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ENTREPRENEURIAL TEAM FORMATION: ANY RATIONALITY?

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ABSTRACT

Research offers two main perspectives on entrepreneurial team formation. The first views this phenomenon as instrumental, driven by a resource-seeking behavior while for the second, homophily, a similarity-attraction concept, is the main driver. Even if these two approaches are generally presented as non-mutually exclusive, a tension exists and has scarcely been explored. Clarifying whether entrepreneurial team formation is driven by instrumental factors, interpersonal ones, or some combination of the two is quite challenging. This paper is an attempt to take up this challenge. Based on the introduction of the consideration set concept, I propose an abducted iterative decision-making model of entrepreneurial team formation, exposing the interplay between both approaches.

INTRODUCTION

The "generic" collective nature of entrepreneurship (Johannisson, 2003) finally overrode the myth of the lone heroic entrepreneur (Reich, 1987; Hansen & Allen, 1992; Gartner, Shaver, Gatewood & Katz, 1994). Entrepreneurial teams constitute a form of "crystallized" collective entrepreneurial action (Larson & Starr, 1993; Johannisson, 2004). More precisely, we can define an entrepreneurial team as composed of individuals who meet at least two of the three following criteria: they have to be founders; significant equity stakeholders (10% or more); and/or actively involved in the strategic decision-making (Ensley & Hmieleski, 2005). These teams are quantitatively significant (Kamm, Shuman, Seeger & Nurick, 1990; Watson, Ponthieu & Critelli, 1995; Lechler, 2001) as well as qualitatively since they contribute positively to the new ventures' success (Eisenhardt & Schoonhoven, 1990; Kamm et al., 1990; Birley & Stockley, 2000; Lechler, 2001; Stam & Schutjens, 2004).

Critical issues in thinking about entrepreneurial teams focus on three main topics: the process of team formation (and the resulting team composition); team functioning (social interaction and interpersonal processes within teams); and influences of team makeup (the potential links between the team and new business outcome and the team's turnover) (Cooper & Daily, 1997; Wright & Vanaelst, 2009). Performance is one of the most investigated issues (Cooper & Daily, 1997; Ensley et al., 2000). Researchers focused on team composition (Amason, Shrader & Thompson, 2006; Packalen, 2007) and processes like conflict and communication (Schjoedt & Kraus, 2009) and are now more and more interested in the teams' specific activities (such as networking and tie leveraging [Neergaard, 2005; Vissa & Chacar, 2009] or knowledge-acquisition [Chandler & Lyon, 2009]).

Despite its importance, the phenomenon of entrepreneurial team formation lags behind in terms of research devoted to it (Aldrich, Carter & Ruef, 2004). Forbes, Borchert, Zellmer-Bruhn & Sapienza (2006) explain this lack of research by the difficulty to identify emerging teams and the fact that organizational behavior research about teamwork has largely focused on behavior in existing work teams, ignoring team formation. Nevertheless, team formation is a crucial stage since it is the source of lasting legacies for the future organization (Ruef, 2002) so, "if well understood, the process of team formation could be shaped to enhance ventures' chances of success" (Forbes et al., 2006: 226).

Research suggests two main explanations to entrepreneurial team formation: one is instrumental, a resource-seeking behavior, and the other is based on interpersonal attraction (Forbes et al., 2006). Even if these two approaches are generally presented as non-mutually exclusive, a tension exists and has scarcely been explored. Clarifying whether entrepreneurial team formation is driven by instrumental factors, interpersonal ones, or some combination of the two is quite challenging (Forbes et al., 2006).

This paper is an attempt to take up this challenge. First, I expose the tension between the two main approaches to entrepreneurial team formation. I then tackle this tension by taking a new perspective as advocated by one of Poole and Van de Ven's (1989) theoretical paradox solving strategies. The introduction of new terms enables me to develop a decision-making model of entrepreneurial team formation achieving a synthesis between the two theoretical approaches.

UNCOVERING THE TENSION BETWEEN THE TWO MAIN APPROACHES

It is more than twenty years since Bird (1989: 207) drew attention to the lack of theoretical base to research on entrepreneurial teams. In the case of entrepreneurial team formation, Forbes et al. (2006) argue that research isn't atheoretical but that the conceptual framework is often implicit. They thus undertake to reveal the theoretical foundations of the two main approaches to entrepreneurial team formation they identified in the literature. In what follows, I present both approaches and their underlying theories as well as their claims with regard to the entrepreneurial team formation phenomenon. An analysis of these contentions permits to expose the tension between the two dynamics.

A Strategic Dynamic

The strategic approach to entrepreneurial team formation offers an instrumental, rational-economical view of the phenomenon. Kamm and Nurick's (1993) model of team venturing exemplifies this perspective (Forbes et al., 2006). As in Ucbasaran, Lockett, Wright and Westhead (2003), the team is considered as a bundle of resources and the objective is to fill the identified gaps. The lead entrepreneur must proceed to make a systematic inventory of the possessed resources as well as of the needed resources for the project and try to reduce the, most likely, resulting deficit in resources. Decisions are thus taken with regard to the project and its implementation needs and more specifically to the provenance of those resources (Kamm & Nurick, 1993). The decisional process focuses on the identification of prospective team member(s) offering the best supply of critical resources to the project (Forbes et al., 2006). Resource dependence theory provides a sound theoretical basis for this "resource-seeking behavior" (Forbes et al., 2006: 229).

Resource dependence theory has been essentially developed by Pfeffer and Salancik (1978). Their book "covered a lot of territory, from the internal power struggles among individuals and departments to industry-level dynamics" (Davis & Cobb, 2010: 23). The main idea is that an organization pursues the maximization of its power (Pfeffer, 1981) but the latter is threatened by the vulnerability that constitutes the organization's need for resources (Hatch & Cunliffe, 2006). The postulate is that no organization can provide all the resources necessary to its survival (Pfeffer & Salancik, 1978). An organization can't be completely self-sufficient and is thus bound to establish relationships with others. Davis and Cobb (2010: 24) argue that top managers should ''choose the least-constraining device to govern relations with [the] exchange partners that will allow [them] to minimize uncertainty and dependence and maximize [their organization's] autonomy.''

One of the options suggested by Pfeffer and Salancik (1989) to the companies in order to reduce the environmental uncertainty and dependency is related to their boards of directors. Hillman and Dalziel (2003) distinguish two board roles according to the adopted theoretical perspective: for agency theory the board's role is monitoring but from the resource dependence perspective it is resource provision (Hillman, Withers & Collins, 2009). Interestingly, the resource dependence role of boards has been found more significant in the firms' early life cycle stages, and in entrepreneurial organizations rather than in larger and more mature ones (Hillman et al., 2009). At the group level of analysis, studies focused on the board's ability to provide critical resources to the organization (Hillman et al., 2009: 1408) and, after Pfeffer (1972), on the fit between the resources provided by the board and the needs of the organization (Hillman et al., 2009: 1408).

An analysis of resource dependence begins with the identification of the needed resources and their provenance (Hatch & Cunliffe, 2006) which matches the first decisions in Kamm and Nurick's (1993) team venturing model. If the identified needs aren't covered by the lead entrepreneur then the decision to form an entrepreneurial team can be taken. But it isn't systematical. Resource dependence theory advocates a ranking of resources according to their criticality. Critical resources are those without which an organization can't function (Hatch & Cunliffe, 2006). In our case, we could define them as the resources without which the venturing project would be compromised. Furthermore, a person giving access to such resources shouldn't be automatically integrated to the (future) entrepreneurial team. Forbes et al. (2006: 231) remind us that according to the resource dependence theory "such access should be achieved in the lowest cost manner […] For example, a banker could be added to a venture's board of directors." We see here some of the difficulties of this strategic approach to entrepreneurial team formation. Most lie in its practical application: defining a resource; assessing resources' criticality; adapting the listing throughout the various refinements or more radical redirections of the project; etc. The second approach is presented as more "natural" (Chabaud & Condor, 2009) and doesn't encounter such practical application difficulties.

An Interpersonal Relations Dynamic

The social psychological vision of entrepreneurial team formation presents the phenomenon as a result of interpersonal attraction. The underlying theory is similarity-attraction (Forbes et al., 2006). In its simplest form, similarity-attraction theory would correspond to the expression "birds of a feather flock together." Similarity is a crucial determinant of attraction. Byrne's (1971) research linking attraction to the perceived similarity in others has produced remarkably stable and consistent results (Jones, 1998: 27). Morry and colleagues (Morry, 2005, 2007; Kito et al., 2005; Morry et al., 2005) provide recent conclusive tests of this theory. Byrne (1971) discusses the "law of attraction" (Byrne & Nelson, 1965) on the basis of similarity in attitudes but the interpersonal similarity concept isn't one-dimensional: similarity in physical appearance, gender and socio-cultural background for example also generate attraction (Lydon, Jamieson & Zanna, 1988).

Heider's (1958) theory of cognitive fit is generally presented as the origin of Byrne's (1971) "attraction paradigm" (Byrne & Griffitt, 1973; Monge & Contractor, 2003; Mannix & Neale, 2005). To conserve a cognitive harmony, actors prefer to interact with others sharing the same values, beliefs, preferences and social attributes (Lin, 1995: 686). Similarity reduces, indeed, the psychological discomfort that can result from cognitive or emotional misfit (Monge & Contractor, 2003: 224).

Similarity-attraction theory has notably been applied in entrepreneurship to the case of venture capitalists' evaluations of entrepreneurial teams (Franke, Gruber, Harhoff & Henkel, 2006). Franke et al. (2006) found that the higher the similarity between a venture capitalist and the members of an entrepreneurial team, particularly with regard to achieved characteristics such as the type of training and professional experience, the more favorable the evaluation by the venture capitalist will be. "Venture capitalists tend to favor teams that are similar to themselves" (Franke et al., 2006: 802). Similarity-attraction theory "has also been successfully applied to some management fields that have a long tradition of psychologically rooted reasoning, such as human resources management and marketing" (Franke et al., 2006: 808).

Besides this theory, Forbes et al. (2006) suggest homophily as a theoretical foundation to the interpersonal relations approach to entrepreneurial team formation. "In sociology, homophily describes individuals' tendency to interact with others of shared personal characteristics, such as age, gender, and ethnicity (Lazarsfeld & Merton, 1954; McPherson, Smith-Lovin & Cook, 2001)" (Grossman, Yli-Renko & Janakiraman, 2007). In entrepreneurship, this concept has mainly been mobilized to study entrepreneurial teams' composition (e.g., Ruef, 2002; Ruef, Aldrich & Carter, 2003; Steffens, Terjesen & Davidsson, 2007). Monge and Contractor (2003: 223) argue that "homophily has been studied on the basis of similarity in age, gender, education, prestige, social class, tenure, and occupation." This status homophily is generally distinguished from a value homophily, that is similarity with regards to values, attitudes and beliefs (McPherson et al., 2001). Mannix and Neale (2005) integrate homophily in the set of similarity-attraction theories.

Ruef et al. (2003) found strong support for homophily, with respect to gender, ethnicity, and occupation, influencing entrepreneurial team composition. Based on such evidence, upholders of the social psychological theories in entrepreneurial team formation explanation challenge the strategic perspective.

Two Diverging Dynamics Contending to Drive a Same Phenomenon

Researchers in each approach do not make claims of mutual exclusivity (Grossman et al., 2007) but their perspectives are nonetheless diverging. The strategic view "suggests that founders engage in an open search, using the fundamental criterion of what a potential member can bring to the venture (Mosakowski, 1998)" (Aldrich et al., 2004: 301). This dynamic should lead to rather heterophilous entrepreneurial teams. But "research so far has found that team composition is driven by similarity, not difference" (Aldrich et al., 2004: 308). Exponents of the social psychological approach find here an opportunity to challenge the strategic view presented as the mainstream approach. Aldrich and Kim (2007: 149) assert that "as a normative principle, the business strategy literature seems to privilege the rational process model over the social psychological model, claiming that new members *ought* to be chosen based on knowledge demands and resource connections, whereas accumulating evidence shows that 'new member addition, *as it actually occurs*, may be better explained by social psychological theories' (Forbes et al., 2006: 232)." Kamm and Nurick (1993: 21) recognize the social psychological approach in these terms: "starting a team venture may be less a matter of problem solving and more a matter of preference for individuals or groups whose members either (1) personally value working as a team; or (2) belong to professions (science and engineering, especially), cultures, or some socializing force where working with one or more partners is highly valued." They also acknowledge that "ready access" and "chemistry" can play a part in entrepreneurial team formation, but still "posit an intendedly rational process," a "problemistic search" (Forbes et al., 2006). Behaviors explained by the social psychological approach are thus seen as marginal and outside the domain of rationality: a rational founder adopts a problem-solving view (Kamm &

Nurick, 1993), a resource-seeking behavior (Forbes et al., 2006). But then if the social psychological theories are indeed "a better fit to the realities of team formation" (Aldrich & Kim, 2007: 149), does it lead to the conclusion that entrepreneurs are irrational in forming their new venture teams (Parker, 2009)?

This situation mirrors in fact an ancient debate on the respective realms of economics and sociology. In his 1916 *Trattato di sociologia generale* (published in 1935 in English under the title *The Mind and Society*), Vilfredo Pareto distinguishes the logical actions which roughly correspond to our nowadays termed rational actions from the non-logical ones which are the actions that escape experimental logic (Boudon, 1981). For Pareto, economics is the science of logical actions while sociology is the science of non logical actions. Boudon (1981) argues that this distinction is of prime importance since it expresses one of the fundamental intentions of sociologists: analyze and explain the actions and, more generally, the behaviors, which give the observer the *feeling* of irrationality. But these behaviors are no more irrational than sociology is the science of irrationality (Boudon, 1981; Zafirovski, 2005). To understand my assertion, we need to consider that there isn't only one type of "valid" rationality despite the rational choice theorists hegemonic will. The instrumental and utilitarian conception of rationality where an individual's acts, in the Benthamian tradition, are based on a cost-benefit calculus in an attempt to maximize the difference between them, is the most common nowadays (Boudon, 2009b). A decision-making model based on this type of rationality follows the rational choice theory. Some authors such as Becker (1996) or Coleman (1986) believe this theory of rationality should be considered as a valid behavioral theory for all social sciences (Boudon, 2006). But this theory has been subjected to critics in its own "base camp," economics. One of the most famous corrections brought to the Homo Œconomicus paradigmatic figure is that of economics Nobel Prize recipient Herbert A. Simon (1976). "He focuses on the limits of human capabilities, both with regard to the individual's ability to rationalize, as well as the (personal, social, or organizational) costs of following a rational strategy. This results in his concept of 'bounded rationality'; people do not strive for a maximum result, rather, they are satisfied with a sub-optimal situation because of the costs of meeting their aspirations and abilities" (Rutgers, 1999: 30). Kamm and Nurick's (1993: 20) model of team venturing is in line with Simon's (1976) "bounded rationality" and "satisficing" notions. But even though Simon (1978 [1992: 357]) rejects the "irrealistic assumptions" of the rational choice theory's "perfect rationality," he stays attached to the consequentialist vision and to the Benthamian tradition of cost-benefit analysis. Boudon (2008a, 2008b) argues that this instrumental and utilitarian conception of rationality, whether under the form of rational choice theory or bounded rationality theory, can't always be an appropriate framework for behavior analysis. These theories can't penetrate the world of an individual's preferences, objectives, representations, values and beliefs (Boudon, 2009a). Hertwig and Herzog (2009: 662) argue that "the rational Homo economicus often does not 'get' the seemingly strange behavior of normal people […] Homo economicus is out of tune with us, mere mortals, and cannot predict our seemingly bizarre behaviors."

Similarly, elements in the entrepreneurial team formation phenomenon can't be explained by economic rationality and thus escape the realm of the strategic approach. These elements are those that can give the observer a feeling of irrationality (Boudon, 1981) like an organizational founder appearing to privilege trust and familiarity at the expense of functional competencies heterogeneity (Aldrich et al., 2004; Parker, 2009). But providing rational explanations to behaviors up to then qualified of irrational is a major task of social sciences (Boudon, 1992: 127-128). Boudon (2008b, 2009a) develops a theory of ordinary rationality where an individual subscribes to a (normative or positive) belief or decides of an action on the basis of reasons. Brym and Hamlin (2009: 90) argue that these "subjectively good reasons are neither arbitrary nor

dependent on the subjects' idiosyncrasies, but tend to be general in the sense that all individuals who are placed in the same situation will tend to perceive the same reasons as good reasons." A nascent team entrepreneur has this type of good reasons to partner with people who are similar to him, who will probably have the same values and who will give him the sufficient amount of confidence and feeling of security to set off or embark on the entrepreneurial adventure. Aldrich et al. (2004: 302) list other positive effects of homophily such as better communication and team work.

So, if the strategic view is rational (economic rationality; e.g., bounded rationality as in Kamm and Nurick, 1993), the interpersonal relations approach is equally but differently rational.

We are thus faced with two diverging explanations of entrepreneurial team formation that rely on two different rationalities, postulate two different dynamics resulting in two different entrepreneurial team compositions. Poole and Van de Ven (1989: 562) argue that "such tensions can be regarded as paradoxes of social theory" and one mode of working with paradoxes is to "accept the paradox and use it constructively." This reflects entrepreneurial team formation researchers' position up to now as both approaches are kept separate and their contrasts appreciated (Poole & Van de Ven, 1989: 563). This doesn't mean that researchers ignore the paradox; rather, they usually pursue its implications. But they still live with it and "this may produce specialized versions of the two theories which retard the recognition of relationships and generate diatribes between proponents of the 'correct' horn of a dilemma. Nor is it always clear just what sort of relationship 'tensions between opposing positions' constitute" (Poole & Van de Ven, 1989: 566). In this paper, I tried to "spell out the nature of the tension" which represents a different way of working with paradoxes (Poole & Van de Ven, 1989).

IMPLEMENTING A PARADOX SOLVING STRATEGY

Poole and Van de Ven (1989: 564) argue that "each 'side' of these tensions has been advocated or emphasized by different theorists, but together they form a tradition of theoretical discourse which is potentially richer than either theory by itself. The problem is how best to mine this rich vein of insight." None of the two exposed approaches can explain the entrepreneurial team formation phenomenon by itself, hence each approach's concession of a "walk-on part" in its production to the other (Kamm and Nurick, 1993; Forbes et al., 2006; Aldrich et al., 2004; Aldrich & Kim, 2007). Grossman et al. (2007) assert that "the probability of interacting mechanisms" is even acknowledged by both theoretical approaches. The "synthesis" strategy which implies finding some new perspective which eliminates the tension (Poole & Van de Ven, 1989) is thus indicated here.

Synthesis Based on a Two-Stage Choice Model

Research on entrepreneurial teams proved the relevance of the decision-making perspective to examine the phenomenon of entrepreneurial team formation (Kamm & Nurick, 1993; Forbes et al., 2006; Smith, 2007). "From this view, the lead entrepreneur engages in a decision making process to determine who will join the founding team" (Smith, 2007: 42). I adopt this perspective but with a specific decision-making model "introducing new terms" as advocated by Poole and Van de Ven (1989: 567).

Kamm and Nurick (1993: 18) propose "a model of the sequence and types of decisions [they] expect to find individuals and groups making as they form team ventures." They argue that "once it has been determined that partners are needed in order to start a new firm, a constellation of decisions follows: where to find partners; how to choose the best one(s); and how to convince

them to participate" (Kamm & Nurick, 1993: 21). This first model of entrepreneurial team formation thus presents three groups of important decisions concerning, respectively, the sources, the criteria and the inducements, that are likely to be related to each other (Kamm & Nurick, 1993). Forbes et al. (2006: 237) argue that it is helpful to break the decision-making process in two main stages, identification and selection, and to also consider an important third dimension, recruitment. They thus follow Kamm and Nurick's (1993) lead. Smith (2007: 42) asserts that "this multi-staged approach is consistent with work on the decision making process in consumer psychology (Gensch, 1987)." Hence, "the result of the identification stage is the development of a consideration set from which a selection is made" (Smith, 2007: 42). But Smith (2007) then adds a screening stage which is inconsistent with his prior assertion since a consideration set is the result of the consumer's screening. I argue that as defined in the team entrepreneurship literature the identification stage doesn't result in a consideration set but in an awareness set. Researchers present indeed identification as the process by which a nascent team entrepreneur becomes "aware (actively or passively) of certain individuals as prospective additions to the team (prospective team members [PTMs])" (Forbes et al., 2006: 237). With Smith (2007: 43), I consider that "while it has not been explicitly stated, the culmination of the efforts to identify potential team members results in the creation of a consideration set." But if we follow, as in this paper, the original choice modeling literature definition of consideration set (see for example Gensch & Soofi, 1995), screening is considered as part of the PTMs identification stage.

The result is a decision-making model of entrepreneurial team formation composed of three sets of decisions:

(1) Identification: The search and concomitant screening of PTMs resulting in the constitution of a consideration set;
(2) Selection: The choice of PTMs from this reduced set. Selection here means that the lead entrepreneur decides that he will try to recruit the chosen individual(s).
(3) Recruitment: Potential team members must then decide whether to cast their lot with the lead entrepreneur (Cooper & Daily, 1997: 131).

I thus specify the existing models (Kamm & Nurick, 1993; Forbes et al., 2006) by adopting a two-stage choice process model with a screening occurring at the identification stage and resulting in a consideration set.

The Consideration Set Concept

In their attempt to define the consumer's decision-making process, marketing researchers introduced the consideration set concept (Jolivot, 1997). This concept operates within the context of a modeling of consumer choice process in two stages widely corroborated by empirical studies: the consumer firstly filters available alternatives using relatively simple criteria and then undertakes detailed analysis of this reduced set (Roberts, 1989; Jolivot, 1997; Laroche, Kim & Matsui, 2003; van Nierop, Bronnenberg, Paap, Wedel & Franses, 2010). Jolivot (1997) asserts that in marketing the introduction of the consideration set concept permitted enriching the choice modeling field with the acceptance of a two-stage model paradigm (Gensch, 1987; Roberts & Lattin, 1991; Ben Akiva & Boccara, 1995) and to improve choice models' predictive power by taking into account these two stages (Horowitz & Louvière, 1995).

Phased decision strategies have been suggested as characteristic of human decision-making in a number of contexts where individuals have to cope with complexity (Wright & Barbour, 1977; Bettman, 1979; Roberts, 1989; Jolivot, 1997). "Existence of consideration sets (as distinct from awareness sets) is a logical outcome of theories in economics and psychology" (Roberts, 1989: 751). Research in the economics of information (Stigler, 1961) suggests that individuals will

continue to search for information as long as the expected marginal returns from that search exceed the marginal cost of further searching (Roberts, 1989: 751; Hauser & Wernerfelt, 1990: 395; Shocker, Ben-Akiva, Boccara & Nedungadi, 1991: 185; Laroche et al., 2003: 193). In addition to the economics literature which implies that the lead entrepreneur may have little incentive to search numerous PTMs, the psychology literature raises questions as to his ability to do so (Roberts, 1989). Miller (1956) and Wallace (1961) argue that individuals limit the number of alternatives in consideration due to the limitation of cognitive capacity (Laroche et al., 2003: 192-193). More precisely, "Miller (1956) suggests that our cognitive capacity to evaluate alternatives lies around a maximum of about seven due to limits in ability to differentiate and finite memory span" (Roberts, 1989: 751).

In addition to its theoretical basis, the concept of consideration set has strong empirical support (Roberts & Lattin, 1991; Jolivot, 1997). The first empirical studies on the consideration set in marketing essentially focused on its size. Only in the eighties did studies begin examining its composition and formation (Jolivot, 1997). In order to consider an alternative, an individual must be aware of its existence. Awareness of PTMs (Cooper & Daily, 1997; Forbes et al., 2006) is thus the first relevant step in entrepreneurial team formation. In marketing, the awareness set is considered as a subset of a universal or total set composed of all of the existing alternatives (Narayana & Markin, 1975; Shocker et al., 1991). With regard to entrepreneurial teams, I argue that the type of network the lead entrepreneur is embedded in (see Aldrich & Kim, 2007) informs us on this total set. In this context, a lead entrepreneur can become aware (actively or passively) of certain individuals as PTMs in three ways according to Forbes et al. (2006: 237): through direct contact; through indirect networking, where a third person acts as an intermediary; or through an impersonal search process. As the lead entrepreneur becomes aware of PTMs, he screens them and forms his consideration set from which he will finally select the individual(s) to whom he will propose to join him. The decision rules for screening and for the further evaluation of the reduced set are generally presented as different in the marketing literature. The consumer behavior literature strongly favors non compensatory models at the consideration phase and then compensatory models at the evaluation stage (Roberts, 1989; Shocker et al., 1991; Roberts & Lattin, 1997). Evaluation is made with a compensatory multiattribute utility model (Roberts & Lattin, 1997: 407) and the consumers then choose the product with the highest utility (Yee, Dahan, Hauser & Orlin, 2007). In a compensatory process, high levels on some aspects compensate for low levels on other aspects while it isn't the case in a non-compensatory process as in the screening stage (Yee et al., 2007: 534).

I have introduced a new perspective (

Figure 1), new terms in order to realize a theoretical synthesis (Poole & Van de Ven, 1989) and thus develop a model of entrepreneurial team formation that integrates both the strategic and the interpersonal relations dynamics.

DEVELOPING AN INTEGRATIVE MODEL OF ENTREPRENEURIAL TEAM FORMATION

Three important groups of decisions compose a decision-making model of entrepreneurial team formation: identification, selection and recruitment (Forbes et al., 2006). The identification-selection phase corresponds to a two-stage choice process as evidenced in consumer behavior literature with the formation of a consideration set in-between. From this new perspective, I now show how the two theoretical approaches of entrepreneurial team formation are valid but partial explanations of the phenomenon and suggest an integrative model.

Abductive Inference

There are various modes of inquiry in scholarly research. The most known are probably induction and deduction. But to elucidate the "surprising facts" (in C. S. Peirce's sense, 1839-1914) in entrepreneurial team formation, I rely on abduction as, "within the context of scientific endeavors, abduction is the basis for the inventive construction of new ideas, explanatory propositions, and theoretical elements" (Locke, 2009: 1). "It consists of three steps: (1) the application of an established interpretive rule (theory), (2) the observation of a surprising—in light of the interpretive rule— empirical phenomenon, and (3) the imaginative articulation of a new interpretive rule (theory) that resolves the surprise" (Alvesson and Kärreman, 2007: 1269).

The observed empirical phenomenon being entrepreneurial team formation, I use a theoretical sampling procedure (Neergaard, 2007) to select 10 recently formed entrepreneurial teams. In this *a priori* purposeful sampling (Patton, 1990; Coyne, 1997), cases have first to be different on various theory-based criteria [e.g., homophilous as well as heterophilous teams on ascribed and achieved characteristics; novice as well as habitual entrepreneurs (Westhead & Wright, 1998); teams that have been (or still are) in incubators or not (Lichtenstein & Lyons, 2001; Ensley & Hmieleski, 2005)]. But cases also have to remain comparable. I choose to select "mundane entrepreneurial teams" (Aldrich & Kim, 2007) and all teams belong to the same sector, the tertiary. This sampling procedure is a qualitative comparative analysis best practice (Ragin, 2006; Rihoux, 2006). The final empirical data consists in 23 semi-focused interviews with the teams' members, entirely transcribed and then coded with the support of QSR NVivo 8 software.

I first analyze the empirical material from the two existing theoretical perspectives on entrepreneurial team formation, the strategic and the interpersonal relations one. I apply two coding grids, each based on one theoretical view. Results demonstrate that both dynamics have a share in the phenomenon. Then, the systematic comparison of both results allows me to detect a combinatory pattern that can explain why teams tend to be homophilous even if they display economic rationality. The introduction of new terms to the equation (Poole & Van de Ven, 1989) through the adoption of the two-stage choice process consumer behavior research paradigm enables me to theoretically ground my suggested model of entrepreneurial team formation.

Van de Ven (2007) argues that theory creation involves an abductive process of "disciplined imagination" (Weick, 1989). In order to develop my model, I thus worked in a back-and-forth fashion in which concepts, conjectures and data were in continuous interplay (Van Maanen, Sørensen & Mitchell, 2007). Van Maanen et al. (2007: 1146) note that "the process of abduction, which likely goes on in most if not all promising research projects, is largely hidden from view." It is indeed a complex process difficult to fully transcribe. Nevertheless, even if overall and succinct, an account should be given to the reader in order to contribute in clarifying the new theoretical proposition's emergence.

A Novel Decision-Making Model of Entrepreneurial Team Formation

A lead entrepreneur needs to be aware of PTMs in order to create an entrepreneurial team (Forbes et al., 2006). Shocker et al. (1991: 182) argue that "as its name implies, the *awareness or knowledge set* consists of the subset of items in the universal set of which, for whatever reason, a given consumer is 'aware' and which are believed appropriate for the consumer's goal(s) or objectives. Knowledge of the items in this set is presumed to reside in individual long-term memory." But for these authors, decision-making can also rely on other information than that already present in active memory. Mintzberg, Raisinghani and Théorêt (1976: 255) distinguish four types of organizational search behavior: (1) Memory search is the scanning of the organization's existing memory; (2) Passive search is waiting for unsolicited alternatives to

appear; (3) Trap search involves the activation of "search generators" to produce alternatives, such as letting suppliers know that the firm is looking for certain equipment; and (4) Active search is the direct seeking of alternatives. For a lead entrepreneur looking for PTMs he believes, according to the above awareness set definition, appropriate for his venturing goal, three search behaviors can be considered. A lead entrepreneur can search his memory for people whom he believes could be (or become) interested in entrepreneurship. This often limits the search to the direct network. He can also expose his entrepreneurial intentions to people around him (family, friends, etc.) who may act as search brokers. They may introduce him to PTMs. Forbes et al. (2006: 237) qualify this way of becoming aware of PTMs as "indirect networking." But search can also be more active. A lead entrepreneur then identifies PTMs that he doesn't previously directly or indirectly know through an impersonal search process (Forbes et al., 2006: 237). This type of search is more costly than the two others and is the only one really permitting to break through network constraints.

A lead entrepreneur screens the PTMs of which he is aware. According to the consideration set literature, this occurs with a non-compensatory process. I argue that the interpersonal relations approach is the best explanation for what happens at this identification stage where a lead entrepreneur considers PTMs he is *attracted* to. In his seminal research, Byrne (1971) focuses on "affective" attraction. But research recognizes other dimensions to attraction, namely the cognitive and the behavioral (or conative) ones. Some researchers keep focusing on the affective dimension because they found strong correlations between the three dimensions and consider that the affective dimension can be representative of the concept (Montoya & Insko, 2008). But others argue that even if an affective appraisal is universal to all aspects of an individual, a behavioral answer is more dependent of the social context and utilitarian considerations (Montoya & Insko, 2008). Michinov and Monteil (2002) revisit the similarity-attraction relationship and demonstrate that the affective and behavioral facets of attraction, respectively "I feel" and "I do," can differ according to the relevance of the attitudes to the social context and the interaction goals of the concerned individuals. The cognitive facet ("I think") of interaction also doesn't necessarily follow the affective one. As Herbst, Gaertner and Insko (2003) formulate it in their article's title, it can happen that "my head says yes but my heart says no." In the entrepreneurial context, "attraction, therefore, is a multidimensional phenomenon that goes beyond simple liking" (Kamm & Nurick, 1993: 21). When applying similarity-attraction theories to entrepreneurial team formation, we thus should be attentive to have an ensemble view as the affective dimension isn't necessarily representative of the attraction concept at large. Here, a synthesis perspective, as adopted in this paper's suggested model, rather than a specialized view of the phenomenon is quite helpful as it removes the need to purge the interpersonal relations approach from functional considerations (Ruef, 2002).

In screening, a lead entrepreneur eliminates the PTMs of which he is aware but not attracted to. Considering that he is looking for one or more potential entrepreneurial team members (this gives the relevant situation for the conative facet of attraction: team venturing objective), a lead entrepreneur will be intellectually (cognitive attraction) and affectively attracted to certain PTMs and not others. In venturing, a lead entrepreneur has certain values, beliefs and preferences and to achieve cognitive harmony in the future team, PTMs need to be in line with them. For example, some entrepreneurs create a firm in order to transmit it to their children while others just want to develop it for a few years and sell it when they get an interesting offer. For Leung, Zhang, Wong and Foo (2006), shared personal aspirations and business visions characterize an interpersonal fit. A lead entrepreneur will then discard PTMs whose values, beliefs and preferences aren't compatible with his. Screening occurs in a non-compensatory fashion which means that high similarity levels on other aspects do not compensate for low levels on these aspects (Yee et al., 2007).

Once the search and screening finished, the consideration set thus formed, the lead entrepreneur chooses the PTM(s) whom he will finally try to induce in joining him. The selection occurs through a compensatory process. The lead entrepreneur will choose the PTM(s) who will optimize his utility according to Simon's (1976) bounded rationality theory. I thus argue that at the evaluation stage, the strategic approach offers the best explicative fit. I have exposed the difficulties of this approach that requires the identification of the needed resources and their provenance (Kamm & Nurick, 1993; Forbes et al., 2006; Hatch & Cunliffe, 2006). The lead entrepreneur must be able to determine the entrepreneurial project's critical lacking resources and decide of the best access to these resources in the lowest cost manner (Forbes et al., 2006). All these conditions form a multiattribute utility model (Roberts & Lattin, 1997). In the consumer behavior literature, "many authors represent a compensatory process as an arithmetic rule in which each aspect receives a weight and consumers sum the weights associated with the aspects in a profile to form utility. Consumers then choose the product with the highest utility" (Yee et al., 2007: 534).

Inducement to join follows identification and selection. From the decision-making perspective I adopted in the modeling of entrepreneurial team formation, it is important to note that, at this stage, the decision changes hands. Smith (2007: 50) reminds us that "the formation of an entrepreneurial team is indeed a mutual process where both the lead entrepreneur and the PTM must both agree to commence a relationship." At the recruitment stage, it is the PTMs chosen by the lead entrepreneur that must decide whether to cast their lot with him (Cooper & Daily, 1997). I consider this as an alternative amongst others like doing nothing (the PTM doesn't change his present situation) or altering his present situation but in a different way (e.g., change job, venture alone or with different people). This is a complex decision. The PTM might use a two-phased choice process by firstly screening the different alternatives. He then assesses his compatibility with the entrepreneurship alternative offered by the lead entrepreneur. Based on the social identification concept, Smith (2007: 117) argues that this compatibility test is notably influenced by entrepreneurial identification he defines as "a desirable attachment made by the PTM to the occupation of entrepreneurship." I argue that usually a lead entrepreneur looks for individuals who are (or could be) for various reasons open to entrepreneurship. Most PTMs the lead entrepreneur is aware of in the first place thus have a certain level of entrepreneurial identification. Nevertheless, it remains an important criterion at the recruitment stage. In a non-compensatory fashion, a PTM who doesn't (enough) see himself as an entrepreneur will screen out the lead entrepreneur's offer. Some PTMs can be in a "passive search" (Mintzberg et al., 1976: 255), that is waiting for an opportunity to venture to come along. It can be a person wanting to venture but not feeling like doing it alone or someone who, in his view, hasn't any good venture idea. But entrepreneurial identification isn't sufficient to further consider the lead entrepreneur's offer. The PTM must also be attracted to the system formed by the lead entrepreneur and his new value creation project (Bruyat & Julien, 2001). Once the alternative screened in, its utility is compared to that of the other possible alternatives present in the consideration set. Smith (2007) argues that the levels of time commitment and financial commitment are important decision factors. The PTM also considers his contribution in other resources (competencies, etc.). He then decides to join or not the lead entrepreneur.

The model is sequential but not necessarily linear as indicated by the feedback dotted lines (Figure 2). Consideration sets are generally small (Shocker et al., 1991) with most set sizes in the range of 3 - 6 (Hauser & Wernerfelt, 1990). Based on the rationale of consideration sets, it has been argued in this paper that a lead entrepreneur has little incentive to search numerous PTMs. Most entrepreneurs content themselves with a memory, direct search and with the mobilization of

their social network. But it may not be enough to form an awareness set. In that case, a lead entrepreneur will have a more active and impersonal search. But even if the entrepreneur is aware of PTMs, the identification stage may lead to an empty consideration set. The lead entrepreneur must then start the search process over again and/or relax his screening criteria in order to finally have at least one PTM in consideration. The latter isn't necessarily selected. The process is then reiterated in whole or in part (identification and selection or just selection). Finally, the selected PTM(s) can decline the partnering offer. If a PTM accepts, the lead entrepreneur may also reiterate the process because he still wants to enlarge his team, without even considering the case of a PTM that accepts at first before retracting himself some time later.

Throughout all these iterations, lead entrepreneurs' mode of thinking may also evolve. I argued that the process starts in a "natural" way (Chabaud & Condor, 2009), in which a lead entrepreneur looks for individuals sharing his interest in entrepreneurship and that attract him as potential entrepreneurial team members. Slovic, Finucane, Peters & MacGregor (2002, 2004) distinguish two modes of thinking, an experiential where decision-making relies mostly on intuition and an analytic where economic rationality is more called upon (see Kickul, Gundry, Barbosa & Whitcanack, 2009 for an application to entrepreneurship). The first is more natural and can help orient oneself in a complex decision-making situation (Slovic et al., 2002, 2004). I thus argue that lead entrepreneurs are first driven by their experiential system and that, throughout the twists and turns the process can have (empty sets and PTMs refusing to join), the need for a more analytic approach arises. This can explain why impersonal search is activated, introducing the strategic perspective in the identification phase I argued being mainly explained by the interpersonal relations approach. Also, throughout the iterations, as the team forms, a group approach can become more relevant (Kamm & Nurick, 1993). The initial venture idea evolves to espouse the team-in-formation characteristics and the remaining needs in resources are further specified. The analytic system gains ground.

CONCLUSION

Understanding entrepreneurial team formation is fundamental since this entrepreneurship stage is the source of lasting legacies for the future organization. Two main perspectives are advocated in research. They rely on distinct rationalities, ordinary and economic, and postulate two different dynamics, respectively social psychological and strategic. While these two approaches aren't presented as mutually exclusive and interactions are even recognized, existing propositions are still specialized versions of entrepreneurial team formation. Spelling out the nature of the tension is the way of working with paradox I adopted (Poole & Van de Ven, 1989). More precisely, I opted for a synthesis dictated by empirical results. I used the two-stage choice process paradigm of consumer behavior research as a key to clear up the tension between the strategic and the interpersonal relations approaches. I abductively developed an integrative model of entrepreneurial team formation. Identification is the first stage and consists in searching and screening potential team members following a non-compensatory process and results in a consideration set. Selection is then made from this reduced set following compensatory decision rules. At the following stage, recruitment, decision changes hands and the chosen prospective team members can decide whether or not to join the lead entrepreneur. Entrepreneurial team formation is far from being a linear process. Through the various iterations, the analytic mode of thinking gains ground on the more natural one, based on ordinary rationality rather than economic. A lead entrepreneur starts by searching his memory for possible team members, his direct and also indirect network. A more active and impersonal search is triggered by difficulties in forming the team or a sharpening of the required resources profiles as the venture idea is refined.

This model has important implications particularly in terms of shaping the process of team formation to enhance ventures' chances of success. Social psychological theories appear to be a better fit in the identification phase while a strategic approach is more meaningful in the subsequent selection phase. But the latter is often reduced to its simplest expression as the consideration set is very small when not initially empty. When the identification phase produces a consideration set of one or maximum two potential team members, no choice is really made. Hence, the whole decision-making process appears as lacking (economic) rationality and can explain the positioning of the strategic approach as a normative approach and the social psychological one as descriptive (Aldrich & Kim, 2007). A lead entrepreneur will spontaneously activate a memory search, direct and indirect network searches for prospective team members but an impersonal search is more costly and he may not value its benefits. Entrepreneurs often need help in exerting their analytical skills. This help may come in the form of an enlargement of the consideration set by fostering active search. Assessing critical resources and developing needed resources profiles is also a complex task where a professional advisor's intervention can be highly valuable. But assisting is different from bypassing. Assistance in search, selection and recruitment is possible and often commendable but an entrepreneur can't be ruled out of the process. The suggested model of entrepreneurial team formation stresses the importance of screening. This essential step works towards cognitive fit, a crucial determinant of performance (Ensley & Pearce, 2001; West, 2007). And the screening activity is inherent to the entrepreneur's world of preferences, objectives, representations, values and beliefs. Effective support to entrepreneurial team formation hence supposes a proper comprehension of the interplay of strategic and interpersonal relations dynamics.

Knowledge is cumulative and self-corrective. From this Peircean perspective, cycles of abduction, deduction and induction are required to produce scientific knowledge (Yu, 1994; David, 2001; Locke, 2009). Discovery rests primarily on abductive reasoning and deduction and induction follow and complement this reasoning as logics for the (always imperfect) testing of plausible theories (Van Maanen et al., 2007). The model suggested in this paper is thus an invitation to enter the dance, to engage in the recursive loop of knowledge, and wheel "to help prospective and practicing entrepreneurs form and maintain effective teams" (Kamm et al., 1990).

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Figure 1: Prospective Team Members Identification and Selection as a Two-Stage Choice Process

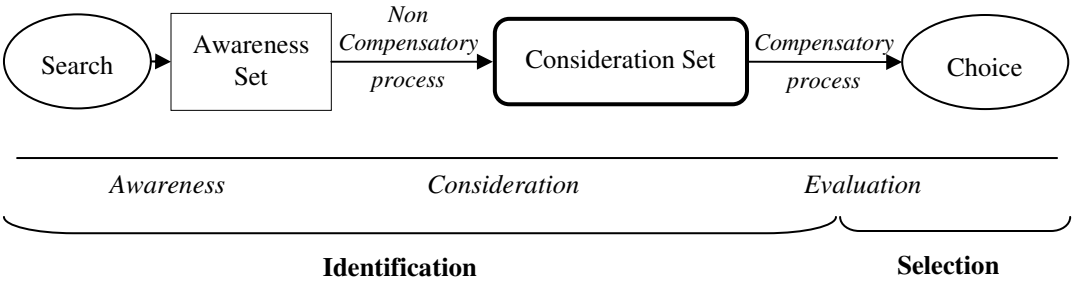

Figure 2: An Integrative Model of Entrepreneurial Team Formation