Conflict resolution mechanisms in alliance networks developing an innovation project

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Abstract
Conflicts erode trust, reduce partnership satisfaction, prevent the efficient execution of the project, and weaken the members' engagement level (Cullen, Johnson and Sakano, 1995). Organisations therefore enforce mechanisms which resolve these conflicts as quickly and effectively as possible (Mohr and Spekman, 1994 ; Gray, 2001 ; Tuten and Urban, 2001). Recent literature on interorganisational relations has adopted a dynamic approach for understanding alliance network performance. However, it focuses mainly on the comprehension of the causes (why) rather than the functioning (how). This article extends the works of Mohr and Spekman (1994) and Tuten and Urban (2001) who explore conflict resolution mechanisms and evaluate the consequential satisfaction among participating organisations. We demonstrate the necessity to acknowledge the moderating variables in order to understand the conflict resolution mechanisms used by alliance network organisations and members (Goerzen and Beamish, 2005).

Our aim is to analyse the moderating role of the advancement phase of innovation projects (from invention to development; from development to production; from production to diffusion) with regard to conflict resolution mechanisms. We have carried out a dynamic analysis based on seven case studies followed over a twelve-month period. Our research is of an exploratory nature as the existing literature has not yet developed a clear-cut and definitive hypothesis on the relationship between conflict resolution, the project advancement phase and the type of organisation (partner/contractor ; financial/ technical/ industrial/ commercial).

In particular, our research demonstrates that the mechanisms used with the technical and financial partners are notably 'soft' (joint resolution and persuasion) whereas, with industrial and commercial partners, they are mainly 'hard' (coercion, sanction and external arbitration). Furthermore, during the innovation project's diffusion phase, alliance networks tend to favour 'softer' mechanisms which 'harden' as the project develops.

This article is divided into three parts. The first consists of a literature review regarding conflict resolution mechanisms, primarily for interorganisational relations. The second part presents the adopted methodologies in our seven case studies, followed over twelve months, using initial primary data (interviews, observations) and secondary data (contracts, media articles). The results are presented in the third section with a discussion regarding the ways in which different conflicts were resolved during the project advancement phase and the type of organisation.

Introduction

By developing alliance networks in order to create maximum profit and success, project bearers are often confronted with conflict. This conflict is derived from inconsistencies and disagreements from different members who have contrasting or opposing objectives.

The relevant literature can be broken down into two principal parts:
- Firstly, the origins and corresponding foundations of conflict must be understood. (Alter, 1990; Jehn, 1994; Jehn et Mannix, 2001; Frechet, 2002; Guery-Stevenot, 2006). By implementing contractual theories, Fréchet (2002) aimed to identify the factors which influence the initial beginnings of conflict within alliance networks. Employing the cognitive governance analysis, Guery-Stevenot (2006) explains the birth of conflict relations between investors and directors. From the cognitive point of view, conflict is found worldwide due to a lack of harmony within a relationship (Alter, 1990). Similarly, it seems that conflict arrives as soon as the involved parties demonstrate incompatible desires (Jehn and Mannix, 2001).
- The second point (Mohr and Spekman, 1994; Iniesta, 1999; Gray, 2001 ; Tuten and Urban, 2001; Puthod and Thévenard-Puthod, 2006) is concerned with the impact conflict and its corresponding resolution mechanisms have on an organisation's success. Inestia (1999) considers conflict to be harmful towards alliance networks as it leads to profit diminution and in the worst case scenario, the discontinuation of the partnership. Our research focuses on this second point.

The aim of our research is to demonstrate the necessity of acknowledging the advancement phase of alliance networks developing innovation projects (ANI) to understand the conflict resolution mechanisms used by the organisations involved. Morh and Spekman (1994) established a link between conflict resolution mechanisms and the partners' degree of satisfaction however they did not take the effects of the moderator's role into consideration (Tuten and Urban, 2001 ; Walsham, 2002 ; Duarte and Davies, 2003). Considering these effects, we believe that the advancement phase is essential in our chosen example, the ANI.

This article is divided into three parts. The first part consists of a literature review regarding conflict resolution mechanisms, primarily reviewing interorganisational relations. The second part presents the adopted methodology exemplifying seven case studies involving alliance networks in the process of developing technological innovation projects which we followed over twelve months gaining primary data (interviews, observations) and secondary data (contracts, media articles). The results are presented in the third section with a discussion regarding the ways in which the organisations resolve conflict during the project advancement phase as and the consequential impact upon the alliance network.

1. CONFLICT RESOLUTION MECHANISMS IN MULTILATERAL RELATIONS

1.1. ALLIANCE NETWORKS: A SPECIFIC FORM OF INTERORGANISATIONAL COOPERATIONS

In attempt to identify different network forms, existing literature (Guilhon et Gianfaldoni, 1990; Paché, 1996; Heitz, 2000; Assens, 2003) classifies all networks into two separate criteria: firstly, concerning the aim of the exchange relationship and secondly, the nature of the regulation trends, formulised or not. Two forms of networks are identified:

- The 'network-firm' which can be described as a type V network (Guilhon and Gianfaldoni, 1990) with vertical exchange organisations in order to create a transfer of complimentary resources. These organisations are found in the interior of the network and are governed in a more or less contractual way (mainly involving sub-contract agreements) by the project bearer's or entrepreneur's decisions;
- The 'network of firms' can be defined as a type H network (Guilhon and Gianfaldoni, 1990) exhibiting horizontal exchange organisations with competitors in order to share or pool identical resources. In this case, the regulation mode is not always formulised but instead may be independent (cf. industrial districts). Like the

industrial districts, alliance networks benefit from a size outcome which allows more negotiation power with their clients, suppliers and financial contributors while also allowing them to achieve economies of scale and further investment capability (Goerzen and Beamish , 2005).

However, most authors have ignored the possibilities of combining both of these situations (Gomes-Casseres, 1994, 2003). The combination of these two network forms will be referred to as an 'alliance network' and can be considered as a third form alongside the two previously noted forms. Following the firm-network and the network of firms, the alliance network can be considered as a type V+H network governed by a focal firm.

Alliance networks thus ally joint vertical and horizontal exchange partnerships and combine the logic of sharing, merging identical resources and transferring complimentary resources. For 'isolated alliance network', the aim is either the specialisation (vertical partnerships) or the sharing of resources and costs (horizontal partnerships). It is extremely rare that an isolated alliance network accumulates the advantages of the specialisation and productivity. This alliance network is a combination of vertical and horizontal alliances which consequently combines these two advantages.

Alliance networks must be considered as consisting of a combination of isolated organisations. Effectively, the advantages that can be achieved from an alliance network are more important than the total advantages gained from different organisations (Gomes-Casseres, 1994). In fact, if a particular organisation in an alliance network does not meet the expectations or another organisation, the unsatisfied members have the possibility to turn towards other organisations in the alliance network for guidance and assistance.

To illustrate (figure 1), let us take the case of three partnered company: A, B and C. A and B are associates in a vertical alliance. A significantly important organisation occupies the heart of the company (the pivot). Both partners A and B gain an advantage through transferring specialised resources but this transfer is equally beneficial to the horizontal alliance network partners (between A and C) as it is presented in the network which, could have a positive impact on the relationship between partners A and B regarding the benefits of sharing resources.

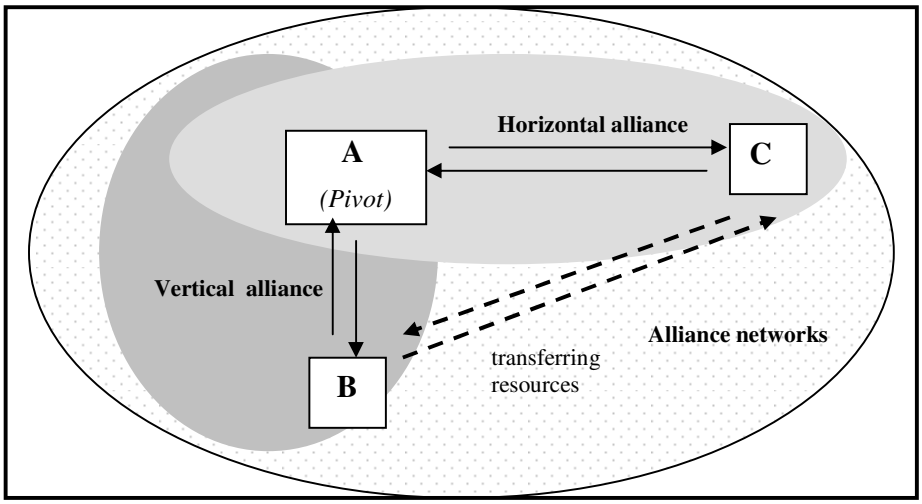

Figure 1. Illustration of an alliance networks

The company in charge of the innovation project (the pivot) weaves a multitude of links with various, heterogeneous organisations. In current related literature, these links are studied bilaterally. It thus can be argued that a more global analysis is needed to understand the complexity of the links between different actors and their consequential repercussions on the conflict resolution mechanisms. In order to specify our argument, these mechanisms must be examined.

1.2. CONFLICT RESOLUTION MECHANISMS IN AN ANI

The Social Sciences explain conflict as having negative or positive consequences (Assael, 1969; Amason and Allen 1996), in regards to the performance of the alliance network. We do not wish to enter into this debate in our research as our primary concern is to understand the conflict resolution mechanisms used by organisations rather than the origins or effects of the conflict. It is thus necessary to define conflict in a way in which we can empirically observe this phenomenon. For the purpose of this study, we will refer to Thomas' (1992, p.653) definition of conflict as "a process which begins as soon as one group perceives that another is negatively effecting them, or is at the point of negatively affecting them or something important for them" 1 .

The specificity of each alliance network makes it necessary to develop a specific executive analysis in order to holistically examine them (Doz and Hamel, 2000). It is

for this reason that we propose a new conflict resolution mechanism which can be applied to interorganisational cooperations in general. In the second section we show the specificities of the alliance networks which had a goal of developing a technological innovation project (ANI) using data taken from seven case studies. By nature, innovation projects are unstable; the level of emotional engagement involved in the project is extremely high and strategic assets are required. Consequently, these alliance networks are particularly prone to conflict and thus favourable for conflict development and resolution mechanisms.

1.2.1. Interindividual and Interorganisational conflict resolution mechanisms

The literature regarding conflict control (Rahim, 1983; Mohr et Spekman, 1994; Bendersky, 2003; Jabs, 2005) identifies various types of conflict resolution strategies. Different levels of analyses (between individuals, organisations etc) which bring about a notable distinction between typologies are discussed. In turn, researchers limit themselves to a dyadic analysis. However, in an alliance network (Gomes-Casseres, 1994), it is essential to consider the entire collection of interactions (the sum of two and two or one versus many or many versus many).

As soon as there is an interaction; there is a high risk that conflicts may occur. Regarding interorganisational cooperations, conflict is seen as almost inevitable considering the inherent interdependencies between the groups (Mohr and Spekman 1994). It is therefore important to put resolution mechanisms into practice yet these mechanisms have repercussions regarding the success or failure of the alliance network (Borys et Jemison, 1989). Companies which engage in an alliance network are motivated to find ex-ante mechanisms which permit conflict resolution as, by definition, they are linked together by the goal 'to control' an uncertain environment (Cummings, 1984).

The number of involved organisations is important for the ANIs (Gay et Dousset, 2005) as their relationships are not necessarily dyadic (though all the research cited above is limited to bilateral relation analyses). Furthermore, if a conflict emerges between two technical partners in an ANI, it is possible that another member of the network intervenes to find a solution (for example: the project bearer). It is extremely probable that the pivot intervenes to head the conflict resolution. This type of situation is not contemplated in current literature surrounding conflict resolution. Conflict resolution mechanisms are seemingly more complex when considering ANI cases as they are not always ex-ante (an innovation project is unstable by nature and thus does not allow for a mid-term visibility of the alliance network structure) and the level of engagement given by the involved organisations is particularly heterogeneous. Mohr

and Spekman's 1994 typology includes six types of mechanisms to study the organisation and has the advantage of being easily executed. As these authors study bilateral relationships, we have adapted these mechanisms to take multilateral relationships into account:

- **Conjoined Resolution:** different groups come together to find a mutual solution for a problem;
- **Persuasion**: one of the organisations (or a group of organisations) attempts to persuade the other organisations that solution A or B is the best to rectify the conflict situation. In the case of multilateral relationships, we specify that 'persuasion' refers to an actor (or actors) who persuade the other members of the ANI. According to Amason and Allen (1996), persuasion is generally more constructive than coercion;
- **Coercion:** one or many partners restrain the others from choosing the conflict resolution solution. Mohr and Spekman (1994) distinguish coercion from domination but fail to offer a clear definition. We therefore do not support this distinction between coercion and domination;
- **Sanction:** reprimanding a partner in a friendly manner or excluding him or her from the organisation;
- **Introduction of a third party:** a third party (arbitrator or tribunal) creates an agreement between the conflicting groups.

According to Morh and Spekman (1994), choosing to call in a third party may generate positive consequences regarding the alliance network's continuation and future in general, but it must be noted that these results do not consider the presence of moderating variables.

1.2.2. The moderating variables of conflict resolution mechanisms

After having studied certain works (see table 2, below), it becomes evident that is necessary to take the moderating variables into account in order to study the link between conflict resolution mechanisms and the service and/or partner satisfaction. We propose to firstly review the previously studied principal variables before taking into account the dynamic evolution in an ANI.

Walsham (2002) explains how cultural differences between project teams have led to conflict and have slowed software development. These cultural differences produce different mechanisms according to the type of people, mainly formal for engineers and informal for technicians. For Duarte and Davis (2003), money and principal lead to different mechanisms. However the independent principal point of view is not taken into account.

Mohr and Spekman (1994) argue that an alliance network's success depends on three variables: the association's attributes (trust, co-ordination, interdependence, etc), communication behaviour between associates (quality, frequency etc) and conflict resolution mechanisms. These authors carried out a quantitative study without moderating variables which was noted as a limitation in their conclusion. Tuten and Urban (2001) expanded Mohr and Spekman's (1994) model to include previous partnerships by using the length of the exchange as a moderating variable. The survey respondents clearly distinguished the difference between long term partnerships and the more occasional buyer-supplier alliance networks. Tuten and Urban (2001) support the necessity of using a dynamic approach in order to understand the different conflict resolution mechanisms regarding interorganisational cooperations. Conflict resolution is not a linear variable. Conflicts and their mechanisms evolve over time and yet no research to date explains or describes this evolution. Our aim is to overcome this information gap.

1.3. ANALYSING CONFLICT RESOLUTION MECHANISMS USING THE DYNAMIC APPROACH

Among ideas surrounding academic debates about cooperations, more specifically regarding innovation alliance networkd, is one particularly important argument (Larson, 1992; Zajac et Olsen, 1993; Ring et Van de Ven, 1994; Doz, 1996; Reuer et Arino, 2002) which concerns the importance of taking the evolution dynamic into consideration.

It must be noted though that there are few authors who analyse the evolution of co-ordination mechanisms in relation to cooperations (Reuer, Zollo et Singh, 2002). Longitudinal research regarding interorganisational cooperations generally identify three phases of development such as in Das and Tent's (2002) work which categorises the three phases as: formation, construction and results. According to Ring and Van de Ven (1994), the evolution process of associates can be sorted into three phases: negotiations, future action engagement and the execution of these engagements. This model is adapted to study non-repeated dyadic relations but it can not be implemented to study an entire project. Moreover, although this indicates the key states and each principal stake, this model remains inadequate as it fails to include any circumstantial factors (the environment, internal conditions, etc) which could affect the cooperation process.

However, despite studying the multilateral relationships, the number of associates is not fixed and therefore it is difficult to linearly structure the phases. The cycle of an ANI is interactive and needs a return loop. The project bearer is able to negotiate before hiring (psychological contract) a commercial provider during the development

phase and then during the diffusion phase with the partner's advice, he or she can hire a second commercial provider which will inevitably lead to returning to the negotiation phase.

Zajac and Olsen (1993) studied the evolution of alliance networks regarding the value creation process which they break down into three phases: introduction, implementation and renegotiation. This approach is most suited to our research in order to reach our aim as a repetitive and iterative cycle of relationships can be seen during the renegotiations phase in our case studies. Figure 2 (below) demonstrates the possibility of combining the value creation process and the innovation process. The value creation process' repetitive and iterative cycle is situated in the central chain of Kline and Rosenberg's (1986) innovation model. They propose a chain which begins with the invention phase and continues with the development, production and implementation (diffusion) phases.

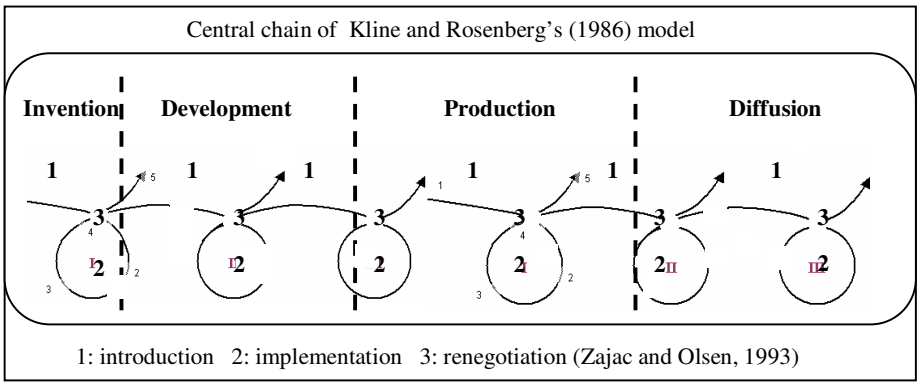

Figure 2. The integration of the value creation process in the central chain of innovation

Considering an ANI, this analysis unit allows us to study different phases which appear to be the innovation process but are also commonly found throughout the entire project. Considering this, even if in the heart of an ANI, we can observe an evolving heterogeneous partnership group, (Ring and Van de Ven, 1994), it remains preferable to analyse the network in the group to understand the complexity of the interactions.

Furthermore, Kline and Rosenberg's (1986) proposed phases are common in innovation project groups. It is for these reasons that we support the following three phases in this study of innovation projects: to invention from development (Phase 1); development to production (Phase 2); production to diffusion (Phase 3).

Together, these analyses respond to the necessity of better understanding the evolution of the interorganisational cooperation structures. Furthermore, no research has taken the evolution phase in regards to understanding the conflict resolution mechanisms

used by associates into account. The empirical section of this research aims to verify the importance of the evolution phase regarding the mechanisms adopted by the members of the ANI.

2. METHODOLOGY USED FOR THE EMPHIRIC RESEARCH OF THE SEVEN ANIS

A qualitative methodology was adopted in the case studies during the research process as the phenomenon in question is vast, complex and largely unexplored. Our research is therefore of an exploratory nature, in the sense that the literature has not yet developed a precise hypothesis regarding the relationship between conflict resolution and the evolution stage. It is for this reason that our interviews began with an in depth questionnaire in order to take the different dimensions of potential conflict resolution mechanisms into account. Moreover, to understand the impact the advancement phase has on the mechanisms, we met with the project bearers at least once every two months over a period of six to twelve months (depending on the start date of the case). We carried out 57 interviews of which 33 were tape-recorded. Due to confidentiality reasons, the remaining 24 could not be audio-recorded.

2.1. METHODOLOGY CHOICE

Each of the seven case studies relies on three information collection tools to ensure data triangulation (Yin, 1994): the interviews, direct observation and secondary data analysis. We chose these particular seven alliance networks because they each were developing at least one technological innovation in collaboration with at least three other organisations. Fifty seven interviews (see Table 1) were carried out with different members of the innovation networks: the project bearer, the financial, technical and industrial associates. By carrying out semi-structured interviews over an average of one and a half hours, we hoped to gain a better understanding of the innovation networks' history, the different conflict resolution mechanisms implemented in these networks, the difficulties experienced and their consequential repercussions on the innovation project. This research was equally executed using secondary data:

- **Internal:** emails exchanged between different project members, the project bearers' internal notes during the project advancement presentations, business plans, contracts between members and organisations;
- **External:** internet; press releases and articles, newspaper clippings.

In conclusion, a passive observation was carried out (regular presence: one day every two months over 6 or 12 months in the project bearers' offices), to capture the actual environment and working atmosphere (the eventual tensions or, in contrast, the joyful periods linked with the innovation project).

2.2 CASE PRESENTATION AND DATA TREATMENT

The multi-site case studies provoked the construction of a theoretical sample (Glaser and Strauss, 1967). This critique allowed us to select the cases which corresponded to our research question. Thus, we carefully chose innovation networks of different sizes in the heterogeneous activity sectors, but which each aimed at successfully executing a technological innovation project. We specifically chose cases which shared enough common traits (technological innovation, networks with at least three collaborators, etc) with the others but which could be clearly distinguished from one another in many other ways (Hlady Rispal, 2002). The aim of our research is not to replicate results but more so to discover the conflict resolution mechanisms used during the life span of an ANI (alliance networks developing a technological innovation project).

Projects[1]	Project bearer(s)	No. of Stakeholders[2]	Innovation Object	Sector of activity	Studied phase(s)	Remarks	N° of interviews
Project A	SME (12 employees)	65	Component for car manufacturers	Automobile	I et II	Ambitious project: heavy investments and strong degree of professional skill	**13**
Project B	Craftsman (2 employees)	8	Products for beauticians (B to B)	Large-scale distribution	I, II et III	Conflicting situation: the commercial partner demands property rights on the already deposited patents	**9**
Project C	Independent (1 employee)	11	Basic consumable products	Large-scale distribution	I et II	Project remains stable: the target market is oligopolistic	**6**

[1] For reasons of confidentiality, we do not reveal the names of the innovation projects.
[2] The average number of stakeholders during the year of observation. The term 'member' is used in the organization sense.

Projects[3]	Project bearer(s)	No. of Stakeholders[4]	Innovation Object	Sector of activity	Studied phase(s)	Remarks	N° of interviews
Project D	SME (3 employees)	9	Machine to improve the manufacturing process	Industry	II et III	Opportunist behavior: deposit of an additional patent without warning the project bearer	**7**
Project E	SME (6 employees)	24	Sport protection product	Sports and leisure activities	II et III	Project succeeds without major difficulties	**10**
Project F	Independent (1 employee)	6	Product specialized in sliding sports	Sport and leisure activities	II et III	The project bearer consulted to the experience of the poject bearer E	**8**
Project G	Three enterprises	7	Autonomous products	Industry	I	Tedious and formal negotiations	**4**
TOTAL							**57**

Table 1. The characteristics of the ANI study

3. THE NECCESSARY CONSIDERATIONS REGARDING THE ADVANCEMENT PHASE AND THE TYPES OF ORGANISATIONS

We will now present the case studies' results concerning the conflict resolution mechanisms used by the project members. One proposition to take into account involves two moderating variables: the innovation project's advancement phase and the type of organisations and members.

[3] For reasons of confidentiality, we do not reveal the names of the innovation projects.
[4] The average number of stakeholders during the year of observation. The term 'member' is used in the organization sense.

3.1. Conflict resolution mechanisms vary with the project advancement

Each case study's principal result is that conflict resolution mechanisms are not static but in fact develop according to the innovation project's advancement phase. Furthermore, the project bearers reiterate that they do not hire people using the same mechanisms in the development phase as in the diffusion phase.

During phase 1 (invention to development) exterior arbitration and coercion are never employed. Instead, collaborators privilege 'softer' mechanisms such as persuasion exercised by the project bearer and joint conflict resolution.

> *"You know, when you begin, you come up against many difficulties when trying to reunite certain partners. So, you put a bit of water in your wine and try to resolve the disagreement cordially, using dialogue, in a way that leads to each being able to state their point of view" (bearer, project B)*

The major use of 'soft' mechanisms explains the different approaches. First and foremost, as we have detailed in the first section, we are interested in ANIs, which are particularly subjected to fixed time constraints. Moreover, if the project falls behind during phase 1, undesirable repercussions could occur in phases 2 and 3 which could compromise the project's aims or lead to the project's failure. Regarding our case studies, this explains why we have never observed the practice of 'neglected' which can be observed in many other alliance networks (e.g. franchises). Similarly, the project bearer has certain patent deposits but these do not assure legitimacy in the middle. The project bearer must initiate the "snowballing effect" in order to prove the relevance of the project. During this phase, negotiation is not in the project bearer's favour which partly explains the desire to resolve the conflict in a joint manner. This explication relates to cases A, B, C, D, E and F as the organisation is of a small size (artisan, PME, independent). Project G entails a large scale project and the utilisation of softer mechanisms as there is next to no long term goal.

During phase 2 (from development to production), the mechanisms start to harden and we see persuasion occurring more and more frequently. The bearer plays the role of the mediator which presents him or her with a global vision of the project. This in turn allows him or her to believe that they personally are the most suitable to find the best conflict solution:

> *"I have recently had conflicts between two of my technical associates who did not understand why we kept this solution for fabrication. I therefore had to give them an entire sales pitch, like a salesman, so that they would agree to this solution" (bearer, project A).*

During phase 3 (from production to diffusion), the organisations used were mainly exterior arbitrations where the coercion of the mechanism's detriment was softer and similar to joint conflict resolution or persuasion. This phase is where the organisations release the product into the market. Implementing a third party (arbitrary or tribunal) is common as there is less hostilities (Frery, 2003) between associates:

> *"Until now, I needed him because I didn't know how to go about it in another way. But now that I know that my product is selling, I'm going to find new salespeople and get rid of this idiot in all fairness" (bearer, project D).*

In this first part, we are encouraged to think that it is necessary to integrate the project's advancement phase as a moderating variable regarding the study of conflict resolution mechanisms. Following this, we remarked that the mechanisms changed according to the type of organisations and members.

3.2 THE NECCESARY CONSIDERATIONS REGARDING TYPES OF MEMBERS

As a result of the different interviews, we realised that the project bearers saw the partners and contractors in their ANI differently:

> *"With a contractor, you have a budget, a proposition and a result. With a partner, you have direct lines, common long-term and medium -term goals. You find a partner to accompany you, to achieve your goals together" (bearer, project F)*

It therefore can be argued that it is essential to identify this distinction regarding the nature of the partnerships in our analysis so that we can readily see how this difference influences the conflict resolution conflicts.

Technological innovation demands a combination of different resources to succeed in achieving innovation, which in turn requires the presence of different members within the innovation network who bring these resources and specific skills. Callon, Larédo and Mustar (1995) categorise these members into four groups: science/technology, industry, regulation, user or market.

During our research, we questioned people on the name that they gave to each type of member of their innovation network. For the majority, the interviewees made distinctions between the financial, technical, industrial and commercial associates. This is not surprising as it relates to the guidelines for advising the project bearer on

how to develop the innovation network offered by Oseo[5]. Considering our data treatment, we employed the typology used by the members which has multiple similarities (scientific sector/technology equalling technical members/industrial sector equalling industrial members) to Callon, Larédo and Mustar's (1995) typology, but instead of the users, it considers the commercial collaborators (B to B).

Table 2 (below) summarises our reflection on the different members within the innovation network by classifying the actors into two categories: the nature of the relationship and the nature of the members.

Nature of the members / Nature of relationship		Technical	Financial	Industrial	Commercial
Providers		Enterprise X	Credit Establishments	Producers X	Distribution Agents
Partners	Private	Clearly Identified Enterprises	Priming Base Business angels	Clearly Identified Enterprises	Licence
	Public	CRITT	OSEO, Trade chamber	-	UBIFRANCE

Table 2. A typology of an alliance network's members.

We examined the seven case studies to see if this variable influenced the conflict resolution mechanisms:

The technical collaborators

The conflict resolution mechanisms used in conflict situations with technical members are generally "soft". It must be noted that although these mechanisms are "soft", they may intensify (P1: joint resolution; P2: persuasion; P3: sanction, threat) with the project advancement for partners where as they 'soften' for the providers (P1 : sanction, output ; P2 : joint resolution; P3 : joint resolution). Supporting these elements, the bearers explain that it is necessary to understand how to communicate with the partners and similarly, to learn how to "resolve conflict calmly and with dialogue" (Project G's Bearer) because partners are essential in order to technically achieve innovation. For the partners, speech is divergent. Among the projects studied during phase 1, not one of the partners had a sound knowledge of the project. It is

[5]OSEO was born in 2005, by bringing together ANVAR (French innovation agency) and BDPME (SME development bank), around a mission of general interest supporting the regional and national policies. Its mission is to provide assistance and financial support to French SMEs and VSEs in the most decisive phases of their life cycle : start up, innovation, development, business transfer / buy out. By sharing the risk, it facilitates the access of SMEs to financing by banking partners and equity capital investors.

therefore relatively easy for the project bearer to fire the partner before hiring another provider:

> *"It is essential to leave on good terms, because as soon as you start to invest in someone, it's difficult to fire them later on. But, with Mr X, since the beginning, I sensed that he was already having difficulties with everything. I therefore preferred to hire one of his competitors" (Bearer, project F).*

For the public technical partners, the scenario is slightly different as they are not in a 'give-give' frame of mine. They are in charge of helping the companies but are not valued or paid in relation to the results they produce. Therefore, if the relationship does not suit the member, it is up to him to leave the ANI:

> *"Our job is to advise. Our objective is not to get results. Therefore, if we believe a person does not want to listen to our advice, we will leave the project altogether" (Public technical partner, project E)*

Financial Collaborators

Private partners are of a different nature according to the project's advancement phases (P1: priming bases; P2 et P3: business angles). Generally, like for all technical collaborators, conflict resolution mechanisms are mainly soft. Private financial partners are essentially used in projects which need to raise investments (projects A and C). Their interests often diverge from the existence of concealed sociocognitive conflicts, which occur as soon as the results or the bearer's behaviour does not satisfy the partner. If conflict erupts during phase 1, as the partners' investments are limited, the decision to break up the partnership is often made:

> *"We want to be nice and take a chance on these projects but there are limits. If we are going to be in total disagreement for the total duration of the project, it is better to disengage entirely while we still can" (Private financial partner, project C).*

In phases 2 and 3, the conflict resolution mechanisms intensify. The project bearer has proven the project's technical feasibility and is in a position to convince his partners of the project's potential.

Industrial Collaborators

Industrialisation is becoming more and more evident in developing countries (China, eastern countries etc). The conflicts in phases 2 and 3 are often linked with the collaborator's opportunistic behaviour (fraud, no respect for deadlines). In phase 2, the power struggle favours the industrial partner who uses coercion to resolve conflict. Furthermore, an industrial partner who is present from the beginning of the

project acquires a certain command of the product which allows him or her to impose a certain number of choices:

> *"We have followed project X from its beginning, even before the documents were signed. We know precisely how to serially produce product Y. We have the knowledge. If we say that the piece must be round or otherwise the chain will break, they have to listen to us. (...) Um, even if it is not the case, we prefer to withdraw rather than to do something that hasn't been done yet but doesn't need to be done" (Private industrial partner, project A).*

In phase 3, it is the project bearer with help from his commercial collaborators who will attempt to use his power of coercion to resolve conflict. Having said this, it is common that industrial partners act as the providers of certain commercial partners in the ANI. Thus, if they do not meet the terms of the project bearer's solution which will put an end to the conflict, they endanger their reputation which can lead to the simultaneous loss of many clients (the bearer, certain commercial partners).

Commercial Collaborators

Conflict resolution mechanisms are at their 'hardest' when regarding commercial collaborators. Conflicts may emerge between the bearer and one of the commercial collaborators or between different commercial collaborators (resulting from competition). In the first instance, whether it concerns a partner or a provider, the arbitrary resource is privileged. This can be explained by the detailed contracts signed between parties which are found in phase 3 of four different case studies: "All the different deriving agreements from the present CONTRACT or in relation to it will be definitively severed following the arbitrary rule of the International Court of Arbitration in conjunction with the International Chamber of Commerce by one or many arbitrators named accordingly with the rule" (Contract, project F).

> *"The relationship with my partner is very difficult, I trusted him, I gave him a large part of my know-how and I previously tried to resolve the problem as adults but it is impossible to talk to him. But, at that particular moment, I needed him, he was the only distributor of my product and I couldn't take him to court. But, as soon as I could find another distributor, I didn't waste any time in finding other distributors or seeing a lawyer so that he would return my documents to me" (bearer, project D).*

The second case was similarly about arbitration but instead, this arbitration was performed by a member of the ANI, the pivot: the project bearer.

> *"Recently, we wanted to introduce a new provider to take care of Northern Europe. However, the relationship with Enterprise X and our commercial partner rapidly turned sour because he stepped on*

everyone's toes, stuck his nose into everyone else's business and tried to take over everyone's projects. I therefore had to mediate and I chose to keep my partner but find an international provider who couldn't possible cover France" (bearer, project E).

Table 3 (below) demonstrates the principal conflict resolution mechanisms used by the ANI members as taken from both our analyses and observations.

	Partners		**Providers**
	Private	**Public**	
PHASE 1			
Techniques	**Joint Resolution**	**Joint Resolution**	**Sanction :** launch
Financiers	**Sanction** : launch	**Joint Resolution**	-*
Industries	**Joint Resolution of the problem**		**Bearer's persuasion**
Sales	**Joint Resolution of the problem**	-*	**Bearer's persuasion**
PHASE 2			
Techniques	**Project bearer's persuasion**	**Sanction :** launch CRITT, no obligation to results but to their means	**Joint resolution with the project bearer**
Financiers	**Project bearer's persuasion**	**Sanction** : launch	-*
Industries	**Coercion**		**Industrial coercion**
Sales	**Partner's Persuasion**	-*	**-***
PHASE 3			
Techniques	**Sanction** : threat	-*	**Joint resolution** of the problem with convocation from the

			group of partners regarding the importance of conflict
Financiers	**Coercion :** intervention from other partners	-*	-*
Industries	**Coercion** : of partner (weight of commercial collaborators)		**Exterior arbitration** : court
Sales	**Exterior arbitration** : court	**Sanction** : launch	**Exterior arbitration** : court

* For each of these seven case studies, we could not record the conflict resolution mechanisms in phase 1 between or with the ANI financial providers. This does not however mean that the conflicts and mechanisms used to resolve them do not exist.

Table 3. Conflict Resolution Mechanisms during the project advancement phase and in relation to the type of collaborator

Discussion and conclusion

We have studied the conflict resolution mechanisms used by members in seven different ANIs and considered the arguments and conclusion of other studies (Mohr and Spekman, 1994; Tuten and Urban, 2001) regarding the characteristics which lead to partnership satisfaction. Following this, two main points have emerged:
- Regarding an innovation project's process, we have distinguished three phases which correspond to the principal phases of an innovation project and in which the repetitive and interactive cycle of the value creation process is found. Conflict resolution mechanisms are not static and vary according to the project's advancement phase. This is to say that during the upstream phase, the mechanisms used are mainly 'soft' (joint resolution, persuasion by a partner or project bearer) and harden with the advancement of the project (exterior arbitrage, coercion).

Conflict resolution mechanisms differ according to the members in an ANI. In our seven case studies, the majority of the respondents put a significant importance on distinguishing between partners and contractors. We have integrated this element in our analysis and finally it appears that conflict resolution mechanisms are mainly 'soft' for partners and mainly 'hard' for contractors. Similarly, regarding the resources and skills brought by each of the partners, conflict resolution mechanism vary but are mainly 'soft' for technical and financial partners and mainly 'hard' for industrial and commercial partners.

Future works could further the limits of the current research however, these contributions must be contextualised. Conflict resolution mechanisms can vary depending on the position of the innovation in the value chain (final product, integrated product). Quantitative research could relieve the insufficiency of generalising results. Furthermore, the number of cases seems insufficient to replicate the studies (Yin, 1994) and to obtain external validity.

Future works could demonstrate that it is necessary to take the moderating role in the project advancement phase of an ANI into account as well as the types of members and partners. Furthering Grandori and Soda (1995) works which consider coordination mechanisms in interorganisational partnerships, we suggest it is necessary to study the following coordination mechanisms: exchange regulation, decision making, collaborator selection and result allocation.

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