

Paradoxes in inter-organizational relationships: how do alliances managers deal with ambidexterity in innovative projects?

Vichara Kin
Université de Nantes
France

Nathalie Fabbe-Costes
Aix-Marseille Université
France

Frédéric Prevot
KEDGE Business School
France

Abstract

Inter-organizational relationships are complex. The individuals who are at the heart of the management of these relationships are often confronted with paradoxes. As gatekeepers, they have to arbitrate between contradictory constraints. The ability to cope with these tensions is critical to the survival and competitiveness of organizations. To better understand this question, in the management literature, research on paradoxes has developed by considering them not only as a necessary evil, but rather as a lever organizing collective action. (Smith and Lewis, 2011). Although research on paradoxes has largely developed over the past 20 years, there are still areas that have not been widely explored (Schad et al., 2016). In particular, there is little research on inter-organizational situations. In addition, studies on the role of individuals in the management of paradoxes are also rare. Our study aims to fill this double research gap. We propose to analyze situations of management of paradoxes by individuals in inter-organizational context. We focus on a type of managerial situation that is an archetype of paradox management: the management of ambidexterity, which consists in finding a balance between exploration and exploitation in a context of innovation. We focus our research on situations of B to B alliances in which innovations have been developed. We study how alliances managers deal with ambidexterity in this context. Based on a series of expert interviews with alliance managers, three cases were selected and are presented in this article. They illustrate three situations of implementation of ambidexterity management practices. From a theoretical point of view, these illustrations highlight a complex phenomenon (management of ambidexterity) in a situation that adds to its complexity (innovations in the context of inter-organizational relations) by approaching it from an angle that has remained little studied in the literature on the management of paradoxes: that of the individual practices implemented by managers. In addition, these cases concern complex and frequent situations that managers face and the cases presented in this paper can be of inspiration to practitioners.

Introduction

The vast majority of companies face the constraints of an ever-changing environment, intense competition and organizational complexity. These pressures at different levels confront managers with contradictory demands. To better understand this issue, management research has evolved towards taking into account the paradoxical nature of management situations, thus outbalancing the conception according to which the company must make choices between opposing alternatives in order to find the best match between internal structure and external environment (Smith and Lewis, 2011). Studies on paradoxes do not consider these alternatives as a necessary evil, but rather as a lever for collective action. They emphasize that the ongoing effort to simultaneously manage conflicting demands is a condition for long-term survival of organizations (Lewis 2000, Smith and Lewis 2011, Schad et al.) Although research on paradoxes has largely developed over the last twenty years, there are still areas that have not been widely explored, as demonstrated by a recent review of the literature (Schad et al., 2016). Among these areas, the authors identify individual approaches to the paradox. The literature on

paradoxes lacks studies to better understand how managers, at their level, organize to manage situations of conflicting requirements.

A paradox particularly studied in the literature is that of ambidexterity. It consists of pursuing a dual logic of exploration and exploitation in the development and evolution of the organization (Tushman and O'Reilly 1996, Smith and Tushman 2004). In rapidly changing environments, faced with the strategic movements of competitors, in the context of innovation, or in any situation that requires adaptation or anticipation, the company must often seek a balance between the challenge of developing new skills (exploration) and the requirement to maintain a strategy, a structure, a culture and processes that allow the continuity of its activity with its current skills (exploitation). In these contexts, the ability to develop this dual logic, despite the fundamental contradiction between change and continuity, is considered necessary for the survival of the firm (March 1991, Gibson and Birkinshaw 2004). Organizational ambidexterity is a privileged ground for studying the management of paradoxes through the individual role of managers (Lubatkin et al., 2009, O'Reilly and Tushman, 2011). However, in the literature, this question of managers' practices has received little attention in the specific context of inter-organizational relations, whereas these are a frequent framework for studying ambidexterity (Stettner and Lavie, 2014).

The purpose of our research is to study the practices that alliance managers implement to manage ambidexterity in the context of innovation projects in inter-organizational context. Based on a series of expert interviews with alliance managers, three cases were selected and are presented in this article. They illustrate three situations of implementation of ambidexterity management practices. On the theoretical level, these illustrations highlight a complex phenomenon (management of ambidexterity) in a situation that adds to its complexity (innovations in the context of inter-organizational relations) by approaching it from an angle that has remained little studied in the literature on the management of paradoxes: that of the individual practices implemented by the managers.

The management of ambidexterity: exploration-exploitation paradox

“Paradox denotes contradictory yet interrelated elements – elements that seem logical in isolation but absurd and irrational when appearing simultaneously.” (Lewis 2000, p. 760). However, rather than suffering the paradox, it is possible to consider it as a lever organizing collective action. From this perspective, paradox management is about how companies manage the tensions resulting from the conflicting demands they face. The paradox is then considered as positive because it makes it possible to regulate contradictory elements that are necessarily present in organizations. Learning to manage paradoxes is a condition for long-term business survival in turbulent environments (Lewis, 2000, Smith and Lewis, 2011, Schad et al., 2016).

Ambidexterity, whose contradictory elements are exploration and exploitation, highlights a paradox for organizations often faced with situations of change, whether external -related to the environment or competition- or linked to internal decisions (Tushman and O'Reilly, 1996). Since March's research in 1991, studies on ambidexterity have proliferated. Ambidexterity is defined as the capacity developed by the organization to combine exploration and exploitation (Tushman and O'Reilly, 1996). Exploration involves a search for new alternatives. Its effects are uncertain, long-term and often negative. Exploitation is the development and extension of existing skills, technologies and paradigms. Its effects are positive, fast and predictable (March 1991). Ensuring these two logics amounts to managing a paradox because of the search for novelty or originality on the one hand, turned towards creativity and the long term (exploration), and profitability of the existing on the other hand, turned towards the predictable and the short term (exploitation). Ambidexterity is important in the context of innovation (Jarvenpaa and Wernick, 2011). Innovation represents the ability to offer an original or differentiated offer (which may concern the product / service or the production process), in order to build competitive advantages. Seeking innovation therefore induces tensions between the desire to use the existing (exploitation) and the quest for originality (exploration). Identifying how exploration-exploitation tensions are managed in a context of innovation can thus provide a better understanding of the mechanisms of paradox management (Smith and Tushman 2004, Lin et al, 2013).

While the results of past research have largely contributed to defining the characteristics of ambidexterity and the resulting tensions, few studies have analyzed the way in which management of ambidexterity is put into practice (Jarvenpaa and Wernick, 2011), particularly by individuals (Lubatkin et al., 2009, O'Reilly and Tushman, 2011). On the other hand, many studies have shown that

the management of ambidexterity depends on the context in which the company operates as well as its strategy and organization (Tushman and O'Reilly 1996, Raisch and Birkinshaw 2008, Andriopoulos and Lewis, 2009, Turner et al, 2013). Thus, while it is clear in the literature that the antecedents and results of ambidexterity are not the same for all organizations, studies are still scarce on the different management methods implemented by managers and distinctive features associated with them. Past research in the field has focused primarily on the role of management teams and how they are organized (Smith and Tushman 2004, O'Reilly and Tushman 2011, Jansen et al., 2008, Lubatkin et al., 2009), and have been instrumental in highlighting the influence of certain types of leadership (Jansen et al., 2008), authority in decision-making, participation in cross-functional activities, and coordination mechanisms (Mom et al., 2009). The research that focused on the manager, as an individual, contributed mainly to a definition of ambidexterity as a characteristic of the manager (Mom et al., 2009). More recent research (Turner et al., 2013) identifies the management mechanisms of ambidexterity at different levels: organization, group, individual. At the individual level, three mechanisms are at stake: organizational capital (multiple inter-functional interfaces, use of best practices, managerial relevance), social capital (individuals favoring the emergence of a context conducive to ambidexterity, leadership oriented to both relationship and structuring) and human capital (initiative, cooperation, multitasking, negotiation). Thus, research on individual management practices of ambidexterity is recent and rare. Most importantly, the mechanisms identified are only within the framework of an organization. We propose to develop this research by illustrating the management practices of ambidexterity in the context of inter-organizational relations, which are a frequent context of management of ambidexterity.

Management of ambidexterity in inter-organizational relations

A strategic alliance is defined as a voluntary and generally long-term inter-organizational relationship, formal or informal, which groups together independent companies that coordinate skills to achieve goals that they would not have achieved, or less effectively, if they had been alone or had merged their operations. It is a place of pooling and exchange of resources (similar or complementary) and it supposes an equitable sharing of results. Strategic alliances are particularly useful configurations for innovating. However, they are subject to strong tensions, being made up of independent partners each with their own culture and goals. Each partner must make efforts at the individual and collective levels, particularly in the context of innovation, because innovation is not only progress, it is also tensions and power relations. An important issue in the relationship thus lies in a commitment within an inter-organizational collaboration all the parameters are difficult to know *ex ante* and that is subject to certain risks. In this context, the exploration-exploitation paradox is particularly exacerbated in alliances (Lin et al., 2007). Indeed, organizations that form an alliance to innovate accept a certain porosity of their borders to achieve goals that they could not achieve alone. A commitment to exploration and exploitation can thus be a reflection of the commitment of the partners in the alliance. In the day-to-day operationalization of this commitment, alliance managers appear as actors who work on the border between the partner organizations and who take an intermediate position between the choices of the leaders and the needs of the field (Vlaar et al. 2007). To understand paradox management practices, the role of these actors therefore seems essential. The role of an intermediate manager can be defined a set of behaviors and attitudes of a focal person that result from the processes of mutual adjustment between this focal person and a system based on necessarily contradictory and ambiguous requirements. The roles, actions and practices of alliance managers have rarely been analyzed in past research (Luvison and Cummings, 2017). Studying the actions of an alliance manager makes it possible to identify the mechanisms involved in the management of paradoxes, particularly in the situation of managing ambidexterity in an inter-organizational context.

Method

The data used were collected as part of a project conducted within ASAP France (Association of Strategic Alliance Professionals), an association of alliance managers from large companies, usually multinationals, from all sectors (automotive, pharmaceutical, services, ...). The study was conducted in two main phases running over two years (August 2013 to September 2015). The first phase consisted of interviews of experts identified according to the following criteria: existence of an alliance with at least one innovation project, presence of an alliance manager confronted with the dual logic of

exploration and exploitation and willing to share his experience. 18 interviews of experts, lasting an average of one hour, were conducted on the basis of a guide developed from the literature review. The main themes were the forms of ambidexterity in the project, the articulation of logics of exploration and exploitation, the roles of alliances managers, the performance of the innovation project and the difficulties encountered. In a second phase, three cases were selected according to the following criteria: the partners of the alliance have a clear objective to innovate; the alliance deals with a project that is considered a great success; the sectors concerned by these projects are diverse; a commitment to an exploration and exploitation process is identified and presented with precision during the interviews; important internal and external documentation is available. 287 documents were collected for these 3 cases. The interviews with the alliance manager, lasting an average of one hour, were transcribed in their entirety and coded on NVivo8 and they were supplemented by regular exchanges by mail following the interview. The collection of documents and the analysis of the verbatim associated with the interviews led to the identification of a set of essential elements defining the management of ambidexterity.

The objective is to analyze a phenomenon in depth: the management of ambidexterity in an inter-organizational context. The case study method allows here to identify exemplary management modes of ambidexterity.

Results

The three cases represent three configurations of management of ambidexterity: exploration, exploitation and a balance between exploration and exploitation. Each case involves a specific project carried out as part of an alliance. Cases are named according to the management modes. The first case, named "handyman" highlights a method consisting in organizing the activities day to day in a spirit of adaptability. The second case is called "manager". It refers to a cautious attitude towards relational or environmental risks consisting in storing knowledge and assets in order to secure the relationship as much as possible. The third is titled "acrobat" and highlights the need to continuously ensure the security of assets and the ability to remain flexible in case of relational or environmental turbulence. Table 1 summarizes the information needed to better understand the profile of each case.

Case A. The handyman: management of ambidexterity oriented towards exploration

Although exploration and exploitation coexist in the project, a hierarchy between the two elements of the paradox in favor of exploration has been noted. This commitment is rooted in the vision associated with the project, in the consideration of learning in the innovation process and in the ability to adapt to the occurrence of hazards. Project A is part of an open vision of partnership: the goal of both partners is to seek ever more to progress, even if it means having to completely reconfigure resources and know-how, or even business models, to create new ones. In this context, the project manager accepts the adventurous aspect of the relationship: daring to embark, build day-to-day and make choices to succeed in innovating.

"We must try, if we do not take risks, we do not move forward. Everything evolves, there is no room for complacency, we cannot act as if what we accomplished in the past was enough. "

What is the use of looking back too much, rehashing the past? The bosses made the decision to work together, right? So now, we carry on, even if it's not easy every day."

"For having sold things around innovation for quite a few years, I realize that we are clearly on a breaking point. We change our model, our customers, our distribution model. We change almost all the pillars at once."

"We tinker, we adopt the DIY way, because we know that something will happen, but not when, nor how. We cannot know in advance, the alliance is not set like a clock. To bet on the future is also to take the risk that this future is compromised. "

In this commitment to exploration, organizational learning, intended to integrate knowledge obtained through the innovation strategy, is made ex-post, after the hazards have occurred.

"When we run the project, we have identities, expectations, but all of this can slow down the project. Do not waste time putting things in order, overloading teams, wasting time training, knowing everything about everything. On the contrary, we must off-load, to be more agile. "

"We do not learn before, we learn after. Because it's more natural. We do not learn before about what we do not know, we cannot, we learn after thanks to what we lived, I mean, once it happened. Everyone does as he can. "

Table 1. Summary of the context of the projects

Project	Case A Project oriented towards exploration	Case B Project oriented towards exploitation	Case C Balance between exploration and exploitation
Industry	IT-Services	Pharmacy	Consulting
Age of partner 1	15 years	32 years	30 years
Age of partner 2	23 years	Less than 10 years	11 years
Duration of the project	2 years	3 years	2 years
Age of the manager	38 years	42 years	44 years
Seniority in the position	2 years	4 years	2 years
Context of the project	<p>Project A brings together two companies (A1 and A2) in the IT and services sector. A2 organizes international conferences with thousands of speakers. They ally to create partnerships with other companies or obtain funding.</p> <p>To ensure the logistical management of meetings and appointments during these conferences, A1 brings its expertise in software. It proposed to develop and integrate a new service offering with A2 which consists of the use of a powerful software, fruit of the A1-A2 partnership. The service offer was new for A1; A2 has never used an alliance for this type of project.</p>	<p>Project B brings together two companies from the pharmaceutical industry (B1 and B2). The goal is to develop, through a start-up, the possibilities of a new molecule.</p> <p>Considered as classic by the alliance manager, the project implies that B1 supports the development of B2 by providing experts and significant financial support. New markets were expected for B1, which was waiting to adapt the molecule to expand its product portfolio and enter new markets. B2 aimed at specializing in its field, as well as preserving its independence, expanding its offer and obtaining financial support to strengthen its research capabilities.</p>	<p>Project C is in the consulting sector.</p> <p>C1 is a company belonging to a network of alliances with various actors (associations, companies ...). It offers solutions to its partners to innovate. C1 creates a relational network (a kind of think tank), to create a dynamic of exchange between partners (search for skills).</p> <p>With the project, a new service delivery system have been developed, more direct, to enlarge the territorial coverage of C1 on one side and to allow access to new skills for C2 on the other. In addition, C1 gave to C2 contact with previously inaccessible partners.</p>

Organizations participating in the project have a strong ability to adapt to hazards. They are agile and able to reconfigure their assets and redeploy them when unforeseen events occur.

"We can adapt, we are not afraid of that. We must, so we do. It's true that we have to be motivated enough, and we are. We are here for that. "

"In fact, we do not need to have everything, just adjust our knowledge"

"You have to be creative"

When a problem happens, we take it, we sit around the table. Do we know how to solve it?

Who manages? No problem is left unresolved, and that's how the project moves forward. "

Exploration, which involves a search for novelty, seems to create a culture of creativity, acceptance of change and flexibility. The occurrence of hazards does not destabilize the teams, interested in what can be discovered following these hazards. In practice, this open and tinkering vision of the project, linked

to an ex-post learning mode and a strong capacity for adaptation, is based on a set of elements that characterize the management of ambidexterity oriented towards exploration.

We often have to discuss, convince. It is our arguments that count and that make our legitimacy. If the team listens to me, it's because I have things to say, I listen to what they have to say. There is an essential relational aspect. "

"We seek consensus."

"They are my equals, colleagues, we get to know each other, we have no hierarchical relationship. If someone offers me a good idea, then that's good for the project."

"I do not impose. I do not have that power. But I stimulate the dynamics, so that we go beyond the frame and that we really live the project "

"We trust, and we get to know each other"

"You need convinced people, otherwise it does not work. We all have a culture of creativity, it's a bit of a service model today. We are not recruited, if we are not able to push the limits, to see other horizons. "

"There is the risk that they do not play the game [...] It would be a pity, but we cannot control everything."

"Yes, we have incentives. This motivates, helps us stay in the race."

The identity associated with the project is based on the creativity of teams and alliance managers, consistent with a management oriented towards exploration. In the project, the resistance of the members of the team seems weak and their motivation rather strong, marked in particular by the presence of various incentives favoring and rewarding the commitment. In this context, it seems necessary to work with individuals for whom change is experienced as an opportunity, who are able to "actively propagate" this change by participating in the defense of the project and its dissemination. A control system aimed at identifying warning signals mainly from the external environment of the alliance promotes responsiveness. This environmental scanning appears as essential in the project.

In addition, the verbatim reports show that the actors mobilize flexible links, using their legitimacy as experts and weaving often informal relations with other actors in project. These relationships are frequent and strong. Exploration that seeks novelty potentially materializes through new relationships between actors who, as they carry on the project, develop new ways of doing and acting together. These new relationships can create conflicts. When conflicts arise in the project, the actors try to negotiate and seek consensus. Since exploration supports the search for original solutions, the consensus seems to be a favorable mode of operation to rally different actors around an agreement favorable to the whole. Equal relationships are established, leading to a relatively democratic decision-making process in the day-to-day management of the alliance.

Finally, the actors mobilize a know-how combining the knowledge held and constantly evolving, which seems consistent with a vision where exploration supports the reconfiguration and the combination of existing resources. Interpersonal trust seems in case A relatively strong without being naive: the actors are aware that the partner of the alliance can enter a race for learning and monopolize the developed know-how. A commitment to exploration is therefore not without risk. However, the opportunities offered by the development of the relationship with the partner remain interesting enough to get involved in a collaboration.

Case B. The manager: management of ambidexterity oriented towards exploitation

Case B also presents a hierarchy between exploration and exploitation, for the benefit of exploitation. In this approach, it is a question of securing the relationship as much as possible and of controlling the risks. Partner organizations accumulate knowledge and know-how. The companies considered the project a pragmatic opportunity for each member to achieve their own goals. In this context, this seems consistent with the exploitation approach, which seeks applicability, and which can therefore be translated into relationships where the objectives are clear, accessible and measurable.

"The other partner alone could not have developed on this market without us. So we did not even need to discuss during hours. We understood each other, and we gave substance to the project. [...] They were not alone, we helped them, and they thus understood that the project made sense, that we were not opportunists, or no more than they were, in any case. "

"We seek to master a maximum of parameters"

"If you do not know your environment, including your partners, you're lost, you're ahead. To negotiate the contract, objectives, sharing, it is better to know the maximum possible parameters."

"If we do not have the data, we can not deal with the problems. And to get the right data, you have to be able to gather, use, and process it."

"We have our practices, our rules. We are together, but we do not interfere in each other's affairs. It remains very cordial. Everyone is expert in his field, and everyone knows what he can get from the other, in good faith."

The actors also want to secure the relationship by adopting a precautionary principle, by implementing an ex ante learning device whose purpose is to use or restore previously stored knowledge. This choice is clearly made to enable organizations to operate on a solid and proven basis in an uncertain environment.

"Experience is essential! It prepares us for the future."

"We are like the ant! It accumulates, it stores! I'm trying to get the team ready. We learn a little about everything, in order not to be surprised when the time comes. It happens anyway, it always happens. But we do as we can, in fact, it does not mean that it always works, but it reassures, that's all. In life, you cannot control everything."

However, the actors hardly reconfigure their assets. While the accumulated experience should help to face the environment, it seems to be rather a brake on the agility of the actors. We can explain this difficult adaptation by the fact that exploitation, which seeks applicability, avoids unknown situations and is not adapted to situations where the automatism developed cannot be applied. Such hazards put the members of the team in difficulty, who then try to protect themselves and maintain their habits, revealing a relatively low ability to adapt.

"It was quite difficult. There was resistance, it was difficult to move forward. "

"As in any franked institution, when the benefits are given, it is not easy to change. There is no reason for the company to depart from this principle. You are rewarded if everything happens in the frame, but if you have to change things, then it's more difficult. Everyone is vetoing, and that makes things rut. People know how to defend their interests and achievements. [...] People do not always see the merit of the change you are proposing, even if it is necessary and you bring arguments."

"A lot of problems. [...] We have not been very flexible."

This vision of the project linked to an ex ante learning mode and a low adaptation capacity is based on a set of characteristic elements of a management of ambidexterity based on exploitation.

"Alliance management must allow the project and the defined contract to be implemented, executed as efficiently as possible: quickly, easily, with as little waste as possible. For me, we are responsible for maximizing the result as related to the contract, making it the most fruitful possible "

"An alliance is not a merger!"

"The alliance manager is here to make sure that the contract is implemented."

"I'm putting into practice the elements of a contract, decided by the two companies. [...] The clauses are defined. I check that everything goes as planned."

"There is resistance sometimes, but we have to smooth things out so that it does not become a battlefield."

"There is a hierarchy. Everything is well structured."

Partners seek to preserve their identities. Members of the team tend to resist change. They are attached to routines and a structured management mode. This resistance could be linked to an attachment of individuals to their role and status internally: it may be to defend assets, maintain a certain level of power, or seek to control the parameters of a known relationship. There is a formal control system, essentially based on the respect of the contract. This mechanism is consistent with the goal of securing the relationship. The relational mechanisms put in place within the framework of the project exist but rather aim to fight the resistance of the members of the team. Contractual links are mobilized. They are the fruit of a stable, well-identified and structured relationship. Recurrent, they are however relatively weak, being limited to interactions ensuring a hierarchical relationship. When conflicts arise, the alliance manager try to enforce the contract, which seems consistent with a commitment to

exploitation, which is by nature the application of planned solutions. In this context, the use of hierarchical links takes precedence.

The know-how acquired is accumulated and standardized, consistent with the logic of exploitation, which aims to stabilize existing resources and replicability. Finally, the actors consider the alliance partner as a means of meeting the needs of the company, but, unlike in case A, the risk of opportunism appears less present, each partner seeking a precise and definite know-how, agreed in advance and intended to enrich the portfolio of existing knowledge for each.

Case C. The acrobat: management of ambidexterity balancing between exploration and exploitation

A dual commitment to exploration and exploitation is sought in case C. The project aims at achieving a balance in the relationship, limiting risks and engaging in a culture of sharing in the long term. The project is part of an open network approach.

"I try, with our partnership approach, to build a platform of exchange, to gather information, to circulate it"

"We are building relationships for the future."

The actors desire to store know-how in a learning mode both ex ante and ex post. Everyone is concerned with learning, able to use the right skills at the right time. Rather than reconfigure and combine its assets to create new ones, project C partners prefer a principle of alternation in the use of certain existing capabilities, whenever possible.

"Find the right way for everyone to agree, convince people that on this project it was absolutely necessary to go together. Once it is understood, they do everything alone, or almost. Everyone is making efforts, everyone is sweating. We make great efforts together, we move together"

"Knowledge is not something we use and forget. It must be solicited when it is necessary to use it, when it is necessary to do it. It's like you and me, you have a portfolio skills, you draw in it if it's useful. To read, you take your glasses, your reading skills, your hands, your capacity for analysis, synthesis, and you read. But when you dive into the water, you make a 50-meter, you use your body, you do apnea, you do not need to read, do you? [...] You cannot choose one or the other, leave one or the other."

"We learn together. We increase our skills and knowledge, thanks to the project."

"You have to use the knowledge you have, the information you need, at the right time."

"I have no problem sharing my knowledge, and I help the team to capitalize."

This use of "portfolio" skills sheds light on the involvement in the exploration-exploitation of Case C, where it is ultimately necessary to use the appropriate skill from a stored ensemble or to store, without prioritizing knowledge between any usual knowledge ex ante and original knowledge ex post. In this context, knowledge sharing seems essential in order to build a "common heritage". This spirit of openness supports a relatively strong adaptation capacity of the actors. The organization does not have difficulties to overcome the hazards and assumes its experience to better deal with them. In a balanced commitment to exploration and exploitation, experience is a major asset in dealing with hazards.

"An organization that does not adapt is an organization that does not survive. This is the principle of evolution, right? The current world is tough for companies that do not adapt."

"We try to pass the waves with our experience. However, we do not sail by sight, we have a map."

The vision of project C, associated with an ex ante and ex post learning mode as well as a strong adaptability, is based on a set of elements characterizing the management of ambidexterity in the case of a balanced commitment in exploration and exploitation.

"I talk to people who know. Otherwise, no one brings added value. With experience we are more efficient, we do not turn around the bush, we know where we are going and why we go there."

"There is no a miraculous recipe. You have to work with people who know what you are talking about, who are open-minded, able to train, to evolve, [...] who see the possible evolutions, who want to overcome the problems. They must share our vision."

"The environment is not always in line with our objectives. It is sometimes hostile, and one must be able to alert if it may impact the project. "

"We are open to other possibilities, other partnerships, it is a base of our alliance vision."

"The least we can do is respect our partners. Having a common destination does not necessarily mean pushing back the identity of the other. Without ethics, the partnership does not hold. It may work for some cases, but it cannot last. Everything that takes time is exhausting, but beneficial for everyone."

In case C, the actors seek to share a relational ethic and are receptive to network life as well as open innovation issues. In this configuration, risk taking seems to be accepted, and even encouraged, but must be mainly controlled and targeted. The opening of the members of the team, which benefit from the mobilization and the support of the top management, is linked to their adhesion to the project. They are convinced of its interest and they accept changes consistent with the overall strategy of the company and the objective of the alliance. Potential resistance identified within the project appears to be related to concerns about the external environment rather than internal organization.

Indeed, since the project aims for the long term and the search for a continuous balance in the engagement, the actors avoid the internal dissensions and accept a porosity of the borders advantageous for the alliance. This porosity and the associated openness culture are understood by all the actors. In this perspective, the contract is considered as a support to the relationship and not as a constraint. In addition, for the project to be successful, the need to work with an experienced team was clearly mentioned. The actors essentially mobilize institutional links without, however, seeking to use hierarchical authority, considering these institutional links as a means of clarifying relations between actors or legitimizing an expert point of view. Despite these institutional linkages, relatively experienced actors remain free to create relevant interpersonal relationships outside of those originally intended for the relationship. When conflicts arise, they negotiate. In this mode of management, the objective is not to reach a consensus that attracts the majority of opinions, but rather of asserting an opinion, even a minority one, by negotiating and explaining the choice made. The know-how is mobilized in "juggling", alternately. To explore and exploit, actors mobilize a range of skills, in a flexible way, according to their needs. The partner is considered as one who participates in a common project, with a strong implication that results in a sharing of costs, risks and know-how.

Table 2 summarizes the various elements resulting from the analysis of the three cases. The vision of the project, the mode of learning and the capacity to adapt are presented at the top of the table because they are directly associated with the speeches of the respondents in their description and justification of their commitment to exploration and / or exploitation during interviews. . The table is completed by a presentation of the criteria or distinctive elements on which we could observe different behaviors by comparing the organization in the three cases. These elements highlight issues in the management of ambidexterity: issues of power and control, issues of knowledge, cultural issues and relationship issues. These issues are discussed below.

Discussion

The results show that the way a paradox can be approached involves choices for organizations. Since a paradox brings into confrontation elements considered as contradictory, the possible management modes to deal with the paradox lead to a more pronounced commitment in one pole or another, or to the search for a balanced commitment in both poles. However, there is not a priori a management mode more adequate than another, but different possible commitments in the poles of the paradox. The management of ambidexterity refuses the dilemma, which supposes a rejection of one pole for the exclusive benefit of another, but accepts prioritization. Our results show that the practices observed in the management of ambidexterity depend on conditions related to the company's situation. The commitment to exploration and exploitation appear directly related to the vision associated with the project, the way of learning and the adaptability of the teams. This commitment leads to different management practices.

The focus on exploration (case A) led to a project promoting informal but strong links, creativity, the ability to reconfigure easily, the search for consensus and the development of new skills. The focus on exploitation (case B) led to creating formal but less rich links, favoring the framework of the contract and the use of hierarchy, and seeking accumulated and standardized know-how. When the commitment is balanced between the two poles of ambidexterity (case C), the action carried out in the project did not materialize in a simple "mix" of the exploration and exploitation elements. It is implemented in a specific way, compared to the two other cases, by promoting an opening of inter-organizational borders, ensuring ex-ante and ex-post management of knowledge and seeking trust and

legitimacy more than relational flexibility or respect for the established framework. Thus, it appears that the prioritization of exploration is linked to the creativity culture of the partners as well as to the existence of a hazard that leads to a change in the established order. On the contrary, the prioritization of exploitation could be linked to a context specific to the industry, which regularly uses alliances to develop products and adopts a systematic formalization. This habitus on the industry can explain the known and proven organization that materializes in the contract. This leads us to suggest that research on the management of paradoxes must study the contextual elements that may explain the choice of commitment in one pole of the paradox rather than another.

Table 2. Summary of the management modes of ambidexterity

Management of ambidexterity	Management oriented towards exploration (Case A “Handyman”)	Management oriented towards exploitation (Case B “Manager”)	Balance between exploration and exploitation (Case C “Acrobat”)
Objective	Flexibility and adaptation to changes in the environment	Secure the relationship, increase power of negotiation	Balance in the relationship, network approach
Organizational learning	Storage of ex-post acquired knowledge	Develop the ability to store ex ante acquired knowledge	Storage of both ex-ante and ex-post acquired knowledge
Absorptive capacity	Flexibility, adaptability, creativity, capability to reconfigure resources	Limited adaptability	Adaptability, modularity of resources
Characteristics of the project management			
Identity related to the project	Use team creativity, rely on alliance managers	Opportunity, pragmatism, focus on the achievement of its own goals	Importance of ethics in the relation, network approach, open-innovation
Resistance within the project team and motivation of the actors involved in the project	Little resistance, target the promoters of change; presence of incentives	Fight resistance to change, which is based on an attachment to one's status internally.	Open minded team members. Potential resistance related to environmental fears. Mobilize and show the support of top management.
Environment scanning and control system	Identify the warning signs. Reactivity to the environment changes	Control, enforcement of the contract	Charter of good behavior, internal alert and conflict resolution.
Nature of relations	Mobilize flexible links and expertise, weave informal relationships	Mobilize strong, contractual or hierarchical links	Mobilize institutional links and legitimacy, develop interpersonal links
Conflict resolution	Negotiating and seeking consensus	Enforce the contract	Negotiate and be diplomatic, look for compromise
Management	Preference for "democracy" and peer-to-peer relations in the project	Top-down compliance, use of hierarchy	Importance of negotiation
Type of knowledge	Combined and constantly evolving	Accumulated and standardized	Mixed
Opinion on the partner	A partner who can enter a race for learning	A partner seeking to achieve its goals	A partner who shares costs, risks and know-how

The distinctive criteria identified in our results highlight issues related to power, control, knowledge, culture and relationships. The issues of power or control are particularly highlighted by the mode of decision and the mode of conflict resolution. Trust could then be an important dimension to explain the commitment in one pole or another of ambidexterity. These considerations can be related to the transaction cost approach, whose developments deal with risks of opportunism in the relationship and contractual mechanisms to limit them. Can paradox management be influenced by formal mechanisms? The issues of knowledge, highlighted by the way of learning, the know-how used and the ability to adapt, can be linked to the previous issues: do we learn together in an agreed or

unforeseen way? The question of knowledge creation is also very important: are they created before the alliance to develop through it, or are they developed ex-post? Are the actors prepared to face the paradoxes? Is their knowledge more conducive to engaging in exploration or exploitation? Nonaka et al. (2014) show that new knowledge is created under open innovation conditions, while more explicit knowledge implies longer-term and more framed integration and learning. Does the commitment to a pole of a paradox presuppose defining the types of knowledge expected? Cultural issues were also highlighted in our results, which illustrate the importance of considering the cultures of organizations and individuals to implement organizational strategies and ensure operational effectiveness. In this context, the commitment to a pole of a paradox implies taking into account the culture of organizations and actors impacted by the paradox.

Finally, relational issues are highlighted by identifying the type of relationship between project partners. This can be related to the relational approach (Dyer and Singh, 1998) which emphasizes the importance of informal links. Opportunities for informal links can influence engagement in a pole or another of the paradox.

Thus, several theoretical approaches allow to enlighten the results obtained and to identify theoretical perspectives for the study of the management of paradoxes. The issues identified shed light on the question of the antecedents of the choice of management methods of a paradox. Engagement in a pole of a paradox can be linked to issues of knowledge, power, culture and expected relationships.

Finally, the management methods identified show that management by the dilemma (choice or preference of one of the two elements) constitutes a form of "illusion" in the management of paradoxes. Indeed, exploration and exploitation are present in the projects but to different degrees. They are only hierarchical or searched in a balanced way. Despite the existence of two logics deemed exclusive (Smith and Lewis, 2011) or contradictory (Raisch and Birkinshaw, 2008), the projects studied show that the management of ambidexterity is possible. Our results illustrate the situation in which organizations lock themselves into the paradox when they respond to situations by dichotomizing the opposite poles rather than trying to combine them. Finally, they underline the need for management support and the importance of local managers (in our case, these interface managers, which are alliance managers). They have to deal with their team, the top management and the ambiguity of their inter-organizational position that creates tensions in their roles. The roles of the individual, especially the middle manager, become essential to understand these issues.

Conclusion

The literature has shown an interest in the management of paradoxes. However, there is still little research on how paradoxes can be managed in practice by individuals. In this perspective, studying the management of ambidexterity in an inter-organizational context focused on innovation is a relevant research avenue. Our study highlighted three cases, representing three possible engagements in exploration and exploitation. The analysis of these cases makes it possible to illustrate three ways of implementing ambidexterity management, associated with different behaviors according to a set of characteristic elements of the management of the studied projects. From a theoretical point of view, our results make it possible to identify different modes of management of ambidexterity. The various criteria we have put forward led to propose antecedents in the choice of ambidexterity management: control (decision-making mode, conflict resolution mode), knowledge management (learning mode, know-how, adaptability), the links established between actors (nature of relations) and the culture of the project (project identity, vision of the project and the partner).

The main limitation of this research lies in the illustrative nature of the cases. It is certainly a method to study a phenomenon in depth but the results from this type of analysis are difficult to generalize. In addition, the information was collected on the basis of interviews. Even though this information was supplemented in later exchanges and using documents, more precise data could have been obtained by making direct observations without going through the filter of the respondents' speech. As a result, the research proposed in this article is intended to be extended. In particular, it would be interesting to check if the three behaviors (handyman, manager, acrobat) are found in other contexts of management of paradoxes. In addition, it would be relevant to study, in a longitudinal analysis, how the transition from one management mode to another can be achieved or whether the adoption of a management method is stable. Finally, a quantitative analysis could make it possible to test the links between the antecedents identified and the management methods of the paradox.

Our results highlight the fact that middle managers play a key role in the management of ambidexterity. Identifying more precisely the roles played by these boundary-spanners in the management of paradoxes (Williams, 2013) constitutes an important research avenue. A discussion of practices in the management of paradoxes cannot in fact forget the place of these actors, who embody the intention of the organizations, and the results presented in this article propose ways to analyze the roles of these particular actors.

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