Strategic Thinking: a Requisite Business Tool for Navigating in Turbulent Market Seas

Abstract

The recent global economic crisis has increased vulnerability of the world economy. This turbulent time has forced executives to made strategic choices and decisions under high level of uncertainty for facing many unexpected challenges, threats and opportunities. Different executives in facing a similar situation will made different strategic choices and decisions. How one can explain executives' strategic choices and decisions? In our study, we relate executives' choices and strategic decisions with mental models, derived from temperaments. According to the mental model proposition, there are two basic mental models: operational and strategic. In a dynamic business environment of increased uncertainties, the capability to strategic thinking, derived forms strategic mental model, should enable executives to conceive more creative business strategies, helping them to navigate in the turbulent market settings. So, by knowing one's mental model or temperament, it may be possible one makes previsions about executives' chance to succeed in running the enterprise. By knowing executives' mental model, it will possible to made previsions about how to lead strategically, and help the corporation to navigate safely in the turbulent market seas of the continued global economic uncertainty

INTRODUCTION

The implications of recent global economic crisis have rapidly spreading around the world and have pointed to increased vulnerability of the world economy and to a strong slowdown in international trade and business. This slowdown brings changes in the business environment that may be different in their character and evolvement and may have a different impact in different countries, industries and business. With these changes in the world economy, in many industries and firms, also the most effective established business strategic models have become invalid as has been most severely experienced by many of the largest world corporations (Jurse, & Vide, 2010). Quickly, the paradigm of seeing the great business opportunities due to steady growth of everything - markets, customers' purchasing capability and wealth of individuals - has become irrelevant and not valid anymore. This unpredictably business changing circumstances has forced executives and firms to adapt their business operation with many new and unexpected challenges, threats and opportunities.

This seem to be affecting business strategies of firms and how firms may better align their business strategies with an increasingly complex, volatile and surprising business environment and how they may better face challenges, threats and opportunities existing in this business environment kind.

Obviously, to navigate the business activities of a firm successfully through this challenging business environment, executives need to understand a broad variety of emerging drivers of change in the external environment, the nature of opportunities, uncertainties and risks, and their possible consequences for the business performance of their firms in order to be able to act more proactively. This navigability will be under the strong influence of executive strategic choices and decisions that will lead enterprise to survive and grow or to the bankrupt. As appointed by literature, in facing a similar situation or business environment, different executives and managers will have different perceptions and will use perceived information in different ways, leading them to different strategic choices and decisions for the corporation. This influence may lead to two main questions: "What are the factors that lead executives and managers to different perceptions and different decisions facing the same situation or business environment?" and "How one can explain executives' strategic choices and decisions?"

The purpose of this paper is to examine the executive strategic choices and decisions, their relationship to mental models that are derived from temperaments (as proposed by Keirsey, & Bates, 1984) and the mental model as the substratum for strategic thinking competence. The paper goes on by reporting survey research data on professionals attending Brazilian MBA Programs. It concludes that strategic mental model is the mental model with lower preference. It is the substratum for strategic thinking, one of the most important tools for navigating and for succeeding in these turbulent market seas.

STRATEGIC CHOICE, DECISION, AND MENTAL MODEL

Decision making is a process that involves the selection of a specific course of action that is supposed to bring enterprise desired results (Gibcus *et al*, 2008). As a strategic activity, it is a process that leads to the choice of goals and means, resources and people and the way which they are effectively deployed. As strategic, they are crucial to the viability of enterprise and may be defined as programmed choices and/or reactions about business and environment issues that affect the survival, thrive, well-being and the nature of organizations (Shoemaker 1995). Under the decision process point of view, every time an executive faces the need for making a decision it is expected him or her to adopt a planned and rational approach to decision-making. As a larger stream of research on cognitive biases in decision making process has consistently demonstrate, managers are not perfectly rational but boundedly rational. Bounded rationality refers to the limits experienced by managers in their abilities to perceive and interpret a large volume of pertinent information in their decision making activities (Simon, 1979). In the same way, the challenges or problems an executive faces are complex and made up of more variables one can comprehend

By other side, management research has established that the perception do play a major role in the decision making process and suggests that an individual's perceptions, rather than objective reality, explain the decision to start a new business, for example (Krueger & Brazeal 1994). Perception directly influences enterprise successful performance because to survive and grow it is necessary to anticipate or react in facing business environment opportunities. Because of this, the search for understanding on executive's way of perception and use information about business environment and how perception may influence strategic choices and decisions becomes a relevant issue for developing some propositions to support strategic choices and the decision making process (Gallén, 2006).

As many factors influence the strategic decision making process, the fact of an alternative or course of action is perceived as possible or desirable leads us to a question related to the

factors leading an executive to perceive the same situation in a different way from others facing the same situation. So, the ways one makes strategic decisions seem to be closely related to the executive's personal characteristics (Korunka et al. 2003). In this case, executive's preferences and particularly his or her way of perceiving and taking information have an effect on strategies she or he tends to prefer.

A lot of research indicates that executive's way of perception is a main factor in understanding the strategic choices and strategic decision (Gallén 2006; McCarthy, 2003). Hambrick et al (1993) stated that executive's perception is limited because one selectively perceives only some phenomena included in her or his field of vision, and the data selected for processing is also limited by the values and cognitive model filter. So one can ask: how one can explain executives' strategic choices and decisions? The answer may be found in the mental model approach that is recognized as an important determinant of individual behavior which manifests itself in executive's strategic choices and decisions. These mental models are neither wrong nor right (Keirsey, & Bates, 1984), but mental models, particularly their way of taking and use information, have an effect on the strategies they tend to prefer. In this sense, the discussion can be addressed by the relationship between mental models and temperaments (Keirsey and Bates, 1984).

MENTAL MODELS AND TEMPERAMENTS

Mental models or cognitive styles may be described as characteristic models of perceiving, processing and using information gathered and different mental models may lead to different strategic choices facing same business environment. When one knows the cognitive style of executives, one "can assume that their processes of strategic choice and strategic decision making are different if their perception and judgment are different from each other" (Gallén, 2006: 119).

There are many approaches on differences about mental models or cognitive styles in the literature. As Hambrick, Geletkanycz, and Fredrickson (1993) put it, some executives are only interested in "what is" than other that are more able to accept the new, untested ideas about "what might be". This proposition is in according to the temperaments approach as developed by Keirsey, & Bates (1984), and temperaments are "based primarily on observable extravert behaviors and describe differences in people noticed and registered throughout the history" (Kroeger, & Thuessen, 1992)

Temperaments are derived from one's preferred modes of perception and behavior in facing many life situations and are a useful way of grouping preferences, and permit to make consistent previsions on preference and behavior of person, on how one learns, and on how one manages (Kroeger, &Thuessen, 1992; Nelson, Good, & Hill, 1997).), and about mental models. Differences in perception - concrete or sensorial and global or intuitive (Jung 1991) - are the first to be considered because perceptions are the manner people collect information about the world which influences the other functions.

The preference for concrete perception mode points to a preference for collecting factual and concrete information and then deciding what to do: organize them or continue to look for more information. The preference for global perception mode means that an executive will prefer to collect abstract or conceptual data and then will organize this information in a rational way or by considering values and ideas and interests of other people. By considering those preferred modes of perception and behavior in facing many life situations (Silva 1992) and the Hambrick et al., (1993) propositions and translating the "what it is" as factual focus on "here and now" and "what may be" as "possibility for the future" it became possible to make a synthetic classification of mental model into two types: operational mental model and strategic mental model.

THE STRATEGIC MENTAL MODEL AS THE SUBSTRATUM FOR STRATEGIC THINKING

By analyzing mental models one will find that the capability to deal with business strategic requirements and strategic management questions will better match the strategic mental model (Nelson, et al.,1997; Tieger, & Barron-Tieger, 1995). This mental model prefers to work with a global vision, not focusing on the specifics, but on the big picture, and not in the present but on the future (Tieger, & Baron-Tieger, 1998). The strategist focus is on possibilities and to deal with them in a logic way to design new organizational ways to attend strategic objectives and they are good innovators. She or he is able to see how the global systems work and the interworking of the systems components and the long and short-range implications of events which occur (KEIRSEY & BATES, 1984, p. 146). Strategists are good in creating and in formulating strategies and they are able to understand and deal with complex ideas and situations and to find principles and tendencies in them. In others words, strategists think strategically and have the strategic thinking competence

The Need for Strategic Thinking Competence

Katz (1991), in discussing the skills of an effective administrator, says that his extensive work with company presidents and his own personal experience as a chief executive office have given him much more respect for the difficulties and complexities in the executive role, whose job requires CEO to be an effective operator and also an effective strategist. To perform this job successfully an executive manager must be able to see the enterprise as a whole, but recognizing how the various functions of the organizations and jobs performed inside depend on one another, and how a change in any one part affects systemically all the others; and it extends to visualizing the relationship of the individual business to the industry, and sociopolitical, and economic forces.

This kind of executive is supposed to comprehend that by recognizing these relationships and distilling the significant elements in any situation she or he will be able to make sound decisions and act in a way which advances the overall well-fare of total enterprise. To face

this challenge, and to make successful decisions, and to take effective actions, one executive must have strategic thinking capability to do not only an effective coordination of enterprise activities, and the enterprise's ways of doing business, but also establish the whole future direction in which company should grow, especially in now a days of economic slowdown. So, the company overall success is dependent on the executives' and professionals' strategic thinking capability to find new business opportunities by establishing strategies and policies, and by carrying out effective strategic decisions. This capability is the unifying, coordinating ingredient of the executive management process and of undeniable importance.

Strategic Thinking Competence

The question for strategic thinking is recurrent question in business literature. Addressing this competence is an enormous challenge. By researching this theme in the literature, the first reference found was Katz's work on the Skills of an Effective Administrator (1991). As one may conclude that, in this HBR classic, Katz (1991) by naming the Conceptual Skill, in fact, was naming strategic thinking competence:

"As used here, conceptual skill involves the ability to see enterprise as a whole; it includes recognizing how the various functions of the organization depend one another, and how change in any one part affect all the others; and it extends to visualize the relationship of individual business to the industry, the community, and the political, social, and economic forces of the nation as a whole. Recognizing these relationships and perceiving the significant elements in any situation, the administrator should be able to act in a way which advances the over all welfare of the total organization." (Katz, 1991, p. 26)

Beside this, in this time of global economic crisis, the strong slowdown in international trade and business brings changes in the business environment. With these changes in the world economy, in many industries and firms, also the most effective successful established business strategic models may have become invalid as has been most severely experienced by many of the largest world corporations (Jurse & Korez, 2010). In times of these unpredictably business changing circumstances, the traditional strategies and the traditional ways for running business have been challenged, have forced executives and firms to adapt their business operation with many new and unexpected challenges. This seem to be affecting

business strategies of firms and how firms may better align their business strategies with an increasingly complex, volatile and surprising business environment and how they may better face challenges, threats and opportunities existing in this business environment kind.

In this environment, where the social, political and economic forces are out of executive control, this conceptual skill or strategic thinking capability implies work with possibilities and possible futures. Nowadays, enterprise is supposed to operate in a world that is always in change, and this change presents new strategic challenges and opportunities. To build success in this fast changing business world, the enterprise needs a strategic business management model and it requires the managers and professionals to be creative and skilled and have high levels of strategic thinking. Under this business environment conditions, strategic thinking will be necessary and of great value for the enterprise and their strategic business unit to the development of credible business scenarios in the search for reducing the doubt about its business decisions (Barnet & Berland , 1999).

The changes in the world economy require business to be innovative, an imperative for eventually every enterprise (Doroty, & Straus, 1997). The main challenge faced by enterprises is to build and maintain structural and operational competitive advantage without being imitated by its competitors. (Hoffman, 2000). Putting in this way, strategic thinking competence, a requisite for executive success, requires executive decisions and actions to be grounded toward strategic business objectives. Under this business environment, it will be more important having the ability to problem and opportunity find instead of having the ability for problem solving. The competence for problem solving, while important, is not as significant as the competence for problem finding, and these competencies involve very different cognitive process. The competence for problem solving involves operational and analytical skill; it is important but, as Drucker reminds us, "Al we can hope to get by problem

solving is to restore the normality; all one can hope, at best, is to eliminate a restriction on the capacity of the business to obtain results" (Drucker, 1981, p 125)

On one hand, problem and opportunities finding requires the perceptual skills to identify opportunities and problems long before evidences of them can be found by even the most advanced management information system. In others words, it requires strategic thinking skills. This competence for opportunities and problem finding enables managers to foresee opportunities and problem that may arise from changes in business environment, in marketplace, product, prices, consumers' preferences, competitors' actions and in methods of running business. Competence for opportunities and problem finding – the strategic thinking competence - enables managers to go beyond written reports and to scan the business environment for less concrete clues that an opportunity or problem exists.

On the other hand, problem-finding competence is exceeded in importance only by opportunity finding competence because it is by finding and exploring opportunities in business that results are obtained (Leavy, 2010). Strategic results in business come from exploring opportunities, not solving problems. Finding and exploring opportunities implies that effectiveness rather than efficiency is essential to business. So, the pertinent question is not how to do things right but how to find the right things to do, and concentrate efforts and resources on them (Drucker, 1981).

In the same way, opportunity-finding competence also requires the perceptual skills to identify opportunities long before evidences of them can be found by even the most advanced management information system. In others words, it also requires strategic thinking skill. Competence for opportunity-finding enables managers to foresee opportunities that arouse from changes in business environment, and it enables managers and executives to perceive the "futuribles" or the signs of the future "walking in the present" (Boisanger, 1995) to get strategic and competitive advantage from actual and future possibilities and opportunities

they bring about. It is just for this reason that one in an executive position may have the capability for strategic thinking. But, what strategic thinking is?

Strategic Thinking

Strategic thinking or "Strategic mind" (Barner, & Berland, 1999: 120) has an imprecise definition and an anecdotal use. It took very little attention to defining more specifically what the concept of strategic thinking looks like in practice (Liedtka, 1988). Described and defined in many ways (Pellegrino, & Carbo, 2001), it seem to be related to the ability to collect and process a very high amount of information and, form this mass of details, to select what really is important and necessary to make effective strategic decision that may be differential for the company success. Davis, Skube, Hellervik, Gebelei, & Shead (1992) defines strategic thinking as the ability to understand the global scene – past, present, and future – for defining possibilities and alternatives, associated with the capability for considering simultaneously a long range of factors inside-outside the organization in the problems solving and decisions making and action implementing.

Strategic thinking is related to the capability for identifying strategic opportunities for the business success by considering a broad range of inside-outside factors for defining critical and high return strategies and for defining priority for the efforts according defined strategies, in a way that decisions and taking actions have an adjusted focus to the critical strategies of the business (Davis, et al., 1992). Strategic thinking is based on a self-reference, on a sense of strategic intent and purpose imbedded in the mind of manager throughout the organization that guides theirs choices on a daily basis. It is required for the strategic thinking that one extrapolate the understanding of her or his own job to an understanding of the larger organization, of the connection between her or his organizational roles, and the functioning of the organizational system, and the interdependence among the various roles that comprise the system (Liedtka, 1998).

Strategic thinking as a needed competence for competitive success in present and future market is related with all the basic managerial functions and activities – planning, organizing and directing and controlling (Oliveira, 1997, passim) – and with all the business functions as marketing, manufacturing and operating, financial, HR management and innovation.

What research indicates is that those who are high scored on strategic thinking capabilities has skills that provide them with different perspectives and different approaches to management in this turbulent business environment. This capability enables these professionals to see things others do not see and incorporate factors information systems and computer programs cannot handle successfully (Harper, 1989). They also tend to be more skilled to effectively scan the business environment and to see possibilities others can not; they tend to be more innovative in dealing with strategic issues and generate ingenious new solutions for old problems that may have upset for years; to be more insightful and better at finding new ways to do the right things that need to be done. In a R&D new product process, these strategic thinking professionals are in a better position to sense whether a product idea will "land" or not in the marketplace.

They are capable of collecting and processing a high amount of information, and distill from this amount of details what is really important and necessary to the effective strategic decision making process, and seeing the organizational system as a whole and understanding the interdependencies inside the system, the relationship of each part with the others and with entire organization; understanding the global situation and seeing the scenario – past, present and future – for defining future alternatives and possibilities for the company.

The Developing Strategic Thinking Competence

it may be said that address the strategic thinking competence is a mandatory issue for facing global business environment. But it is not an ease task. Katz (1991 p.32) in dealing with the question for developing strategic thinking competence, points out that "a number of methods

have been tried to aid in developing this ability with varying success" and that "some of the best results have always been achieved through the coaching of subordinate by superiors". According to his proposition, other ways to develop this skill is through trading jobs or job rotation, that is, by moving promising young men through different functions, and special assignments, particularly that one which involves interdepartmental problems, and works with cases involving broad management policy and interdepartmental coordination, and by presenting a series of detailed description of specific complex situations (Katz, 1991). He stated that conceptual skill must become a natural part of executive makeup and "different method may be indicated for developing different people, by virtue of their background, attitudes, and experiences but, in every case that method should be chosen, which will enable the executive to develop his own skill in visualizing the enterprise as a whole and coordinating and integrating the various parts. But things seem not to work this way. These recommended methods seem not to be effective in developing the capability for strategic thinking. In his retrospective commentary, Katz (1991) points that the conceptual ability – his name for strategic thinking – depends on a specific way of thinking, one's mental model, and its development is more complex than he has been thinking. As he stated:

I am now less sanguine about the degree to which this way of thinking can be developed on the job. Unless a person has learned to think this way early his life, it is unrealistic to expect a major change on reaching executive position. Job rotation, special interdepartmental assignments, and working on case problems certainly provides opportunity for a person to enhance previously developed conceptual abilities. But I question how easily this way of thinking can be inculcated after a person passes adolescence. In this sense, conceptual skill should perhaps be viewed as an innate ability. (Katz, 1991: 34)

Katz (1991) statement was based on what was known at that time when he did his work, and one may say that imbed in his proposition conceptual skill should be viewed as an innate ability she or he may see the fixed-brain myth, that stated we are born with a full complement of neurons and produce no new neuron during our lifetime. But advanced research techniques have given neuroscientists and neuro-psychologists opportunities to remarkable discoveries on brain like the growth of new brain cells even in adult brain, destroying the fixed-brain

myth (Katz, & Rubin,2000; Douglas, George, Holmes, & Lawton, 2005). Another wonderful discovery refers to the brain plasticity and the possibility to establish new brain connections. Discoveries show that it is still possible to improve one's mental faculties, and optimize the brain functioning, and get the best out of one's brain cells and maintain it by adequate stimulation, and exercises, and activities.

Recent research results are pointing out is that every one is capable of operating either on operational mode or strategic mode. Research has shown that the less preferred mode is not developed and remains primitive. By considering this statement, it may be said that the development of strategic thinking capability not only is possible, but also mandatory for the executive success. But, how to do it? Fortunately, research and development on brain knowledge such as neuroscience, allied to researches results on Psychology like structural cognitive modifiability (Silva, 2006; Feuerstein, Feuerstein, Falik, 2010), and on brain plasticity made possible to abandon the fixed-brain myth and the conception of the brain as a definitive structure, and bring about the possibility to one have her or his mental model modified, or developed by enhancing the natural level of strategic thinking capability. Recent researches and discoveries also point out some methods that can help in developing and maintaining new brain connections. As appointed by Dawes (2006), Feuerstein's experience was that people's cognitive functioning could be challenged and changed and by considering that there is a link between cognitive flexibility and the ability to respond favorably to the challenge of change, this approach may be used as one of basic tools with both those who were struggling to come to terms with their changing and challenging business environment and with executive teams that needed to be able and flexible enough to lead initiative for organizational transformation (DAWES, 2006). In others words, as a tool fo developing strategic thinking competence. All of this research brings about the basis for the development and the proposition of a series of activities that are designed to help people

improve the mental capability, flex and develop a mental model that are propitious to the strategic thinking. But researches are only beginning and a lot of efforts are needed.

CONCLUSION

In this paper, we relate theoretically executives' choices and strategic decisions with mental models, and appoint that there are two basic mental models: operational mental model and strategic mental model. Mental Models propositions appoints strategic mental model as the more appropriated model to lead with global business turbulence. This mental model takes information through her or his sixth sense focusing, not on what is but on what may be, and looks for meaning in all things. A person with this mental model will probably choose to describe herself or herself as innovative. She or he may be characterized as disorganized person by the low adherence to norms, and rules, and structures. Many times are considered undisciplined. He or she is able to think strategically, and to bring innovative solutions to daily problems and issues. This executive is visionary and architect of change. She or he is imaginative and analytical, exploring all possibilities inherent in any situation and directing their energy toward building systems for the future. She or he is a visionary and works on ideas with ingenuity and logic. She or he learns by an impersonal and analytical process for personal mastery and may be sensible to people or privileges rationality.

Mental models proposition appoints that, in a dynamic business environment of increased uncertainties, where it is often impossible to predict a firm's future challenges, threats and opportunities, the capability to strategic thinking – the capability to "see the forest for the tree" or to come up with new ideas by adopting a radical change in perspective in order to "think outside the box" with the aim to be more imaginative in thinking about the challenges on how to open new horizons for a firm – will be mandatory. It also appoint that in times of increased uncertainties, this process requires executives to use a strategic thinking capability in making more effective choices and decisions, and in designing business strategies.

Strategic thinking is also required in bringing forward or reacting creatively to challenges, and threats and the opportunities that quickly appear and disappear and in getting more immediate feedback from the business environment, and in focusing their effort on continual strategy realigning, improving, and fine-tuning with the aim to navigate the activities of a firm toward the attainment of a firm's flexibly set strategic goals. Strategic thinking should enable executives and managers to conceive more creative business strategies, and it may thus help them to improve the overall strategic management concept of a firm, by applying a more creative and dynamic approaches in strategy formation for the firm market position development and navigate in the turbulent market settings.

So, by knowing one's mental model, it may be possible to make previsions about executives' chance to succeed in the strategic choice process and in the decision that will be made in running the enterprise. In this way, one will be in a position that made possible to lead strategically, and help the corporation to navigate safely in the turbulent market seas of the continued Global Economic Uncertainty by adequately facing challenges and addressing opportunities they may present.

BIBLIOGRAPHY

Berry, M. (1998). Strategic planning in small, high-tech companies. **Long Range Planning**, 31, p. 455-66.

Davis, B., Skube, C. J. Hellervik, L. W. Gebelei, S. H., & Shead, J. L. (1992) **Successful manager's guide**. USA: Personnel Decisions International,

Douglas, K., George, A., Holmes, B., & Lawton, G. (2005). 11 steps to a better brain. **New Scientist**. London: May28-Jun3, 2005. Vol.186, Iss. 2501; pg. 28, 12 pgs

Drucker, P. F. (2007). **People and performance: the best of Drucker**. USA: Harvard Business School.

Feuerstein, R., Feuerstein, R. S. Falik, L. H. (2010). **Beyond smart**.NY: Teacher ollege Gallén, T. 2006). Managers and strategic decisions: does the cognitive style matter?. The **Journal of Management Development**, 25, p.118-134.

Gibcus, P. and Vermeulen, P. and Jong, J. (2008). Strategic decision making in small firms: a taxonomy of small business owners, **International Journal of Entrepreneurship and Small Business**, 7 (1), p. 74-91.

Hambrick, D. C. and Geletkanycz, M. A. and Fredrickson, J. W. (1993). Top executive commitment to the status quo. **Strategic Management Journal**, 14 (6), p. 401-18.

Harper, S. C. (1988). Intuition: what separates executives from managers. **Business Horizons**, September-October

Hirsh, S. K, & Kummerow, J. (1997). **Introduction to type in organizational settings**. USA: CPP,

Hirsh, S. K, & Kummerow, J. (1998). Introduction to types, USA: CPP,

Hoffman, N. P. (2000). An examination of the "sustainable competitive advantage" concept: past, present, and future. **Academy of Marketing Science Review**. Vancouver: pg.1

Huang, G. T. (2008). Essence of though. **New Scientist** London: May 31-Jun 6, 2008. Vol.196 Iss. 2658; pg. 30, 4 pgs.

Jung, K.. G. (1991). **Tipos psicológicos**. São Paulo: Zahar.

Jurse, M., & Vide, R. K. (2010). Strategic thinking as a requisite management tool for managing international marketing in turbulent times. An Enterprise Odyssey. **International Conference Proceedings**. Zagreb: May 26-May 29, 2010. pg. 1151, 24 pgs.

Kamat, S. (2003). NGO and the new democracy. **Harvard International Review**, 25 (1), p. 65-69

Katz, D. .(1991). As habilitações de um administrador eficiente. SP: nova Cultural

Katz, L. C., & Rubin, M. (2000). Mantenha seu cérebro vivo. SP: Sextante

Keirsey, D. and Bates, M. (1984.. Please understand me: character & temperament types. USA: Prometheus

Korunka, C., Frank, H.; Lueger, M., & Mugler, J. (2003). The entrepreneurship personality in the context of resources, environment, and the startup process. **Entrepreneurship Theory and Practice**. 28(1); p. 23

Kroeger, O., Thuessen, J. M., & Rutledge, H. (1992. **Type talk at work**. USA: DellBooks Kummerow, J. (1985). **Talking in types**, USA: CAPT,

Liedtka, J. M. (1998). Linking strategic thinking to strategic planning. **Strategy and Leadership**, Sep/Oct, p. 31,

McCarthy, B. (2003. The impact of the entrepreneur's personality on the strategy-formation and planning process in SMEs. The Irish Journal of Management, 24, p. 54-73,

Nelson, B. and Good, L. and Hill, T. (1997). Motivating employees according temperaments. **Human Resource Management Magazine**, March, p. 51-58

Oliveira, D. de P. R. (1997). Excelência na administração estratégica. 3ª ed. SP: Atlas,

Pellegrino, K. C., & Carbo, J.. A. (2001). Behind the mind of strategist, **The TQM Management** 13. p. 375-4711

Pink, D. H. (2007). O Cérebro do futuro. RJ: Elsevier

Robey, D., & Taggart. W. (1981). Measuring managers' minds: the assessment of style in human information processing. **The Academy of Management Review**, vol. 6, n.3.

Shoemaker, P. J. H. (1995). Scenario planning: a tool for strategic thinking. **Sloan Management Review**. 36 (2), p. 25-40

Silva, M. de L. R. (1992). Personalidade e escolha profissional. SP: EPU

Simon, H. (1979). Rational decision making in business organizations. **American Economic Review**. 69, p. 493–513.

Simon, H. A. (1955). A behavioral model of rational choice. **The Quarterly Journal of Economics**, 69 (2), p. 99-118.

Simon, Herbert. A. (1970). Comportamento administrativo. Rio de Janeiro: FGV

Taggart, W. A. (1998). Human Information Processing Model of Management Model in

Carey, J. M. (ed.) Human factors in management information systems. New Jersey: Ablex

Tieger, P. D., & TIEGER-Baron, B. (1995). Do what you are . Canada: Little, Brown & Co,

Tieger, P. D., & TIEGER, B. (1998). **The art of speed reading people** . Canada: Little, Brown,

Tiwani, A. Et al. (2007). The bounded rationality bias in managerial valuation of real options. **Decision Sciences**. 38 (1), p.157-181