Reflexive Evaluation about the Decision Process that Seeks to Define A Form to Perform R&D
Dusan Schreiber

Abstract
During the last two decades the conditions of competition in the market changed with an increasing participation of the new players. This dispute resulted in the reduction of operating margins and changes in the business strategy. The strategy of high-volume production changed to the production of items with higher added value, requiring new concepts of the industrial organization. New organizational processes emphasizing features such as flexibility, creativity and decentralization were designed. This new kind of organization stressed the importance of expertise and a competitive differential, highlighting the importance of the R & D unit, that reflects a complex and multifaceted organizational reality, especially in the decision-making process that seeks to define the way in which to perform its activities (external, internal or combined). This paper analyzes decision making in the organizational process considering the balance of power and some methodological possibilities of representation of the reality using interpretative paradigm.

Key words: Decision process, R & D management, Organizational Culture, Strategy

INTRODUCTION
Globalization started to consolidate in the eighties of the last century and so, the increasing level of competition in markets resulted in a great reduction in operating margins. From the production of high volumes of homogeneous items, organizations passed to the production of smaller volumes of differentiated items and higher added value. This period was characterized by many changes, especially in the corporative environment which is the focus of this study. The western organizations, that initially targeted to eliminate losses through reduction in the time of preparation of machinery and of manufacturing, total productive maintenance, development of families of products, total quality management, kanban, among other practices, adopted techniques of organization and management of production developed and matured particularly in Japan after World War II. As a by-product of these changes, the organizations achieved a significant reduction in the sizes of lots of production, which, in many cases, were reduced almost to the unit and without any additional cost. It was defined as the passage from the way of mass production to the customized way of production. Different authors refer to this process under different names: from Just in Case to the Just in Time, from Mass Production to the Lean Production and from Taylorism-Fordism to Ohnism, among other denominations. Regarding this subject, Hayes and Wheelwright (1984) are among the most cited authors.
As time passed, it was possible to verify that the changes were not limited only to the intern scope of the organizations, but extended to the chain of suppliers and to the portfolio of customers. Thus, there is an effective change in the structures (national, sectored, etc.) of the industrial organization and also in the part of the value already added and assimilated by the economic agents. Partnerships and strategic alliances (also among competitors), organizational structures in the form of networks (some virtual), the automation and integration of systems, among others, are some of the initiatives and management practices adopted. At different levels, they represent practices that provide organizations with great flexibility, as well as a reduction in the life cycles of their products or of the operational processes in use. It is important to highlight that in this environment the generation of knowledge is mediated through coordinated action among multiple agents.

1 FEEVALE University, Faculty of Management and Creative Industry
E-mail: dusan@feevale.br

Available online
www.bmdynamics.com
ISSN: 2047-7031
In addition, it should be also noticed that if the generation of shared knowledge reduces delays and costs, increasing the flexibility and agility of the answering time, at the same time it also reduces the value of this knowledge, which is an element of distinction in the market. Furthermore, as this knowledge is spread and becomes potentially available to competitors, it reduces its capacity to be identified and explored as a factor of competitive differential in the market. For this reason the organizations have to engage in continuing search for new knowledge, being able to innovate in products, processes, organizational structures, etc. Despite the new forms of organization and management of production adopted in order to accelerate the time, to reduce the lead time and costs, investing in internal capacity to generate knowledge remains a current practice and affirmative management.

Although the existence of many sources of knowledge that lead to innovation, (customers, suppliers, franchisors, licensors, etc.) it is Research and Development unit (R & D) that provides strategically relevant knowledge, which can be considered as an exclusive and restricted property. This understanding is expressed by many authors, but Madhok (1996) and Langlois (2003) not only agree but complement saying that the R & D units are effective repositories of the competitive resource with an added value currently more relevant offering a unique condition of differentiation - hardcore knowledge. Holding this source of knowledge, the organizations can adopt strategies that aim contextual and situational adaptation, according to the stratification of consumers in globally distributed niche (ORTIZ, 2003).

It is not only enough to generate the knowledge (the function R), but it is also necessary to develop it (the function D) and put it on the production line, in the form of products and services and in an adequate scale. For this reason some authors use the term R, D & E instead of R & D, including the function of engineering production. Therefore, the decisions involving generation, development and exploitation of knowledge, especially the ones that generate innovations, deserve permanent attention of managers. Furthermore, in the contemporary environment, more than ever, the answer to the question “Make or Buy?” raised in the classical texts of manufacturing, finishes strategic considerations due to its link to the process of generation of knowledge.

Consulting literature it is possible to verify that the answer to the raised question is traditionally supported by the objective, normative and technical criteria, based on the fact that the unit of R&D has been structured to perform operational activities of the basic and applied research, continuously aiming at economic sustainability (WESTWOOD; SEKINE, 1988; STOKES, 2005).

Although this issue was already focused by a wide range of categories in the organizational studies, the analysis of the decision-making process on the base of subjective and cultural considerations has received little attention when handling issues of P, D & E, as in the case of the “Make or Buy?” question. This fact deserves a greater attention by the researchers, due to the growing importance that these activities have assumed as factors of growth and sustainability in the long term.

However, interdisciplinarity, which characterizes the R & D unit and enables the construction of a relevant competitive differential, implies, or at least is thought so, in the increasing influence of subjective variables on the processes of management, with emphasis on the decision process. These subjective variables derive from an organizational culture which is built on symbols, narratives, language and myths that permeate the organizational fabric, expressing itself in all of its actions, at an individual or collective scope. These subjective variables are inherent to the organizational culture, social relations and relations of power in the organization.

Such relationships actively contribute to construct and reconstruct the reality on the base of the organizational values, goals and beliefs that are shared by individuals associated through the similarity of their personal interests, aligned or not, with the organizational interests. When such interests are reinforced by power based on technical expertise, consolidated and legitimized through the increased importance of innovation, appears the risk of the opportunistic behavior and the possibility of adopting political criteria in decision-making. This behavior could be motivated by the clash over intra-organizational resources and the power, changing the focus of effective strategic interests and objectives of the organization.
Therefore, it is possible to notice that the rationality and objectivity highlighted in the literature of the first half of the last century as characteristics of the highly technical areas such as production and R & D, give space to more subtle and subjective variables, characterized by political, social, cognitive and perceptual aspects, as part of the system of organizational meanings and constituting one of its symbolic and regulatory elements, reinforced by regulatory processes (SCOTT, 1994).

This complex and multifaceted reality, which characterizes contemporary organizations (also called post-modern), is perceived in the process that defines how the activities of R & D (if externally, internally or on a combined basis) will be carried out. So, besides the objective variables (ex. the internal rate of return, participation in the market, strategic alignment, time to make it), the possibility of the decision being defined on the base of the subjective variables becomes evident. It happens because sometimes the imaginary overcomes the real, when the people (who decide) elaborate the reality based on their own experience, trajectories and personal interests (not always aligned with the organizational interests). It is possible to adopt criteria in the process of decision-making that aim at defining how to carry out R & D, dissociated from organizational priorities, due to the influence of social relationships and power that permeate the institutional fabric.

Therefore, it is clear the need of a new approach to search the organizational environment, in particular, the social relationships and power, which bind various organizational units. Contrasting the research methods of quantitative type, objective and positivist, typical when the subject involves activities of R & D, a symbolic interpretative approach is proposed. It allows the performance of a comprehensive analysis of the social, cognitive and perceptual aspects that can influence the decision-making process related to the form of implement activities inherent to the area of R & D.

This essay is part of the research for the doctoral thesis of one of the authors and aims to highlight as a central contribution, the existence of a conflict of interests of an individual or of a community of individuals associated on the base of the similarity of interests. Such conflicts allow them to exercise the technical power within the organization and against its interests being represented by the management of R & D, in relation to the definition on how to carry out the activities of this organizational unit.

R&D MANAGEMENT AS AN ORGANIZATIONAL STRATEGY

The first contributions to the strategy study, since its conception until its implementation, had its origins back to the sixties of the last century being originally linked to the concept of strategic planning. Sloan apud Chandler and Chandler (1992) defined the return on capital as the main goal of the strategy. All actions undertaken by the corporation should focus on this goal. The design of several models of corporate strategies was conceived in the following decade. Among the most prominent we can mention the research from Harvard Business School, from which originated the SWOT model of analysis designed by Andrews (1980) based on empirical observations and the work of consulting firms such as Boston Consulting Group and McKinsey & Company. These companies became famous for their supporting tools for management known as a "curve BCG" and the method of analysis and portfolio of strategic business units.

Studying the subject of strategic management, Henry Mintzberg (1973) emphasized the importance of contingency perspective for the organizational strategic positioning, leaving the manager free to make decisions in accordance with the changes in the external environment. Porter (1989) contributed to the debate identifying five competitive forces: (1) entry of new competitors, (2) threat of substitutes, (3) power of negotiation of the buyers, (4) power of negotiation of suppliers and (5) rivalry between existing competitors. Furthermore, other researchers noticed the relationship of dependency with one of the derivations of the mainstream economics theory - the RBV (Resource Based View). This matter was initially conceived in the economic field by Penrose (1953), and resumed in a more consistent way by researchers in management only in the eighties (WERNERFLET, 1984) and nineties (MAHONEY; PANDIAN, 1992) through a concept that defines the ownership of scarce and valuable resources, and also innovations as a competitive advantage.
The approach developed by Skinner (1969) became more relevant in the eighties of the last century. It showed the alignment of the strategy of production with the organizational strategy. Such approach made competitive organizations begin to concern about formulation and implementation of manufacturing strategies aligned with its business strategy. The strategy of production is composed of different dimensions, according to Hayes and Wheelwright (1984) who emphasized that manufacturing policies and procedures should be defined simultaneously with strategic decisions in the following aspects: capacity, quality, facilities, planning, production /materials, technology, organization and vertical integration in the workforce.

Exploring the relationship between strategy and technology innovation Curry and Clayton (1992) defined three categories of technological strategies: (i) adopt and adapt, (ii) innovate in the incremental mode, (iii) innovate in disruptive way. Each of these three categories corresponds to significantly different business positions and type of management. Following a determined set of conditions, there is only one best strategy to be adopted according to different gradations of risk and cost. Some years before, Rosenberg (1982) had already highlighted the factors associated with the production that influence innovation and technological development: changes in the production process or design; flaws or deterioration of quality, high cost; problems and inefficiency, and the acquisition of new equipment, including the replacement of old ones. Berman and Hagan (2006) confirm this view by developing an alternative model of strategy design based on technology. The concept and principles of a process of business strategy combine the vision of the market and technological know-how enabling companies to implement it in the different economic sectors and to achieve higher rates of innovation.

Considering the fact that the organizational unit responsible for the conveyance of the activities of product innovation and of the industrial process is the R & D unit, we can conclude that doing or not research and development is no longer an option for an organization which is challenged by increasingly fierce competition and needs to increase the range of product portfolio and reduce the time of development and production. Therefore, we can say that R & D unit occupies a central position in the innovation of products within an organization.

Despite the origin, history and nature of the activities developed in the unit of R & D, which are predominantly objective, technical and quantitative, it is possible to recognize the existence of social reality derived from the composition of the teamwork in R & D. Each one has an idiosyncratic history, vision of the world and individual interests. Moreover, it is worth observing that the need to work together with other organizational units involves intense social interaction which contributes to build the organizational reality of the institutions and of the R & D unit. Therefore, the R&D unit can be interpreted as a complex net of individual and collective perceptions about the organizational operation which interweaves at the same time that reflects and recreates the reality and organizational identity.

This recognition was noticed by Henry Mintzberg (1973) who defined strategy as a set of consistent organizational behaviors oriented by the organization for a determined period of time along with the strategic changes in order to react to the modified conditions of the environment, but limited by bureaucracy and leadership action. In this concept the author recognized the influence of culture in the organizational decision-making process. Whittington (2002) also recognizing the influence of culture, could identify through a systemic approach, the influence of internal structures to define strategies and policies including micro politics of the individuals and departments, social groups, interests and resources of the surrounding context.

This way it is possible to perceive the need of a more detailed study of the subjective variables that influence the processes of management and decision-making of the R & D unit based on the recognition that this unit occupies a central position in the organizational universe. At the same time, its importance to the process of innovation, central to the construction of the competitive differential is confirmed. Significant budget and relative autonomy in the allocation of resources allow the R & D unit to participate in the organizational clash over power and intense social interaction with other organizational units.
COGNITIVE, MENTAL AND PERCEPTIVE PROCESSES IN THE ORGANIZATIONAL ENVIRONMENT

The social and organizational environments need to be interpreted. Actors who form this environment take on the active role in the construction of events in the way that they acquire meaning, based on their behavior and attitudes, assuming positions, ignoring some nuances and paying attention to others. Interpretation is the translation process of the organizational events, development of patterns for the understanding, discovery of meanings and assembly of conceptual schemes (DAFT; WEICK, 2005).

These socially constructed realities demonstrate a set of idiosyncratic characteristics, unique, like languages, symbols, meanings, data and information, standard behavior of social actors in action, forms of interpretation of social and organizational events, the relations of power, policy, history, metaphors, myths, problems, characteristics, internal and external view, sensations and games (WEICK, 1995).

It is possible to notice that the construction of the social environment and its significance reorient the focus of its physical characteristics in the direction of the concept that interprets environments as always "in the process" of being created, always in the temporary and uncertain way and open to manipulation for the satisfaction of desires (of individual or collective nature). The value and significance are related to the environment - in time and space - but must be created and played. This effort to create an environment becomes the elaboration of beliefs and values of the people who form the organization environment, motivated and externalized to construct the social reality that they desire (STOKOWSKI, 2002).

For Buttle (1994) communication is the "locus" of processes through which people co-create, manage and transform the social reality they form. More than mere co-orientation towards a common set of referential meanings, people interpret the actions and discourses of others and coordinate their own actions in accordance with the result of this interpretation. This coordinated and interpretative process produces a social reality in which the person is immersed.

Every process has a structure that is visible and another that is hidden, independent of being part of the interaction, dialogue, planning or negotiation. When people become aware of these structures of interaction and discourse that it provides, the language assumes a central role in forming the desired reality through relationships with other people and the world. The personal and organizational development demands new forms of relationships between these people and the environment. In order to achieve this objective and this way improve organizational performance, it is necessary to elaborate new arguments about the world, the environment and life itself, structuring their own identity as well as the organizational identity (HANSSON, 2002).

Symon and Clegg (2005) consider that the identity is negotiated and constructed on the base of the interaction between the social actors. Their research investigates why determined identities are invoked in specific contexts. In a parallel line of study based on the results of their research, the authors say that the socially constructed identity has a political function. The authors analyze the influence of the construction of social identity in moments of technological change.

For Bernstein (2005) identities are available as a strategy to form the collective action in order to change the institutions, influencing the change of the dominant culture, their categories and values, its policies, structures and even the participants themselves. Thus, the expression of identity may represent a position of conflict and a disposition for a change. Examining how groups are represented by means of language and images enable the explanation of how the institutionalized beliefs are built.

The interpretation of organizational events is directly dependent on their perception as highlighted Ariely and Carmon (2000). It can be seen that people synthesize, evaluate and internalize experiments, and evidence that this is not a simple integration of single components of perceived events, but tend to focus on just a few specific aspects (Gestalt characteristics). These aspects include the degree of intensity of the pleasure of the experience that these perceived aspects can cause. This way, it becomes evident that the observable aspects must show relevant effects of interest for individuals in order to be observed, recorded and internalized.
Waller, Huber and Glick (1995) also verified that the content of the functional experiences delimits the perception, or makes the perception of executives and managers selective in the process of management, not in relation to the environment, but in order to understand changes that can influence the organizational outcome. Their research showed that the selective functional perception resulting from the conditioned and schematic development processes is probably higher for operational managers than for the executives of the highest ranks within the organization.

Bunderson and Sutcliffe (1995) noticed that the structures of knowledge functionally oriented are apprehended through positive reinforcement, because they are not simply absorbed as a result of professional experience in a particular field of knowledge. This also suggests that this learning occurs by the confluence of functionally oriented goals and positive results that lead to the development of knowledge structures functionally oriented. Moreover, efforts to measure the relationship between these structures of knowledge and selective perception should take into account the situational importance of determined event for the individual as for the group to which he belongs.

Based on the results of a survey carried out with four hundred and seven participants, Stumpf and Dunbar (1991) confirmed the relationship between decision patterns and behavioral typology. The decision patterns reflect a behavioral disposition based on cognitive traits identified in prevailing mental models used by individuals for longer periods of time in their life. During the research it became evident that the preferences of the type of personality reflect the way of thinking of the individual what causes higher or lower susceptibility to certain events, objects and environments socially constructed.

Another research conducted by Beyer et al. (1997), demonstrated that the managers are influenced on the decision-making process by professional experiences and perceptions of the facts. This influence mainly happens in their cognitive and emotional dimension. But the content of these experiences, the degree of negative or positive intensity and their reactions, suffer the influence of aspects related to attitude, behavior of the individual character - personal and idiosyncratic, not allowing the widespread generalization to every type of experience.

**DECISION PROCESS IN R&D**

In the seventies of the last century, the logic that innovation guarantees the construction of a competitive differential enabling the organizations to earn an extraordinary profit started to be questioned (SCHUMPETER, 1982). More organizations investing in innovation reduced the life cycle of products; the cost to innovate grew tremendously and the rate of innovations commercially viable dropped which increased the risk of the innovation entrepreneur. However, the culture of innovation was already institutionalized with no chance of reversing this process. The way of achieving success changed and it became important for organizations to innovate in the right products, in certain moments and at reduced cost.

One of the reactions to this new scenario, aggravated by increasing competition, in the domestic and global market, was that organizations which already externalized a series of activities not directly related to the hardcore business of the organization, started to outsource activities of R & D. They followed the logic of the economic theory whose motto is related to the central question of "Make or Buy?". This conception allows the appearance of important variables that favor the decision to outsource. Turning flexible the amount of fixed costs, reducing costs per se and reducing the average time for development are among these variables. In several economic sectors, with emphasis on the drug and software, the outsourcing occurred even beyond national borders and so, occupying a global dimension.

Other important variables, inherent to the process of decision to outsource (or not) the activities of R & D were highlighted. Some of them are the knowledge management and the internal control of the development process. The management of the R & D unit that was positioned to occupy a central role in the organizational universe got new responsibilities and functions, with higher budget, more autonomy and decision-making authority to allocate financial and human resources. The decision-making process which until then aimed at highly technical activities related to research and development of products and...
processes, has acquired new dimensions and complexity, in order to interact more intensely with other organizational units involved in decisions characterized by a higher degree of subjectivity.

Concerning the analysis of the decision-making process, Herbert Simon (1967) established differences between scheduled and non-scheduled decisions, saying that the first are routine and the latter are unpredictable. He also emphasized that variables related to non-scheduled decisions are affecting more directly the business success and, consequently, their survival. Several other authors dedicated to study the decision-making process through examining in detail its specificity and confirming the original concept and design. Based on a quantitative research with sixty nine American executives Hitt and Tyler (1991) concluded that the decision making process is both rational and intuitive.

Some years before, Howard (1984) already ranked decisions at three levels: routine, tactical and strategic. He emphasized that the decisions of routine differentiate from strategic decisions in complexity, greater political implications within the organization, besides spatial extent and time. Thus, the organization can be perceived as a political system in which the decision-makers have partially conflicting goals, limited cognitive ability and it is based on both rational and political variables (EISENHARDT; ZBARACKI, 1992). The political dimension in the decision-making process is manifested in the fact that sometimes the most powerful managers make the decision with a different outcome from the one that a rational process would suggest. These decisions are based on collecting evidence and gathering information to analyze and support this decision process, would suggest.

One of the characteristics of the R & D unit refers to the specialization of the researchers in the very specific tasks that integrate the design of operational procedures allowing that the knowledge generated in a previous step could be combined with the knowledge resulting from the following steps, in a shared or a modular form. This operational fragmentation also allows the functional consolidation of the control of people and processes, exercising organizational power (BARKER, 1993; COURPASSON, 2000). The relations of power are evaluated by Foucault (2002) and Silva (2002) who notice that the organizations are using regulatory mechanisms, such as to emphasize the culture and to share a dominant ideology in order to exercise power. Nowadays the high level of technology available to the organizations, such as telematics, micro informatics, communication and information technology and microelectronics, enhances the organizational power (BALL, 2005).

Based on factors such as power relations, institutional theory, mimetic and social isomorphism, Mizruchi and Fein (1999) argue that knowledge is a construction that emerges from social relations. They also perceive that the exposure to socially constructed myths allows the spreading of ideas through social network, making possible to members of a determined social organization to influence members of other organization.

Coleman and Voronov (2003) share the same opinion and present the understanding that power lies not only in the relationship between the actors because both of them are immersed in a net of pre-designed concepts of rules and meanings. Each one adopted and shaped the perception of the reality according to them. For that reason, it is possible to understand that analyzing the relationships of power, their origin, nature and way in which they influence daily routines and organizational processes is very important to the management of the organizations and their autonomous units. These relationships of power shape the reality of the organizational universe and the environment of social actors who participate in it.

This conception highlights the importance of examining relations of power within the organization based on the fact that the holders of power often represent a benchmark in the organization. Thus, they influence the construction of the public meaning, as a reference to the individuals who form the organization, regardless of the organizational level, due to a symbolic representation based on the organizational history (HITT; TYLER, 1991; PAPADAKIS; LIOUKAS; CHAMBERS, 1998).

The findings and evidence about the subjectivity of social relationships and relations of power, which surround the decision-making process in the R & D unit make possible to say that a new kind of methodological approach is necessary. It could identify and evaluate the adequate understanding of the subjective dimension and its variables that influence the management of R&D unit and allow the appearance of the risk of opportunistic behavior of the involved agents.
THE REPRESENTATION OF REALITY IN THE LIGHT OF AN INTERPRETATIVE PARADIGM

The complex thinking conceived by Morin (2002) demonstrates that the innovative paradigms are closely related to the vision of totality, due to the interconnection and to the inter-relationship, overcoming the fragmented vision of the universe that aims to join parts in order to reconstitute the universe in the several fields of knowledge. Morin (2003) also argues that the society is more than a context, being interpreted as the organizer of all loose parts. According to this, the whole reflects qualities or characteristics that are not found in the parts. If they are isolated from each other and certain qualities or characteristics of the parts are inhibited by the restrictions that emanate from the whole, it is effectively necessary to know the whole to understand the parts.

The complexity of the world and its features reflected in the multifaceted social relations and organizational practices increase the responsibility of the researcher in choosing the axiom, method and paradigm that could form a base on which he will try to interpret the social phenomena. It is noticed that science is in constant evolution in relation to the crystallization of theoretical approaches which allows the development of studies and research on the main paradigms, its ontological, epistemological and methodological dimensions seeking to improve the practice of social science and minimize the occurrence of the bias of the researcher.

However, this does not mean consensus. Kuhn (2001) perceives that science evolves following a general model with two differentiated and distinct phases: pre-paradigmatic and post-paradigmatic. From this perspective he explains the progress of science in the form of scientific revolutions which is a radical break with the theoretical pattern used until then or the scientific tradition established in a given field of research. This way of seeing the development and progress of science challenges the theoretical approach that views the development of science as a process of cumulative knowledge. Observation and experience restrict the extension of the admissible beliefs, but cannot determine a specific set of similar beliefs.

Writing about organizational theory, Burrell and Morgan (1979) presented four paradigms (radical humanist, radical structuralism, functionalist and interpretative), so that the knowledge of the social world could be perceived as being objective or subjective and in terms of order and conflict. The vision presented by regulation theories shows that modern societies are characterized much more by order than by conflicts. On the other hand, the theories of radical changes offer the interpretation that social relations are conditioned by contradictory pressures that aim at transformations instead of continuity and conformation.

It is perceived that the organizational environment is constructed so that it represents the history of the organization, its narratives, symbols and myths. At the same time it presents meanings and values embedded in practices, routines and processes that allow making a comprehensive analysis in order to identify the most relevant cultural traits that define and shape the organizational thinking. It also orients how to interpret, how to act in certain situations and how to cope with perceived threats, regardless of its materialization.

Based on this observation and through the analysis of discourse of the organizational members, it is believed that the symbolic interpretative approach is the most suitable method to understand the perception of the social environment of the organization under study. It aims at recognizing and identifying values, myths, symbols and signs which contribute to the construction of "organizational truths", the form of performing organizational action, the "correct" way of thinking, and so on, that imply on the acceptance of the individual in the group (organization or a specific organizational unit). A symbolic approach is based on the concept of construction of the organizational reality through the negotiation of the symbolic universes and concepts of mythical thinking that integrate the dilemma of the true and false positivist (Strati, 1998).

The symbolic approach allows the comprehension that is important to perceive and to understand the way of constructing and influencing organizational members who have the power to decide issues that impact on the most relevant aspects of the organizational life. This approach presents more relevant features for the purpose of studying the decision-making process in the definition of the form of doing R & D which can be internal, external or combined. It seeks to understand the association and combination
of individual actions at different levels and degrees of intensity, exercise of influence and the reasons that motivate leading organizational actors to think and decide in a determined way. The symbolic interpretative approach turns possible this analysis based on the belief that the perception as a conscious act of recognition, that is, the combination of the object with the context, represents the symbolic organizational universe. The symbol represents the broader and most important concept of the symbolic approach because: (i) the construction of symbols is an act that form the base for the groups and for organizations, (ii) the understanding of symbols is essential to the negotiated interpretation of the specific organizational codes and (iii) the individualization of the symbols is arising from the practice of the organizational life (STRATI, 1998).

CONCLUSION
The organizational fabric is mainly constructed of social relations that emerge from the combination of the individual identities and of the confluence of their expectations, values and visions toward organizational purposes. As part of the organizational universe, people take positions in the organizational history, represent roles, share values and, through practices, rituals and symbols create and institutionalize a characteristic and idiosyncratic behavior that can be interpreted as an organizational culture. This organizational culture represents a benchmark of the right and the wrong to the participants of the organization. It can also orient their actions, based on the interpretation of events, discourses and practices. Therefore, it is understood that the organizational culture relies on the interpretation of the people who participate in this universe. Each one contributes to shape the reality and the organizational culture at the same time that they are influenced by cultural elements and have their own vision of reality recreated on the basis of an organizational reality.

The understanding of the symbolic universe allows the acknowledging of its influence on the processes and organizational practices and on the decision-making process. Recognizing that the organizational culture on the decision-making process is influenced, the adoption of management practices endowed with mechanisms directed to the preservation of criteria becomes evident. Such criteria should aim at the sustainability of the organization through the fulfillment of the economic goals and meeting the interests of stakeholders and shareholders. However, the web of interests that permeates the environment in an organization becomes so complex that it is not possible to conceive a single and ideal method of management that can ensure full satisfaction of all the actors who maintain relations with the organization, regardless the degree of intensity and the type of link.

The management of R & D must present characteristics of adaptability to internal and external environmental conditions and competence to talk with several interlocutors of the organizational universe at different hierarchical levels. At the same time, it cannot submit to the partial positioning of the organizational actors interested in influencing the decision-making process. The management should understand and be understood, participate in the organizational conversations at different levels, absorb the organizational reality, consider and respect the history, symbols and organizational myths. It should consciously notice the “modus operandi” of the organization and its acts, at a conceptual level, presenting new possibilities to interpret the situations and problems, expanding the range of alternatives of actions and solutions.

REFERENCES
BERMAN, Saul J; HAGAN, Jeff. How technology-driven business strategy can spur innovation and growth. *Strategy & Leadership*; 2006; 34, 2.


BEYER, Janice M.; CHATTOPADHYAY, Prithviraj; GEORGE, Elizabeth; GLICK, William H. The selective perception of managers revisited. *Academy of Management Journal*; Jun 1997; 40, 3; pg. 716


BUTTLE, Francis A. The co-ordinated management of meaning: A case exemplar of a new consumer research technology. *European Journal of Marketing*; 1994; 28, 8,9; pg. 76


COOK, Scott D N.; BROWN, John Seely. Bridging epistemologies: The generative dance between organizational knowledge and Organizational knowing. *Organization Science*; Jul/Aug 1999; 10, 4; pg. 381


O’CONNOR, Gina C.; AYRES, Alan D. Building a Radical Innovation Competency. Research Technology Management; Jan/ Feb 2005; 48, 1; pg. 23
STOKOWSKI, Patricia A. Languages of place and discourses of power: Constructing new senses of place. Journal of Leisure Research; Fourth Quarter 2002; 34, 4; pg. 368.
STRATI, Antonio. Organizational symbolism as a social construction: A perspective from the Sociology of Knowledge. Human Relations; Nov 1998; 51, 11; pg. 1379
STUMPF, Stephen A.; DUNBAR, Roger L. M. The effects of Personality Type on Choices Made in Strategic Decision Situations. Decision Sciences; Nov/Dec 1991; 22, 5; pg. 1047
SYMON, Gillian; CLEGG, Chris. Constructing identity and participation during technological change. Human Relations. Sep 2005; 58, 9; pg. 1141
WESTWOOD, Albert R. C.; SEKINE, Yukiko. Fostering Creativity and Innovation in an Industrial R&D Laboratory. Research Technology Management; Jul/ Aug 1988; 31, 4; pg. 16

©Society for Business and Management Dynamics