. In fact, the Team had two different tasks:

- Firstly, management was responsible for coordination, or, in other words, for modifying the scope of the common platform and of job sharing decision-making procedures as and when the legitimacy of the collaboration was affected by its various evolutions. The learning process was further stimulated by defining the risk of either party backing out of specific joint projects downstream and by comparing methods, standards and validation protocols. In this respect, we interpret the platform development as a means of exploring potential common interests, and identifying potentials for shared learning experiences and new (research) projects that could be of benefit to both manufacturers.
- Secondly, management had to adapt the cohesion factor in line with the progress of the studies. Whereas predefined rules governing mutual

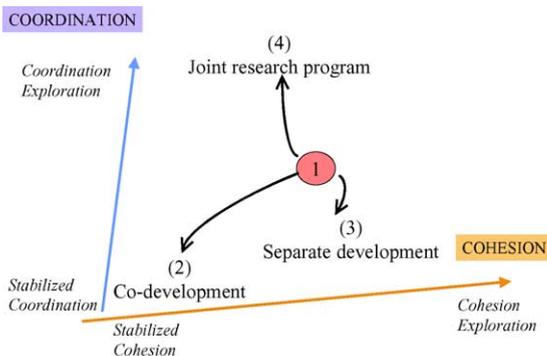


Fig. 1. The dynamic of the Alliance.

commitment or cost sharing introduced upstream may well have been fatal to the entire collaboration process, such rules proved necessary once the learning processes were underway. The major issue was how to define not only the conditions of possibility for collaborative action, but also how both manufacturers could be allowed to revise their own strategic intentions and commitments on a stage-by-stage basis in line with the learning processes.

The main issue is the existence of a dynamic management able to continuously adjust coordination and cohesion (Segrestin, 2003). It seems that, apart from very occasional crises, Renault and Nissan, were able to manage this evolution over time and adapt both the scope of the platform and the governance structure in a consistent way.

## 6. Conclusion

This case study shows how an inter-organizational relationship has to be managed in order to build a collective identity around a consistent “common purpose”. Neither governance structures nor joint projects were determined in advance and the role of the management consisted of monitoring both these design processes.

These conclusions lead us to a discussion of some of the prevalent ideas in the literature.

- Firstly, as noted earlier, researchers have paid a great deal of attention to the stability and longevity of inter-firm relationships as indicators of success. We may, however, question whether stability or longevity can be considered indicators of success irrespective of the context and purpose of the relationships. As noted elsewhere (Marshall and Segrestin, 2002), prevalent definitions of success can be misleading (Arino and Doz, 2000; Koza and Lewin, 2000). The case we studied shows that the termination of an IOR does not imply that it has failed if the common purpose consists precisely of exploring possible joint interests.
- Secondly, the discussion of this case shows that a new form of organizational entity has been developed. Fig. 2 illustrates various forms of relationships defined within the framework outlined in this article: a sale transaction corresponds to a well-defined object on both the coordination and cohesion axes. A

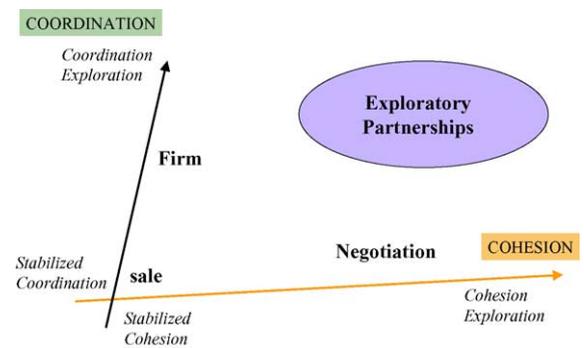


Fig. 2. A typology of partnerships.

firm would constitute a group in which cohesion is stable, but whose nature can be very open-ended. Conversely, negotiation refers to a precise object, but also implies a high degree of uncertainty insofar as partners and the rules of cohesion are concerned. These situations are relatively familiar. But, during its first two years, the Renault–Nissan Alliance constituted a different configuration: a partnership in which both collective identity and common goals were ill-defined.

Our analysis highlights a very specific form of “hybrid organization”, one destined to mutate continually. This “mutational entity”, which we term an *exploratory partnership*, has succeeded, in a manner specific to itself, in taking into account its own particularities.

In this paper, we have discussed a number of the managerial implications of our analytical framework. While these mutational identities are important in the economic sphere, they may have even broader implications at the institutional level. It would be legitimate to ask whether a new kind of legal framework, something along the lines of a new form of partnership or corporation, might be appropriate for this type of organization. Business law arrangements are often heavily criticized for their formalism and rigidity. Yet, contractual freedom allows actors total flexibility in terms of defining status. This is effectively the kind of freedom Renault gave Nissan. But most of the legal devices and working arrangements employed by the Alliance were chosen in order to produce solutions to problems specific to particular transactions or projects. None of them were explicitly designed for “mutational partnerships”. The question of whether, from a policy perspective, it might

not be helpful to define a legal framework in which the transformation of a group and its purpose could be organized is an interesting one. For example, in this type of collaboration, it could be compulsory to establish procedures for defining a contingent and conditional horizon of the scope of the partnership. The governance structure could also require the implementation of specific procedures and techniques for ensuring that the relationship between coordination and cohesion remained stable. Such a framework would doubtless help to keep conflicts to a minimum and ensure the partnership's survival. It would also make the joint exploration of new business opportunities a less complicated process. The question of whether the success of the Renault–Nissan Alliance could only have been achieved through managerial innovations, or whether it might also have been achieved through a new legal form of partnership is a central issue for policy makers.

## References

- Aggeri, F., 1999. Environmental policies and innovation, a knowledge-based perspective on cooperative approaches. *Research Policy* 28, 699–717.
- Arino, A., Doz, Y., 2000. Rescuing troubled alliances. Before it's too late. *European Management Journal* 18, 173–182.
- Barringer, B.R., Harrison, J.S., 2000. Walking a tightrope: creating value through interorganizational relationships. *Journal of Management* 26, 367–403.
- Boyer, R., Charron, E., Jürgens, U., Tolliday, S., 1998. *Between Imitation and Innovation: the transfer and hybridization of productive models in the international automobile industry*. Oxford University Press, Oxford, 394 pp.
- Bruner, R., Spekman, R., 1998. The dark side of alliances: lessons from Volvo–Renault. *European Management Journal* 16, 136–150.
- Callon, M., 1986. The sociology of an actor-network: the case of the electric vehicle. In: Callon, M., Rip, A. (Eds.), *Mapping the Dynamics of Science and Technology: Sociology of Science in the Real World*. MacMillan, London, pp. 19–34.
- Callon, M., Lascoumes, P., Barthe, Y., 2001. *Agir dans l'incertain*. Essai sur la démocratie technique Editions du seuil.
- Child, J., Faulkner, D., 1998. *Strategies of co-operation: managing alliances*. In: *Networks and Joint Ventures*. Oxford University Press, Oxford.
- Clark, K.B., Fujimoto, T., 1991. *Product Development Performance; Strategy, Organization, and Management in the World Auto Industry*. Harvard Business School Press.
- Cohen, W.M., Levinthal, D.A., 1990. Absorptive capacity: a new perspective on learning and innovation. *Administrative Science Quarterly* 35, 128–152.
- Conner, K., Prahalad, C.K., 1996. A resource-based theory of the firm: knowledge versus opportunism. *Organization Science* 7, 477–501.
- Contractor, F.J., Lorange, P., 1988. Why should firms cooperate? The strategy and economics basis for cooperative ventures. In: Contractor, F.J., Lorange, P. (Eds.), *Cooperative Strategies in International Business*. Lexington Books.
- Cusumano, M., Nobeoka, K., 1998. *Thinking Beyond Lean, How Multiproject Management is Transforming Product Development at Toyota and Other Companies*. The Free Press.
- David, A., 2001. *Intervention Methodologies in Management Research*. EGOS Lyon.
- Dosi, G., Teece, D., Winter, S.G., 1990. Les Frontières de la firme: vers une théorie de la cohérence de la grande entreprise. *Revue d'économie industrielle*.
- Doz, Y., Hamel, G., 1998. *Alliance Advantage, the Art of Creating Value Through Partnering*. Harvard Business School Press.
- Doz, Y.L., 1996. The evolution of cooperation in strategic alliances: initial conditions of learning processes? *Strategic Management Journal* 17, 55–83.
- Dussauge, P., Garrette, B., 1998. Anticipating the evolutions and outcomes of strategic alliances between rival firms. *Studies of Management & Organizations* 27, 104–126.
- Dyer, J.H., Singh, H., 1998. The relational view: cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review* 23, 660–679.
- Glaser, B.G., Strauss, A.L., 1967. *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Adline.
- Grandori, A., 2001. *Organization and Economic Behavior*. Routledge.
- Gulati, R., Singh, H., 1998. The architecture of cooperation: managing coordination costs and appropriation concerns in strategic alliances. *Administrative Science Quarterly* 43, 781–814.
- Hagedoorn, J., 2002. Inter-firm R&D partnerships, an overview of major trends and patterns since 1960. *Research Policy* 31, 477–493.
- Hamel, G., 1991. Competition for competence and inter-partner learning within international strategic alliances. *Strategic Management Journal* 12, 82–103.
- Hatchuel, A., 1996. Coordination and control. In: *International Encyclopedia of Business and Management*. Thomson Business Press.
- Hatchuel, A., 2001. Towards design theory and expandable rationality: the unfinished program of Herbert Simon. *Journal of Management and Governance*, no. 1.
- Hatchuel, A., Le Masson, P., Weil, B., 2001. From R&D to RID: design strategies and the management of “innovation fields”. In: *Proceedings of the 8th Conference IPDM, EIASM, Holland*.
- Koza, M., Lewin, A., 2000. Managing partnerships and strategic alliances: raising the odds of success. *European Management Journal* 18, 146–151.
- Koza, M.P., Lewin, A.Y., 1998. The co-evolution of strategic alliances. *Organization Science* 9, 255–264.
- Koza, M.P., Lewin, A.Y., 1999. The coevolution of network alliances: a longitudinal analysis of an international professional service network. *Organization Science* 10, 638–653.

- Larson, A., 1992. Networks dyads in entrepreneurial settings: study of the governance of the exchange relationships. *Administrative Science Quarterly* 37, 76–104.
- Laufer, R., 2000. Les institutions du management: légitimité, organisation et nouvelle rhétorique. In: David, A., Hatchuel, A., Laufer, R. (Eds.), *Les nouvelles fondations des sciences de gestion, éléments d'épistémologie en management*. Vuibert, Paris.
- Laufer, R., Burlaud, A., 1997. Légitimité. In: Simon, Y., Joffre, P. (Eds.), *Encyclopédie de Gestion*. Economica.
- Levitt, B., March, J.G., 1988. Organizational learning. *Annual Review of Sociology* 14, 319–339.
- March, J.G., 1991. Exploration and exploitation in organizational learning. *Organization Science*, 2.
- Marshall, C., Segrestin, B., 2002. Managing exploratory partnerships, an example of new business creation in the telecommunication industry. In: *Proceedings of the 9th IPDM Conference on EIASM*, Sophia Antipolis.
- Martinet, A.-C., 1993. Stratégie et pensée complexe. *Revue française de Gestion*, no. 93.
- McCahery, J.A., 2001. Comparative perspectives on the evolution of the unincorporated firm: an introduction. *The Journal of Corporation Law*, 803–817.
- Ménard, C., 1998. Maladaptation of regulations to hybrid organizational forms. *International Review of Law and Economics* 18, 217–403.
- Ménard, C., 2002. The Governance of hybrid organizations. In: *Proceedings of the LINKS Conference*, Copenhagen.
- Mintzberg, H., 1981. *The Structuring of Organizations: A Synthesis of the Research*. Prentice-Hall.
- Ponssard, J.-P., 1994. Formalisation des connaissances, apprentissage organisationnel et rationalité interactive. In: Orléan, A. (Ed.), *Analyse économique des conventions*. PUF.
- Powell, W.W., Koput, K.W., Smith-Doerr, L., 1996. Interorganizational collaboration and the locus of innovation. *Administrative Science Quarterly* 41, 116–145.
- Ravix, J.-L., 1996. *Coopération entre les entreprises et organisation industrielle*, CNRS Editions.
- Ring, P.S., 1997. Processes facilitating reliance on trust in inter-organizational networks. In: Ebers, M. (Ed.), *The Formation of Inter-Organizational Networks*. Oxford University Press, Oxford.
- Ring, P.S., Van de Ven, A.H., 1994. Developmental processes of cooperative interorganizational relationships. *Academy of Management Review* 19, 90–108.
- Salbu, S.R., 1997. Evolving contract as a device for flexible coordination and control. *American Business Law Journal* 34, 329–384.
- Saxenian, A., 1994. *Regional Advantage, Culture and Competition in Silicon Valley and Route*, vol. 128. Harvard University Press.
- Segrestin, B., 2003. *La gestion des partenariats d'exploration. Spécificités, crises et formes de rationalisation*. Phd Ecole des Mines de Paris.
- Segrestin, B., Lefebvre, P., Weil, B., 2002. The role of design regimes in the coordination of competencies and the conditions for inter-firms cooperation. *International Journal of Automotive Technology and Management* 2.
- Serverin, E., 2000. *Sociologie du Droit. La Découverte*.
- Sobrero, M., Schrader, S., 1998. Structuring inter-firms relationships: a meta-analysis approach. *Organization Studies* 19, 585–615.
- Waller, D., 2001. *Wheels on Fire, the Amazing Inside Story of the DaimlerChrysler Merger*. Hodder and Soughton.
- Williamson, O.E., 1983. *Markets and Hierarchies, Analysis and Antitrust Implication*. The Free Press, New York.
- Young, S., 2000. Limited liability partnerships. A chance for peace of mind. *Business Law Review* November, 257–260.