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Organizational Learning in SMEs' Strategic Management: A Descriptive and Systemic Approach¹

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Abstract

Based on biographical methods and author's argumentation and previous empirical researches, the paper begins by presenting some basic ideas concerning organizational learning founded on systems theory. It then uses Checkland's (1999) soft systems methodology (SSM) to propose a descriptive model of organizational learning, based on the negotiated root definitions of partner entrepreneurs in a new venture creation – a SME. Following this, it presents two systemic models to help show the preponderance of small business owner-managers, and the role of organizational learning as a determinant of strategic management and development in SMEs. The conclusion offers some final considerations and suggestions for future research.

¹ This work was presented in Stockholm, Sweden, during the international congress of the ICSB – International Council of Small Business in 2011. It is an improved and shorter version of previous works (Lima, 2008, 2003).

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Introduction

Learning and mainly owner-managers' learning in the strategic management process are central in the healthy survival of small and medium-sized enterprises (SMEs). To understand how they occur, descriptive approaches are necessary. But previous studies are concentrated on the prescriptive orientation, such as researches based on Senge's (1990) contributions.

Considering this situation and the need of more specific approaches founded on synthesis (much more than on analysis) to deal with complexity, learning and fast contextual changes in strategic management of SMEs, the paper presents conceptual research using systemic thinking to examine the contextual interactions, organizational learning and relationships in SMEs' strategic management. Because of its scope, realism and ability to respect the characteristics of SMEs, the approach used is likely to be of interest in studying other aspects of entrepreneurship and small business management, as well as other fields. In the paper, it is used to propose a soft systems perspective to understand the strategy process in SMEs.

Organizational learning and its systemic basis

According to Mirvis (1996), systems theory is tied to organizational learning. Bateson (1972) reiterated criticisms of traditional conceptions of knowledge which suggest that, when developing knowledge on a given subject, the subject needs to be separated from its context so as to keep the focus on the analysis process. As Bateson later pointed out (1984), analytical separation such as this cannot be sustained in the real world. He went on to build a systemic approach to learning in which he drew a distinction between first-order and second-order learning. This and other similar approaches were the inspiration for the single loop and double loop learning concepts proposed by Argyris and Schön (1978). These authors found that organizational learning occurs when the organization's members respond to changes in its internal and external contexts by adjusting their activities to correct existing or potential differences ("errors") between the results being achieved and the desired results.

According to Argyris and Schön (1978), double loop learning occurs when a change of action is associated with a change in the members' action logic (i.e. theory in practice). This kind of far-reaching learning changes the subjective foundations on which individuals base their actions, and generates changes of rules, policies, objectives, vision and strategy in the organization. Still according to Argyris and Schön (1978), when organization members change their actions in order to correct "errors", but do not make a parallel change in their action logic, organization learning is superficial – in other words, there is only single loop learning. Here, "errors" are identified and corrected, but organizational policies and the subjective bases for behaviour are not changed. Argyris and Schön (1978) refer to *deuteron-learning*, i.e. learning to learn, which occurs when organization members reflect on prior organizational learning or learning failures and create new ways of learning as a result.

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The organizational learning process is cyclic. Members' actions generate changes in the organization's inner and outer realities. Their perceptions and interpretations of the impacts of these changes provide feedback on the organization's activity system. Positive feedback leads to continuation of the existing action logic, but can also generate the intention to correct "errors" by adjusting actions governed by that logic. This is an illustration of single loop learning. Changes to the logic itself – double loop learning – are generated by negative feedback.

The action logic is influenced significantly by the images and visions of organization members. Images, referred to in phenomenology by the German term *Weltanschauung*, are subjective articulations that people use to understand their own reality. In addition to being determinants of the vision – which is a subjective representation of a desired future state to be achieved – images include the moods, behaviours and intentions underlying the perception process. They create a perceptual prism through which reality is viewed. In double loop learning the images are changed, whereas in single loop learning they are not (Argyris and Schön, 1978; Kim, 1993).

In Senge's (1990) work on learning organizations and Filion's (1991, 2004) work on entrepreneurship and SME strategy, the concept of vision is fundamental, and is influenced by images. The notion of image is critical in SSM-based research, and influenced by the contributions of Argyris and Schön (1978). As explained by Lichtenstein (2000), images define tacit behaviour standards and form the basis of the theory-in-use discussed by Argyris and Schön (1978), a tacit structure that rules the current behaviour of organizational members.

According to Argyris and Schön (1978), for organizational learning to occur, the findings, inventions and assessments of the learning agents must be reflected in the images and shared maps of the organizational theory-in-use that individual members use as a basis for their actions. If this does not occur, the individuals will have learned, but the organization will not.

Central roles of learning in organizations

Management theorists and organizational learning and systems theory authors agree that compatibility with the environment is an essential condition for organizations to remain competitive and innovative, a state that is vital to their long-term development and survival. The need for compatibility is a basic premise in strategic management, and has been highlighted in contingency theory studies by authors such as Lawrence and Lorch (1969) and Thompson (1967), who regard organizations as open systems. According to Fiol and Lyles (1985), the need for compatibility means that organizations should regard the ability to learn, unlearn and relearn from past, present and potential future behaviours.

Simon, March and Cyert add the idea that organizations are *face-problem/solve-problem* entities (Thompson, 1967). In this regard, organization members use search, learning and decision processes to provide a satisfactory level of organizational performance within the limited rationality of their members.

To maintain compatibility with its environment, an organization needs to function as a system whose strategic orientations (mission, vision, objectives and goals), activities, structure and configuration are renewed by the members' learning over time, through experimentation with different procedures. In other words, an organization is a system that must self-transform, mostly as a result of organizational learning. And it cannot stop doing this, even when it achieves what appears to be optimal compatibility (Hedberg, Nyström and Starbuck, 1976; Nyström and Starbuck, 1984; Starbuck, 1983). These same authors state that self-transformation based on organizational learning is an effective and possibly necessary method of managing organizations to ensure that they can continue to exist in a changing context. They understand that the probable and desirable consequences of ongoing experimentation by organizational members include learning of potential structural configurations and maintenance of organizational flexibility.

Churchman (1971) uses systems theory to suggest that the main purpose of an organization is to develop its ability to renew itself in response to future challenges. As pointed out by Cavaleri (1994), there are two core elements of self-development: (1) the inquiring system, whose function is to obtain information and generate knowledge about problematic situations faced by an organization as it searches for useful knowledge to reformulate both itself and the organization, and (2) the continuous improvement of shared images (*Weltanschauung*) by its members. Some years after Churchman (1971), the notion of inquiring process was re-used by Argyris and Schön (1978) as a means of helping to reformulate images (and hence support double loop learning) when organization members realize their images are not consistent with reality and/or not appropriate for obtaining the desired results.

Checkland (1991) also uses the notions of inquiring, images and continuous learning in his soft systems methodology (SSM). In its initial stages, SSM produces descriptive models of problem-solving and learning situations. It can subsequently be used to identify ways of optimizing systems in general and learning and thinking systems in particular. SSM is based on the assumption that situations requiring the owner-manager's attention in an organization are connected with the need for collective effort to achieve a purpose (Cavaleri, 1994). An organization such as a SME is a purposeful system (Ackoff and Emery, 1972)³. This means that there is an inner will to guide the organization's development, and that the owner-manager organizes the activities on the basis of a root definition and, eventually, a vision of what is to be achieved.

To achieve a purpose, the organizational reality must be transformed through organized action. Action is based on knowledge that the actors obtain from their experience and gather during the cyclic learning process. Knowledge developed through learning improves the consistency of the organizational actors' images and actions. In our study of SMEs, we found that consistency between the owner-manager's vision and images of their organization's reality was critical in developing a business that was compatible with the context, and hence achieving success.

A model of SME learning-based strategic management

Using SSM (Checkland, 1999), it is possible to develop a simple model that describes the strategic management of a SME as a learning process. First, however, it is necessary to identify the components of CATWOE (*Customers, Actors, Transformation Process, Weltanschauung, Owner and Environmental Constraints*). According to Checkland (1999), this is a precondition for creating the model.

The CATWOE elements are the core components of a process of change that takes inputs, transforms them and produces new forms of outputs. This process is useful in explaining what happens in the strategic process of SMEs.

In CATWOE, the *Customers* are the victims or recipients of the transformation output; the *Actors* are the people who carry out the transformation; the *Transformation Process* is the process that changes inputs into outputs; the images (*Weltanschauung*) are subjective articulations used by individuals to understand reality; the *Owner* is the person who has the power to start or stop the transformation process; and the *Environmental constraints* are factors such as laws and competition that can impact upon the transformation process.

Before identifying these elements in the strategic management process of SMEs, we will begin by looking at the systemic condition of the process itself and the entities involved in it.

The SME system and its strategic management subsystem

According to Kim (1993), a SME can be regarded as both a behavioural system (March and Olsen, 1975) and an interpretation system (Daft and Weick, 1984). In the former case, the implication is that its members change their short-term behaviour in response to feedback from members on the impacts of

³ For Ackoff (1971), a purposeful system is a system capable of achieving the same result by different means, even if the system is in the same internal and external state.

their actions (Cyert and March, 1963). In the latter case, its members actively search for information on the SME's situation and environment, interpret that information and learn by generating knowledge from it (Daft and Weick, 1984). The knowledge generates changes over time and allows the organization's members to act in line with its purpose.

Strategic management consists in a set of decisions and activities that guide the organization's progress within its environment. Because that environment is dynamic and constantly changing, strategic management determines the organization's ability to explore the opportunities available in the environment, and change accordingly. Strategic management is also a coordinated thinking and action system geared towards achieving the organization's purpose. In other words, it is a kind of renovation subsystem, or a subsystem of learning and change that allows the SME to develop in line with its context and purpose.

The core purpose of strategic management therefore appears to be to ensure ongoing learning and change over time. The organization must maintain a positive exchange with a constantly changing context (De Geus, 1997), and role of strategic management can therefore be compared to that of an organ that is largely responsible for renewing the organizational body. In other words, strategic management helps the SME to develop and survive.

The activities of organizations operating in the same market, as they attempt to obtain the same resources, generate competition because those resources are limited by basic economic principles. In other words, SME owner-managers' efforts to ensure survival are beneficial to their own organizations, but may generate losses for other organizations – and vice-versa. This kind of inter-organizational influence can generate responses and counter-responses from competitors and non-competitors alike, and fuel the ongoing process of change for both the entities (organizations, individuals, etc.) and the context in which they operate (Emery and Trist, 1965). Organizations, including SMEs, must work with this influence in order to function and develop.

Developing a systemic model

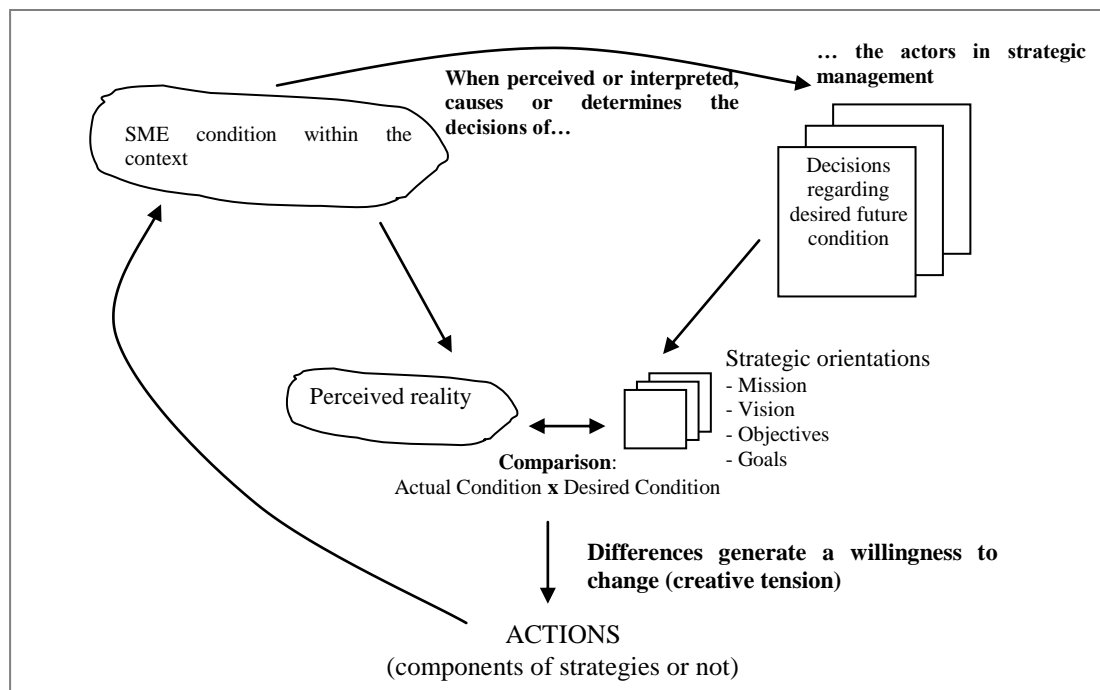
The CATWOE components can now be identified from the above descriptions. The transformation process (T) is the core purpose, i.e. the learning and change required to make sure the SME develops in harmony with its context and achieves its strategic orientations over time. The customers (C) are the SME itself, which is the beneficiary of T, and the competitors, which undergo T. The actors (A) and the owner (O) are the owner-managers and management team (if any) responsible for applying, controlling, starting and stopping T. There are at least three environmental constraints (E): competition, limited resources and the dynamics of change. To obtain the *Weltanschauung* (W), we would need to examine specific SMEs in more detail. However, the purpose of this study is to propose a descriptive model for SMEs in general. In this respect, the missing W does not constitute a serious limitation.

In identifying the CATWOE elements, it becomes clear that the SME system is both the beneficiary and the object of the transformation (T) generated by the strategic management subsystem.

The basic notions of SSM (Checkland, 1999) are helpful in modelling and describing the learning process generated by strategic management in SMEs. One of these notions is an element representing the decision made by the owner-manager concerning the desired future condition that will guide the transformation process. In strategy, this is the equivalent of decisions concerning strategic orientation elements – the mission, vision, objectives and goals – and the strategy is regarded as a means of achieving them.

The use of SSM notions in the model is shown in Diagram 1.

Diagram 1: Strategic management as a SME learning and renewal generator



In the model, the strategic management actors perceive and consider the SME's situation, including its context and its strategic condition in relation to that context. Here, SME activities are perceived as an interpretation system (Daft and Weick, 1984). The information retained in the perception or interpretation process may generate new decisions or refocus existing decisions, with impacts on the strategic orientations.

Strategic management activities are designed to ensure the survival of the SME by making sure the SME's exchanges with its context are beneficial to the organization, its owner-manager and the execution of the strategic orientations. The difference between the desired future condition (indicated by the strategic orientation) and the existing condition generates a willingness to change (or creative tension) that pushes the actors to transform the SME through their actions, which may or may not be strategic. The impacts of those actions are perceived and assessed by the actors as part of a feedback process that causes the strategic orientations to be continued or adjusted. The learning that occurs may be single loop learning or double loop learning (Argyris and Schön, 1978). Here, the organization's activities are perceived as a behavioural system (March and Olsen, 1975).

In this process, strategic decisions or decision elements may change the strategic orientations, or cause them to be discarded in favour of others. The same applies to strategies. In the specific case of vision, for example, our empirical data show that it evolves over time. It may change from an embryonic vision to a fully-developed vision, or an existing vision may be replaced by a new one, depending on the learning, thinking and activities of the owner-managers who support and shape it through the influence of their interpersonal relationships.

The model shown in Diagram 1 presents strategic management in SMEs as a circular, iterative learning process. Partial or complete execution of the strategic orientations generates changes through the actors' activities. These changes are taken into account by the owner-managers in their activities and in the development of strategic orientations. The process is similar to that described by Gladstein and Quinn (1985) for organizational strategic processes in general; these authors viewed the process as a cycle of interactions between formulation and execution of the strategy, with iterations in the form of a spiral.

According to Normann (1985), strategic formulation and execution are connected. Strategic process is rarely a sequence of “first we decide, then we act”. The “sequence myth” has often been damaging to companies. Strategies develop as part of a process comprising at least three key elements, namely formulation of the vision, actions based on that vision, and interpretations and thinking based on the actions and their results. As the sequence is repeated, the vision becomes clearer, new actions are performed, thinking is fuelled, and so on (Normann, 1985). For Normann, the image of the spiral is an excellent reflection of the strategic change process.

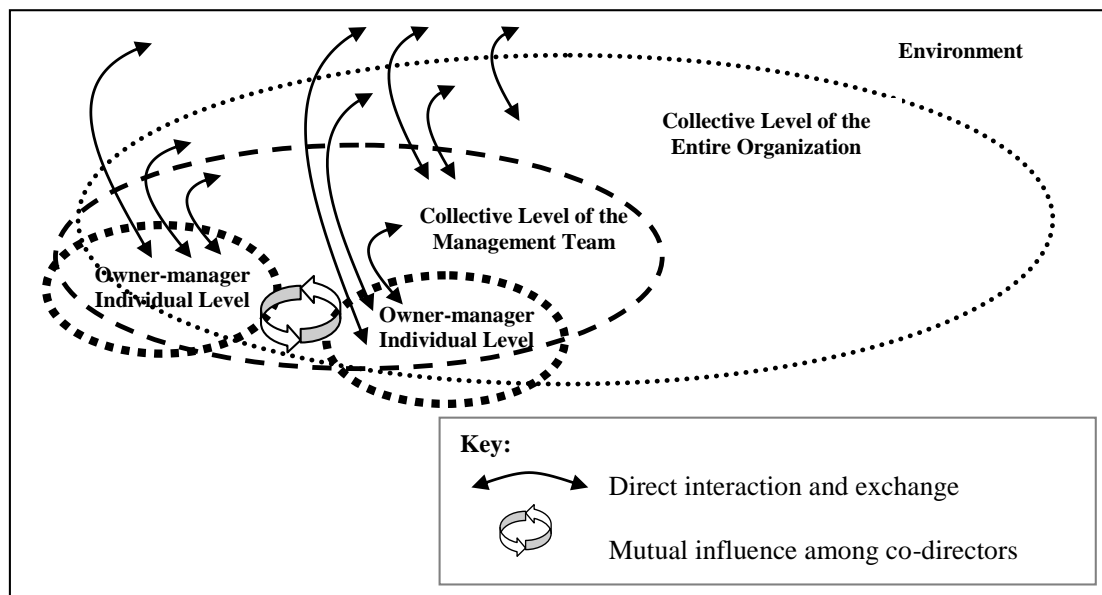
The descriptive model presented in Diagram 1 depicts the strategic management of SMEs as a cyclic process of organizational learning in which the elements of strategic orientation are formed and applied in continuity. This depiction differs considerably from the traditional linear perception of the strategic process that includes formal planning, design and positioning (Lima, 2010b). The perception of strategic management as a learning process is more in line with the complexity, instability and uncertainty currently faced by organizations. As pointed out by Gladstein and Quinn (1985), strategic actors must deal with ambiguity and have only a vague idea of the solutions to a given problem. These authors go on to point out that the notion of circular strategic learning allows for improvisation and scarcely structured solutions, both of which may evolve over time to form strategic streams of action leading to emergent strategies. Additionally, improvisation and scarcely structured solutions can lead to renewal of the strategic orientations.

Organizational learning in SMEs – the preponderant role of owner-managers

Owner-managers play a key role in defining the characteristics of SMEs. The close relationship between the owner-manager and the SME's systems has been confirmed by many authors, including Lima (2004) and Miller and Toulouse (1986). According to Hafsi (1985), the relationship is not as close in large corporations. The owner-managers of small companies are “direct managers”, in that they have a direct and intimate knowledge of the management situation. This allows them to deal with uncertainty and ambiguity using their experience and intuition (Hafsi, 1985). Such an approach is unusual in large organizations, where the work tends to be divided. However, the owner-manager plays a preponderant role in a SME, which is developed according to his or her images and ideas.

Based on these considerations, the following model of the links between systemic levels in a SME was developed from a systemic perspective and confirmed empirically (Lima, 2004; Lima and Zoschke, 2007).

Diagram 2: Model of relationships between systemic levels in SMEs



The model in Diagram 2 shows the dynamics of the relationships between the different systemic levels in a SME: the owner-manager(s), the management team, the organization members, and the context. Its semi-radial format represents the flow of internal influences, mainly emanating from owner-managers. These influences define the occurrence, form and content of the organizational learning processes and the firm's strategic management. The owner-managers play a preponderant role in these processes (Lima, 2004; Wyer and Mason, 1998).

The model is closely tied to the Diagram 1 model of strategic management as a generator of learning and renewal, and these ties are useful in understanding how the elements of the strategic orientation are formed and applied by organization members with stakeholders in the context, under the influence of the owner-manager and senior management team.

In Diagram 2, the owner-managers form the core of the model, and each systemic level interacts directly with the others (as shown by the arrows), or indirectly, via another level. For example, if an owner-manager wishes to share a vision, his or her individual systemic level interacts directly and indirectly with the collective level. The direct interaction is represented by the arrow linking the two levels. Indirect interactions occur via the management team.

In the diagram, the systemic levels of the owner-managers and management team are not completely enclosed within the collective level of the entire organization. This is an attempt to reflect the fact that not all aspects of the owner-managers' lives fall within the SME system. Similarly, the arrows showing the mutual influence between owner-managers highlights the fact that they are a significant influence on one another, and play a key role in defining the thinking not only of each other, but also of the management team, concerning company management in general and strategic management and learning in particular. Mitroff (1983) referred to the influencers of individual or collective subjectivity in organizations as "stakeholders of the organizational mind".

As explained by Kim (1993), collective learning can only take place in an organization through the sharing of individual learning. The SME learning process shown in Diagram 1 also involves sharing the strategic organizational elements, as is the case for vision (Filion, 2004; Lima, 2004).

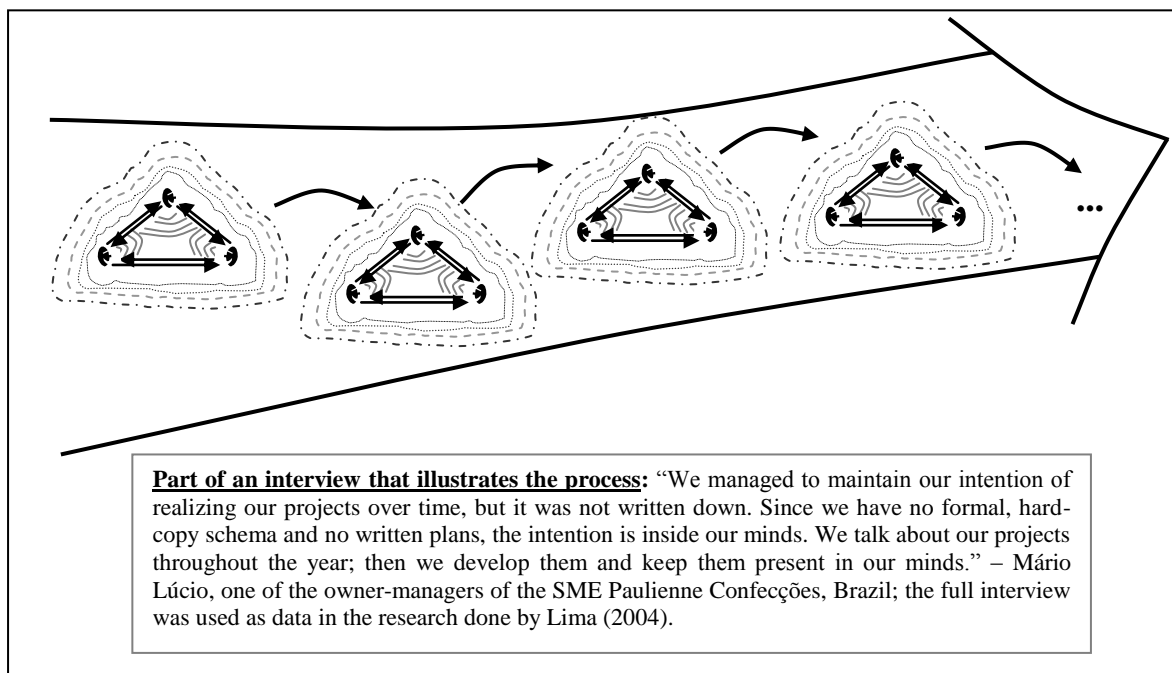
In this respect, the model shown in Diagram 2 is useful in understanding how SMEs learn – by sharing individual learning. In SMEs, the learning shared by the owner-manager, who is a major determinant of meaning, is critical. Gioia and Chittipeddi (1991), in their study of how a vision is shared by the

members of an organization, referred to the transfer of meaning to others as *sense-giving*. Owner-managers shape their SMEs, and its strategies and strategic orientations are based on their images, including what they have learned or are learning in their personal and professional lives.

Communication is required to form and realize the strategic orientations and strategies, and is the principal form of interaction and exchange between individuals. This is explicit in the model shown in Diagram 2, where formation and realization are based on learning, exchange interpretation and recording of information – all of which are clearly based on communication (Giroux and Taylor, 1995).

Lima (2004, 2007), in his investigation into the basis of the strategic conversation process in SMEs, observed that oral communication is important in both forming and realizing the strategic orientation elements, and also in keeping them alive over time in the minds of organization members. This is particularly true in SMEs, which are less formal and tend to have fewer written records. Diagram 3 illustrates these notions, focusing on the development of a shared vision through recurrent strategic conversations communicated by the management team to the organization as a whole. The citation in the Diagram was drawn from a SME case study by Lima (2007).

Diagram 3: Recurrent strategic conversations over time



Robbins and Duncan (1988), in their study of vision, also highlighted the importance of communication. They drew their inspiration from the ideas of Karl Weick, who believed that the *organizing process* of an organization derives from the convergence of the members' individual interpretations, achieved through communication.

Conclusions

The approach developed here is based on a conceptual construction, and provides a dynamic understanding of the organizational learning and strategic management process in SMEs. It focuses on context and the internal relationships of organization members, and allows for the participation of other individuals, in addition to the owner-manager, in management in general and in the formation and realization of strategic orientation elements in particular. In this respect, it presents a more realistic picture of the SME environment than the more limited concept of a “single-headed” organization often

seen in SME research, since it reflects the large number of SMEs that are managed by teams of two or more people.

The paper highlights the usefulness of Checkland's (1999) soft systems methodology (SSM) in describing organizational learning and strategic management in SMEs. It uses the basic notions of SSM to address the situation of SMEs in general, based on the characteristics of SMEs identified by researchers. SSM could, of course, be applied in a much more specific way in a study of a single SME, since it would take into account the characteristics of that particular organization, its context and its actors. It would allow the images of the actors to be considered, and would identify ways of improving processes such as organizational learning and strategic management. In other words, it could be applied in its entirety, and not simply in a descriptive manner, as was done here.

The approach presented in this paper is based on empirical support from previous work (Lima, 2004, 2007, 2010a; Lima and Zoschke, 2007). However, it could be strengthened and adjusted by exploring other topics, and further research, preferably from a soft systems standpoint, looking at the following questions:

- How are strategies established and applied through the relational dynamics of different actors (owner-managers and others) in SMEs? This would require a study of organizational actors, their actions and their relationships, and the influence of these aspects, individually and together, on strategy and the strategy-as-practice approach (Jarzabkowski, 2004; Whittington, 1996).
- How do the learning and experience of non-managerial SME members contribute to the self-transformation and strategic management performance?
- How are various entrepreneurial and strategic initiatives, such as internationalization, product diversification and spin-offs, conceived and applied in SMEs?
- What are the specific cultural features of SMEs, and how do they influence the various aspects of management (relationships, strategic management, organizational learning and initiatives) within the organization?
- How are power relationships built and disclosed in SMEs, and how are they reflected in management processes?
- How do the specific features of a country's social and cultural context influence a SME's activities and the interactions of its members?

This list, while by no means complete, nevertheless proposes some topics that would allow research into SMEs to progress. Studies such as these are required for all countries. In particular, the last question on the list may prove to be extremely valuable, since it would help overcome one of the major limitations of current SME research, namely the lack of appropriate contextualization.

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