FROM VALUE CHAIN TO VALUE NETWORKS : TOWARD A NEW STRATEGIC ANALYSIS MODEL

1. Network evolution

Competitive

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ABSTRACT

Works based on the study of interorganizational networks have arrived to an unprecedented development. To such an extent that, since some years, the strategic reflection has been limited to questions about firms' choice between a cooperative or non-cooperative behavior. So, the strategic literature is dual today, regarding several researches adopting either competitive or cooperative perspectives. Attempts to integrate both dimensions don't prove to be really convincing.

Indeed, authors who really wonder about necessity of the renewal of the strategic paradigms adopted a cooperative logic, by proposing the dyad or the network level as the most relevant to understand the process of income creation by firms. In spite of the undeniable interest of these contributions, highlighting the need to partnerships in order to get relevant resources or to create « relational incomes », and thus going past from competitive to cooperative logic, they shut away firms into a model which limits the strategic analysis field.
In this paper we aim to put into question the validity of current strategic models in an economy characterized by interorganizational networks, multi-market competition, and the intervention of regulation authorities.
A reflection about an organization's strategy needs to consider the question of competitive interactions as a priority. In the sense that strategy is overall a matter of relationship with competition and aims to create or maintain competitive advantages. However, the development of interorganizational networks have led authors to study the cooperative process as well. We find both competition / cooperation concepts in the height of the strategic discourse.

In order to back up our argument, we tackle first, interorganizational interactions and the emergence of the network paradigm, and thus focus on the limits of traditional strategic models in their manner to take into account the interdependencies between organizations. Secondly, pertaining to the question about obsolescence of the strategic vocabulary in explaining the current economic reality, we propose to pass from Porter's value chain concept to value network, and we pose some premises of a strategic analysis model : the value networks' system.

KEY WORDS : Value Networks' System **-** Inter-firm Networks – Competition – Cooperation – strategic analysis

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INTRODUCTION

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Indeed, authors who really wonder about the necessity of renewing the strategic paradigms adopted a cooperative logic, by proposing the dyad or the network level as most relevant to understand the process of income creation by firms (Dyer & Singh, 1998). In spite of undeniable interest of these works, highlighting the need to partnerships in order to get relevant resources (Afuah, 2000) or to create « relational incomes », and thus going past from competitive to cooperative logic, they shut away firms into a model which limits the strategic analysis field.

In this paper we aim to put into question the validity of current strategic models in an economy characterized by interorganizational networks, multi-markets competition and the intervention of regulation authorities.

A reflection about an organization's strategy needs to consider the question of competitive interactions as a priority. Considering strategy as overall a matter of relationship with competition, since « firms, if not all organizations, are in competition, competition for factor

inputs, competition for customers, and ultimately, competition for revenues that cover costs of their chosen manner of surviving » (Rumelt, Schendel & Teece, 1991, p.6). Strategy aims then to create or maintain competitive advantages. However, the development of interorganizational networks have led authors to study the cooperative process as well. We find both competition / cooperation concepts in the height of the strategic discourse.

In order to back up our argument, we tackle first, interorganizational interactions and the emergence of the network paradigm, and thus focus on the limits of traditional strategic models in their manner to take into account the interdependencies between organizations. Secondly, pertaining to the question about obsolescence of the strategic vocabulary in explaining the current economic reality, we propose to pass from Porter's value chain concept to value network, and we pose some premises of a strategic analysis model : the value networks' system.

1. INTERORGANIZATIONAL INTERACTIONS AND STRATEGIC ANALYSIS

1.1. THE EMERGENCE OF THE NETWORK PARADIGM

If competition is a phenomenon studied for a long time[1], the idea of cooperation has big difficulties to find some developments in economic and also in strategic management fields. Indeed, during a long period, cooperative practices have been preferred as opposed to anti-competitive ones, which limit the destruction-creative process on which the capitalism dynamism is based. Until the emergence of the problem of interorganizational networks, authors have considered only interfirms' competitive process.

However, the rapid technological changes, the end of monopoly and the opening of national markets have led to a fundamental modification of a firm's competitive field, real and perceived one, and the search of other competitive perspectives (Miles & Snow, 1986). The increasing of turbulence and thus uncertainty, is originally of a paradigmatic sliding, driving firms to consider other interaction forms than rivalry, and precisely cooperation. New representations of interorganizational relationships leading to new forms of reticular organizations studied under different terms[2], are directly issued from these disruptions.

This need for networks has been identified by Boltanski & Chiapello (1999) in their study concerning the evolution of the managerial literature (which aims executives) between the 60'S and the 90'S period. They note then that researchers and scholars' works in the 90'S were focused on network model. Managerial literature, as the normative expression of capitalism, leads executives to accept and to circulate this model, plunging more and more their firms in the network paradigm. As claimed by Castells (1998), the network logic which becomes general is a fundamental change, a revolution. It's the first time in the history that the first economic organization unit is not constituted by a subject, neither individual (such as the entrepreneur) nor collective (such as the capitalistic class, the firm or the State). This consideration, central but even now largely ignored in the management literature, leads us to consider network as a "multiple unit", which means to take conscious of the need of integrating the firm in one or several interorganizational networks, and take into account its independence, at another level, when describing its environment and elaborating its fundamental choices. Then, it seems important to wonder about the relevance of current strategic models to analyze a firm's environment in an economy characterized by the complexity of interactions and interdependencies.

1.2. THE MAIN STRATEGIC ANALYSIS MODELS AND THEIR LIMITS

In fact, the network paradigm entered straight in the strategic field since last years marked its direction toward a relational logic where alliance and cooperation behaviors supplant competitive strategies (Durieux & al., 2000). However, the observation of strategic models and works leads to note a dichotomy in the field. Indeed, researchers adopt from now on either a competitive interaction view or a cooperative one and attempts to integrate both perspectives are not really convincing. We think that this dichotomy in the literature stresses the limits of main strategic models in understanding a firms' environment and favoring its strategic choices. The difficult cohabitation of both competitive and cooperative perspectives in these approaches seems to be originally of these limits.

We distinguish essentially three main strategic models which help to explain firms' performance[3] : the Porter's approach ; the Resource-Based-View (RBV) ; and the relational perspective, issued from a critique of both first streams.

In the industrial economy approach, and in particular Porter's model, the analysis concerns sector level. Thus, Porter (1980) distinguishes five competitive forces[4] and proposes the concept of « widened rivalry » considering as competitors suppliers, customers, producers of substitute products and potential entrants. This competition generates the confrontation of whole different actors, and only this relationship is considered[5]. In 1985, Porter developed a starting analysis of interorganizational relationships, integrating in his model the relationships of interdependencies up and downstream generated by value creation. He developed then the concepts of « value chain » and « value system »[6]. Then, interfirms' coalitions constituted a way to behave on customers' and suppliers' negotiating power. However, in spite of its

undeniable contributions, the model proposed by Porter remains inadequate to develop a satisfactory strategic analysis which allows identifying performance deposits in a network environment. First, because the environment is given, in the sense that the sector structure determines largely a firms' strategy and their maneuver margin is often limited to imitate leaders. Then, because the sector constitutes little by little, the relevant unit for strategic analysis. Moreover, we can wonder whether sector frontiers constitute today a barrier to organizations' strategic intelligence. Can we still differentiate clearly the computer sectors from TV and radio or the ones from telecommunications ? In addition, firms are sometimes involved in various interorganizational networks coming under completely different activities. A logistic provider can be at once, a car manufacturer, and ore quarry partner; well in which sector is he ? The network logic developed by industry economists shows insufficiency facing the economic and strategic realities of organizations (multi-markets' competition, interorganizational networks…).

The Resource-Based-View (RBV) considers that firms, more than industry, constitute the relevant analysis level to explain performance (Barney, 1991 – Rumelt, 1984 – Wernerfelt, 1984). So, organizations have been rehabilitated as actors. In this perspective, firms are able to accumulate resources and skills which turn into an advantage compared to competitors when they are rare, value creative, non-substitutable and difficult to be imitated (Barney, 1991 – Dierickx & Cool, 1989). This type of approach took originally interest in the resources of a firm in particular. The arguments of resource and capability complement between firms, and the availability of certain resources justified cooperative strategies. Since then, some empirical researches went further to develop the study of resources in the interorganizational network to finally consider it as the relevant level to catch resource location (Afuah, 2000). If the idea seems to be interesting, we wonder about its strategic dimension. In fact, it seems that

we can qualify the model as strategic, which promotes a more or less prospective and projective method. Calling the interorganizational network as a relevant unit limits the analysis to the observation of a situation (the network) in which the firm is already involved any way. Aptitude for projection is in this case, relatively small since the analysis is reduced to identifying resources detained or not so by the network. Strategic options concern only the network frontiers' definition (is it necessary to integrate a new partner who have available resources the network has not ?). The risk of this model is to ignore the strategic autonomy of firms, which paradoxically goes against the resource-based-view postulates.

The relational approach (Dyer & Singh, 1998) considers that cooperation and alliance behaviors can increase organizations' performance and reduce costs and risks. These agreements constitute "relational advantages" which must be considered, just as physical and financial advantages, in determining a firm market value (Preston & Donaldson, 1999). In this perspective, competitive advantage dimensions borrow to both traditional conception of industrial structure and resource-based-views. If it constitutes an interesting approach to catch interorganizational relationships, we can reproach to the relational view to give interest only to the cooperative dimension of interactions. On the other hand, as noted by Preston & Donaldson (1999), only relationships with other firms are taken into account. Other organizations with different nature (institutions, regulation authorities for example) are not considered.

This review of the main strategic models leads us to note their limits to catch simultaneously cooperative and competitive interactions between organizations in a projective perspective. Other streams point out a fundamental change of competition characteristics regarding to their intensification (hypercompetition ; D'Aveni, 1994) or the emergence of new forms (multi-

market or multi-point competition ; Karnani & Wernerfelt, 1985). These models often consider only rivalry phenomenon between organizations and have some difficulties to integrate cooperative practices. Similarly, interaction models remain essentially focused on the only competitive dimension (Chen, 1996). In the opposite, some authors in the strategic management field give interest only to the cooperative dimension between organizations (Afuah, 2000). Even so, in spite of the dichotomy, some researchers try to articulate and even to integrate competition and cooperation in the strategic analysis.

1.3. THE ARTICULATION OF COMPETITION AND COOPERATION CONCEPTS AND THEIR INTEGRATION IN STRATEGY

From attempts to integrate competition and cooperation the concept of co-opetition[7] is born (Koenig, 1996). As noted by Nalebuff & Brandenburger (1997), this concept emerges from the need to cooperate with competitors, and also customers or suppliers, in order to generate a more important value. However, the various contributions which purpose is the clarifying of the articulation between competition and cooperation rather create a confusion by presenting either a simple (even simplistic) point of view and little realistic, or a complex description (based on the overlapping of two behaviors) and little operating in a strategic thought. We can distinguish the following approaches :

- In a first perspective, both notions are considered as alternative behaviors. Thus, first attempts present a binary vision of business world. Thompson & McEwen (1958) identify four relational strategies to deal with environment. While three of them concern cooperation, the fourth one is competition. Both notions are here considered as alternative behaviors, which means that two firms are either partners or rivals at a given moment. We find the same approach when Emery & Trist (1965) suggest to pass from competition to the “maximizing of cooperation” when environment becomes turbulent.

- In a second perspective, competition and cooperation are "located" at different levels of the economic game. In this way, for Bourqui (1990), competition is set at two levels : an external competition (the network facing its environment) and an internal competition (inside the network in order to recover an important part of the generated value added). Nalebuff & Brandenburger (1997) share the same conception by claiming that "creating value, a bigger cake, comes fundamentally under cooperation and implies sometimes customers and suppliers; however, dividing the cake is fundamentally competitive". The interorganizational network is often considered as an homogeneous entity (which means which maximizes cooperation) facing its environment. Besides, Gomes-Casseres (1994) feels that competition is developed, from this point, between networks. Then, the risk is to not consider firms as likely to be independent towards network. The organizational level will become less and less a relevant analysis level in strategic management. But the involvement in an inter-organizational network doesn't signify the pure and simple abandoning of its autonomy and its strategic ability to be determined[8].
- Other authors suggest to consider competition and cooperation as both elements of economic game where it exists an ideal compromise between both behaviors. Thus, for Teece (1992), "the challenge to policy analysts and to managers is to find the right balance of competition and cooperation" (p.1).
- In a fourth conception, rivalry and cooperation are two elements fundamentally opposed and can't be treated independently from one another in the economic reality. As stressed by Perroux, as early as 1973, the struggle-cooperation relationship is in the depths of economic exchange and the only an actors' confrontation implies the contradiction of interests in the economic game. Das & Teng (2000) share the same idea by insisting on the temporality dimension of both phenomena in the economic interaction. For example,

competitive tension is more or less strong according to the development stage of a partnership.

- Finally, in a last approach, competition and cooperation are not opposed one to another. For example, as stressed by Rebière (1994), cooperative politics don't aim to supplant competitive confrontation between firms; the cooperation idea doesn't contrast with the one of confrontation but with the one of autonomous action.

It seems then that in spite of the assertion, which becomes common, of a permanent dialectic competition – cooperation between organizations in economic interaction, strategic models remain deprived to promote the analysis of environments and organizational behaviors. One of the explanations we can give regarding to these limits comes under the concepts used by models. As seen previously, competition and cooperation are interaction forms which have been frequently opposed one to another in the literature, while several authors stress that they are fundamentally overlapped. Lado & al. (1997) note thus that these both notions are very different in a philosophical point of view and even their representation comes under paradox. In other words, the resort to the terms "competitor" or "partner" provides a little to the strategic reading of a firm's environment, even limits it by inducing behaviors which justification is difficult and implications hardly measurable. This remark shows the interest given to a methodology which, rather than qualifying **interactions**, allows the analysis of **interdependencies** between organizations before adopting a strategy.

2. TOWARD A NEW STRATEGIC ANALYSIS MODEL : THE VALUE NETWORK APPROACH

2.1. FOR THE QUALIFYING OF INTERDEPENDENCIES BETWEEN ORGANIZATIONS

We can share with Brandenburger & Nalebuff (1995) the idea that the business vocabulary usually used to define interdependencies between actors (competition and cooperation) is unsatisfactory. In this respect, they propose the abandoning of qualifications such as "partner" or "rival" and the identification of participants involved in a firm Value Net (see Figure 1), which means all the organizations that contribute in value creation and/or its capture. With the traditional vocabulary, leading today a strategic analysis comes under a challenge, in particular for firms involved in new technological field. Hamel & Prahalad (1994) note thus that in any time AT&T can consider Motorola as a supplier, a purchaser, a competitor or a partner. This example illustrates the Lane & Maxfield (1996) idea, in which the strategy defined as the most satisfactory possible action identification among a certain number of alternatives, with predetermined consequences, is completely old-fashioned. Firms create networks, aspire to be present on different markets and manage projects coming under different temporal scales. In a word, it's the end of action, time, and space units that mark current organizations' environment. Complexity makes then anticipating difficult, even perilous. Foresight horizon[9] is reduced and possible consequences of undertook actions are difficult to be evaluated. Most frequent recommended solution is to constantly watch and evaluate its environment. However, as it's the case for AT&T and Motorola, the reciprocal perception of actors evolves permanently, and the meaning of the term "strategy" is questioned. Even so, if this alarmist observation is valid in current strategic models, we can wonder if the development of a language able to take into account, the complexity of interdependencies between organizations, which could allow to improve their ability to deal with their environments. In fact, the meaning the actors attribute[10] to their actions, to their

products, and to entities around them, which specifies widely their maneuver margin and their foresight horizon. These remarks call to a new qualifying of interdependencies between organizations.

Independently from the suppliers and customers, Brandenburger & Nalebuff (1995) suggest thus to introduce the terms of Substitutors and Complementor in a strategic analysis. It's also the case regarding firms with which, a focal organization is interdependent but without realizing transactions. The organizations called Subtitutors constitute alternatives for the focal firms' customers or suppliers. Coca-Cola & Pepsico are certainly substitutors compared with customers. However, this concept exceeds that one of the "direct competitor", identified as one of the five market forces in Porter's analysis, and doesn't correspond either notion of substitution products. In fact, as noted by the authors, Coca-Cola and Tyson Foods, an American agriculture and food company specialist in frozen products, are substitutors as well because both firms use carbon dioxide and their stocks come from the same suppliers ; Coca-Cola to fabricate its famous sparkling drink and Tyson Food to freeze its food. We note that in the Porter's strategic analysis frame these two firms are considered as actors without any interdependency regarding to the distance between each activity. However, the relationship described here creates effectively a strong interdependency between Tyson Foods and Coca-Cola. By going further in this analysis, we can identify many substitutors by comparison with other resources, and in particular rarest ones (for example, certain staff categories).

Complementors are firms from which the customers buy complementary products or to whom suppliers sell complementary resources. So, hardware and software firms are basically complementors. The interdependency between Intel and Microsoft, for example, illustrates this case : stronger micro-processors allow to create even richer applications and arouse the consumers' interest to the frequent renewal of hardware and software. On the basis of the

interdependency described by a complementary relationship, many computer sector actors (random memory, hardware manufacturers…) can contribute to this dynamic.

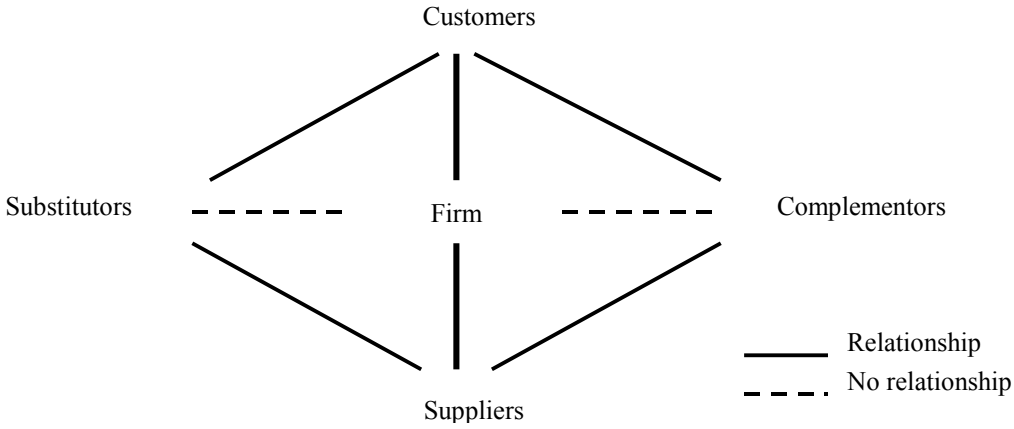

Figure 1. Brandenburger & Nalebuff's Value Net (1995)

On Figure 1, we find vertically the Value Chain (suppliers, firm, customers) including whole production and distribution cycle. However, why must we take into account only the value chain while other organizations, which have any relationship developed with the focal firm, have hand in reducing or increasing the value generated by the firm ? This resort to the notions of substitutors and complementors (represented horizontally) allows the identification of certain actors, which are interdependent with a given firm, that create or pick up the value, thus, are more likely to return to the firm. This new conception of value, based on interdependencies rather than interactions promotes strategic reading of a firm's environment by improving its foresight.

Indeed, traditional strategic models rarely offer the opportunity to question the conditions which lead to consider an organization as a partner or as a competitor. Rivals or a partners' identification is made then on the basis of the existence or not of exchange relationships (transaction) between the concerned firms, or the existence of a certain parallelism (the same

customers aimed with the same products). Finally, the strategic analysis in the traditional models is limited by a frame where organizations in their environments are qualified *a priori* as partners or competitors (or as competitors who are likely to become partners). On the other hand, in Brandenburger & Nalebuff's model the question of behavior to adopt toward substitutors and complementors is posed, and also the fact that a satisfactory partnerships' creation comes under a choice (linked with the value creation or capture) more than an established fact. Indeed, "if we label an actor as a "competitor", we have a tendency to favor competition rather than the search for opportunities to cooperate. Thus, the notion of substitutor describes market relationships without this systematic rivalry connotation. Complementors, neglected by the strategic literature, constitute a natural counterpart of substitors" (Brandenburger & Nalebuff, 1995, p.60). The question demands less to know if we are in the presence or not of competitors than to spot actors' similarity or complementarity, in order to choose the appropriate behavior when facing them.

By integrating value creation and « market forces », the Value Net proposed here makes obvious the relationship between both elements. However, in spite of its important interest, this method presents several limits. First of all, the model remains focused on a unique entity and allows with difficulty to take into account the strategic options offered to competitors. But, in our sense, intersubjectivity[11] is a crucial point in a strategic analysis. Therefore, authors dwell on only firms' identification, taking apart the fundamental role played by other organizations, such as public institutions or assimilated, in the value creation or sharing out between market firms. In addition, we can say that by using firms as the unit of analysis, Brandenburger & Nalebuff can take interest to only mono-activity firms. Finally, as the model considers substitutors and complementors as firms that don't realize transactions with the focal organization, the only identified types of relationship are those of buying and selling

products and services (with suppliers and customers). Another nature of relationship, such as R&D agreements, frequent in interorganizational networks, can't be taken into account.

2.2. FROM A MICRO TO A MACRO CONCEPTION : VALUE NETWORK AND VALUE NETWORKS' SYSTEM

2.3.1. The Value Configuration and the Value Network

The limits noted above must be exceeded in order to bring a successful conclusion to a strategic analysis which permits identifying interdependencies, and also the networks structuring environments. So, Brandenburger & Nalebuff's model must be completed to allow the identification of main organizations, that create, share or influence the value likely to come back to a given firm. Then, as proposed by Freeman (1984), it's the matter of opening the strategic analysis to whole relevant actors, by emphasizing R&D agreements, partners associated in joint-ventures, the role of actors such as authorities, territorial collectivities, trade unions or also associations. Chatov noted in 1981 that cooperation between government and firms remained a taboo (in particular in the USA) stronger than the collusion concept, while it had been always fundamental. Similarly, we can note that professional trade unions play a fundamental role in the transfer of information between a field organizations (Pfeffer & Salancik, 1978). If propositions leading to integrate these actors in a strategic analysis have been provided in the stakeholders' theory frame, in particular through the contributions of Rowley (1997) and Preston & Donaldson (1999), we note that authors often refer to the normative and moral/ethical dimensions (Jones & Wicks, 1999). In addition, most of propositions in the stakeholder theory stress the legitimacy of stakeholders' expectations (Donaldson & Preston, 1995 – Mitchell, Agle & Wood, 1997). Our purpose is not to evaluate organizations' legitimacy of a firm's environment, but to identify those who really count

(making a parallel with Freeman's "who and what really counts", 1994) from a strategic point of view, on the basis of the value likely to be generated (or destroyed) by these organizations. All main interdependent actors of a focal firm constitute what we label the Value Configuration. In fact, why talk about value chain if the industrial economic network seems to be old-fashioned in the current economy ? Why identify only the firms in a market when market / off-market interactions become more and more crucial ?

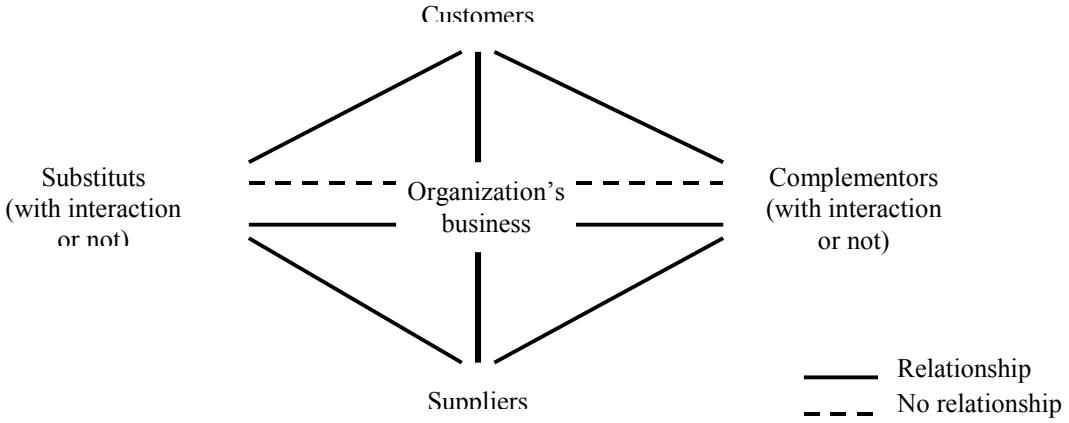

Figure 2. The Value Configuration and the Value Network

Figure 2 presents an organization's Value Configuration, or more precisely one of its activities' Value Configuration. In fact, in our point if view, interdependencies between organizations must be identified at the business level in order to include multi-markets' interactions. The complete Value Network of an organization, meaning full participant interdependency with it (those who intervene, in any manner, in the value captured by the organization), corresponds to the superposition of Value Configurations of its businesses. The Value Network is constituted by suppliers and customers, and also complementors and substitutors in the widest sense, furthering the participants' chances increase or decrease of the value attributed to an organization's business by its customers or its suppliers. This definition includes for example, regulation organisms being more likely to take decisions that

will have a stronger impact on a firm business. The Value Network includes relationships with actors identified in the Value Configuration. These relationships are far from being limited to transactions such selling or buying (as it's the case with customers and suppliers). Lobbying, essential information given by a professional trade union or also R&D agreements can be highlighted. Indeed, horizontally, two types of substitutors and complementors can be identified : those with which the focal organization has interaction in any manner (and belong to its Value Network), and those with which there is not (yet) an interaction for different reasons. This superposition of Value Network and Configuration allows a firm to understand the frame of its interactions with its network, and to contextualize its strategic action. In fact, it's the matter of exceeding the analysis of bilateral relationships which, in spite of their importance, can't emphasize the complexity of various interdependencies between organizations (coalitions, off-market actors' intervention…).

2.3.2. Intersubjectivity in the center of the strategic analysis

The Value Configuration and the value network constitute the starting point of our argument. However, we must exceed the vision focused on an organization. In fact, in our understanding, strategy is above all a question of intersubjectivity. Weber (1971) insisted on the idea that in every social structure type (including market), by any manner, actors must be able to take into account their reciprocal actions. As noted by Swedberg (1993), intersubjectivity is characteristic of the sociological approach, sometimes constituting even the unique difference between economics and sociology (study objects are often the same). It seems then interesting to note that, traditionally, strategy has been more close to economics than sociology[12]. Nevertheless, intersubjectivity is on the basis of strategic analysis. In fact, it appears necessary for an organization to be able to evaluate the opportunities and maneuver margins of its environments' firms. This necessity is even more reinforced by the

multiplication of interorganizational networks because, from a strategic point of view, it seems relevant to identify its partners' relational alternatives. Schelling (1960) stresses thus that in an interaction process, it's not the matter a guess at other's behavior in an objective situation, but evaluating what the other will guess at our evaluation of action possibilities, and so on. Without falling in an intellectual recursive process which leads to paralyzing every action, intersubjectivity brings up magnitude of the resort to an approach that contextualizes the full actors who constitute a firm's universe. However, by remaining rooted to a unique analysis level, strategic models or competitive interaction models (for example the firm for Rumelt, 1984 ; the dyad for Chen, 1996 or even the sector for Porter, 1980) often propose an atomistic and non-contextualized conception of interorganizational relationships.

The development of a strategic analysis model in which we find the intersubjectivity of actors brings up then many questions : What's the appropriate representation form to open out into a poly-centered approach ? What's the appropriate unit of analysis for this representation? How to delimitate the relevant universe of an organization ? What's the scope horizon offered by the model ? In totality, these four questions constitute some reference points in qualifying every strategic analysis method : the representation and information interpreting methods (design), the unit of analysis (focus), the relevant scope and the foresight horizon.

2.3.3. Interpreting tools (design) an unit of analysis (focus)

Only an analysis which offers a multi-level reading can allow an organizations' contextualization. A structural representation method close to mapping, based on the concepts developed in a value network frame, (suppliers, customers, substitutors with or without interactions, complementors with or without interactions), seems then to be appropriate to identify interdependencies between organizations. This method promotes intersubjectivity and

thus avoids some perceptual biases, emphasized by Zajac & Bazerman (1991), that can lead to strategic rough mistakes. For example, an organization with a strong identity can be inclined to ignore its environment and believes in an irresistible competitive advantage leading to what authors qualify as "auto-centered perspective". The problem of "blind spots" constitutes another bias that leads to taking inadequately into account actions of other organizations. A mapping of Value Networks results in a poly-centered perspective and limits these both risks.

A structural representation allows to exceed also the debate on the analysis levels present since some years in the strategic literature. Indeed, as stressed by Garcia-Pont in 1997, three analysis levels have been essentially used to describe competitive structure in the strategic analysis methods : industry, strategic groups, (based on an economic or cognitive approach), and organization taken individually. The author deplores that these analysis levels forget interorganizational networks and present shortcomings in characterizing games that animate market. Since then, as evoked before, several contributions have suggested to turn to the network as unit of analysis in the strategy field.

If works in favor of a resource based approach considered the firm as the relevant analysis level, it appears today necessary to reconsider a resources' location. Thus, following an empirical investigation, Afuah (2000) proposes to exceed the firm while locating resources in whole network. This observation emphasizes the shortcoming of methods, which consider the one firm as the relevant unit of analysis. Similarly, the industry as unit of analysis, as proposed in Porter's strategic method, presents shortcomings regarding recent literature defending the idea of a firms' multiple affiliations in various offer systems, in particular in multi-markets competition contexts evoked previously. Between firm and industry, strategic groups constitute an intermediary level which seems to be interesting to catch the competitive

game, with a less atomized manner than in a firm's case, or less holistic than in a sector's one. However, this concept is lacking of a real theoretical foundation (Rumelt, 1984 – Barney & Hoskisson, 1990) and the stability of the groups identified in empirical researches remains in debate and questions the strategic groups' predictive dimension. As strategic groups, networks belong to a meso-structural level, which is favorable to the understanding of phenomena intervening at micro and macro-structural levels (Rousseau, 1985). This "meso" position is probably originally of the success of interorganizational network concept for researchers today. However, as evoked previously, considering the network as an homogeneous entity impoverishes the strategic analysis. On one hand, the firm idiosyncratic dimension is dismissed, and on the other hand, the perception of the interdependencies within the competitive space is distorted since only interactions between networks are taken into account. It's necessary then to consider an interorganizational network as a "multiple entity" (Castells, 1998), and not as an homogeneous one. In order to fit in this economic organization, the strategic analysis must be multi-levels, taking simultaneously into account a firms' fundamental role in economy and the interdependencies created at another level. If this proposition seems to be in principle obvious, it implies certainly to an interesting corollary, even so rarely considered : independently of the interorganizational network(s) in which it is engaged, a firm has its own existence. So, it's simplistic to limit the strategic analysis only to relationships between partners inside the network. These partners have as well relational alternatives and commit relational differences towards a focal network. In contrast, we can also wonder if this relative independence of organizations compared with their network(s) doesn't constitute the one of competitive space main dynamics, and then a fundamental point in a strategic analysis.

2.3.4. Relevant scope and foresight horizon

Beyond the interpreting tools of environmental data and appropriate analysis level, the qualifying of the relevant scope and the foresight horizon seem to constitute fundamental points in a strategic analysis model elaborating method. These elements are resolutely connected because they constitute the strategic space-time described by a model.

Foremost, it's a matter of defining "arena frontiers". For example, in the Porter's model, the sector constitutes the relevant scope for a given firm. However, as evoked above, this frontier is currently obsolete to define a firm's environment. Lane & Maxfield (1996) note that the strategic analysis at a micro level must allow the identification of entire organizations that "populate the world" of an entity and to allocate them as an identity; the Value Configuration constitutes a tool that aims to fulfil this task. It's the matter equally, at a macro level, to represent the configuration of interdependencies between these organizations (we use here the term of Macro-Configuration).

We label as an "organizational field" a configuration composed by all the organizations as well as their interdependencies (the organizational field constitutes then a Macro-Configuration). Our organizational field definition is in the tradition of the one proposed by Fligstein (1990), with some exceptions. It's a matter of interdependencies (rather than only competition) between firms in a space delimited by initiatives taken by organizations and by the representation they made of themselves and their interdependencies ; in other words by the perception of their insertion in their environments. The organizational field assumes an objective character, which has something of resources held by firms and of outputs nature. But it assumes also a subjective character, or rather intersubjective one, while it's built by actors' behavior trying reciprocally to evaluate their potential actions. By identifying "important" actors (which means those with whom an organization feels strongly

interdependent), a firm forces them to recognize it as well. This chain enactment phenomena (Weick, 1977) leads to institutionalizing and stabilizing the organizational field. We consider, with Lane & Maxfield (1996), that fields are structured and organized by "artifacts", in particular conceived products and services, manufactured and exchanged by organizations. The existence of an organizational field is established by the mutual recognition, around artifacts, of interdependencies between various organizations. Actors share the same conception of legitimate action and place of each organization in the field. So, the organizational field has as main function to promote stability. However, we note that an organizational fields' frontiers are likely to evolve under the pressure of different nature organizations (firms, regulation organisms, authorities…). The example given by the comparison of the progressive overlapping of telecommunications and audiovisual fields is eloquent in this respect.

The concept of organizational field presents a great interest in designing the relevant socio-economic space for an organization. In fact, the field constitutes an entity based on both structural and cognitive criteria. On one hand, its frontiers are not delimited in arbitrary and definitive ways, constituting then a quasi-concrete entity (as it's the case for example of the sector in Porter's approach). On the other hand, it doesn't constitute a pure abstraction as the concept of market, for example. Indeed, Barber (1977) notes that the market would still remain implicitly even if it was absent from the economic literature. Later, Coase (1988) pointed out that for economists the market remains a concept even more vague than the firm itself. He suggests then to consider the market as an institution which organizes and facilitates exchange. We adopt this definition and we consider the market as one of the governance form (as the firm or the network)[13] likely to be implemented in the context of relationships with certain actors identified in the organizational field.

The strategic analysis must allow a simplified description of the organizational field. But, the representation of this one as a space (a Macro-Configuration), composed by organizations structured in overlapped Value Networks, promotes its strategic reading by contextualizing firms. Thus, a firm's relevant scope (which means its organizational field) is composed by main organizations with which it is interdependent and also its main entities, with which these are themselves interdependent. We defend the idea that incomes emerge from the interactions between the organizations of the field. They don't emerge only from interactions or relationships between a firm and its environment (as it's the case concerning incomes in the model of Dyer & Singh, 1998), but from interdependencies, as identified by value networks, generated by whole organizations' actions. This approach suggests that the strategic analysis relevancy (which means the foresight horizon it offers) depends widely on the understanding of interdependencies between field entities. We agree with Wilensky's (1967) idea which states that the real competitive and strategic lever comes under interpretation skills.

We consider Macro-Configuration as the interdependencies between the organizations of a field and the Value Networks' System (VNS) as the representation obtained by proceeding to the mapping of the Value Networks (interactions). It provides an ideal tool to understand the impact and repercussions of signals. Indeed, as noted by Poirier (1988), strategy comes under semiotic. Besides, Smith, Grimm & Gannon (1992) put market signals at the height of their reflection on the competitive dynamic. We consider a signal as any action, undertaken by the entity of an organizational field, providing a direct or indirect information on its motivations, its capabilities or future actions. Of course, this can include also bluff behaviors. No matter the characteristics, signals have often been set as goals for the modification of interactions between several organizations. The Value Networks' System allows a more precise evaluation

of the relevance of a signal and of the considered answers by the organizations of a field (even firms or authorities). Moreover, the signal refers to both an objective action and an interpretation of concerned organizations ; the organizational field (coming under structural and cognitive criteria) suits to its reading.

CONCLUSION

The Value Network model allows the qualifying of interactions between organizations constituting an organizational field (represented by a Macro-Configuration). This model offers the opportunity to promote at once the strategic analysis and action by stacking the "way taken" (the network of created relationships) on the world map (the configuration). In fact, beyond performance factors widely discussed in the literature, it's the question of analysis and strategic intelligence which is posed to the traditional models. Indeed, these models can hardly take into account the current organizational space, characterized simultaneously by networks' development, multi-markets' contacts or also lobbying practices facing the multiplication of regulation authorities. The exceeding of a strategic vocabulary focused on competition and cooperation concepts (which means defining *a priori* the interactions) in aid of a lexical field identifying interdependencies, in order to allow then the choice of relevant interactions to value creation and capturing, leads to a perspective more adapted to a strategy formulation and implementation. The model rests on a wider relevant scope and on a deeper foresight horizon. On one hand, because it integrates all actors who are likely to influence, in any case, the created or captured value by the firm and not only firms which intervene in the value chain. The multi-levels' approach promotes an organizational level reading but also insists on the role played by the constituting and breaking up networks. Those one are themselves contextualized since they are part of a Value Configuration. In addition, according to the chosen complexity level or the available information, the proposed

model allows an analysis at a micro level (focused on an organization) or at a macro level (based on the organizational field).

NOTES

[1] We often forget the idea that competition has been used and developed by Smith (1776) as rivalry (Stigler, 1957).
[2] We adopt here the term of network.
[3] Because this preoccupation is precisely the target of strategic management as noted by Rumelt & al. (1991).
[4] Rivalry between competitors present in a market, negotiating power of customers, negotiating power of suppliers, substitute products' threat, potential entrants.
[5] Porter doesn't refer to cooperative practices in his 1980's book, it's only in 1986 that several chapters of the book he coordinates tackle coalitions.
[6] This notion integrates the value created by suppliers and distributors.
[7] As noted by Nalebuff & Brandenburger (1997), this term have been proposed by Novell CEO Ray Noorda (see Electronic Business Buyer, December 1993), and designs situation where the firm is simultaneously cooperating and competing.
[8] Even if it's undeniable that the involvement in an interorganizational network constitutes an additional constraint to the firm.
[9] We define foresight as the degree that permit a strategic analysis to anticipate environment organizations' actions.
[10] Lane & Maxfield use the term of « attribution ».
[11] We develop this point later.
[12] See the special edition of Strategic Management Journal, vol.12, 1991, dedicated to relationships between Strategic management and economics.
[13] The main goal in this paper is not to define the characteristics of different governance forms. We will insist more particularly on this point in a next paper.

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