New Way to Look at Entrepreneur's Strategic Choices and Decision Process: the Mental Models Proposition

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Abstract

Researchers have long been attempting to understand the concepts of strategic decision and choices. One way to examine this issue is to approach it through the entrepreneur personal characteristics. According to the theory of mental model, there are differences in the ways entrepreneurs perceive the business environment and the ways they make choices and decisions. Studying the influence of these characteristics may be of great importance since entrepreneurship may be a way to economic and social development, and wealth production for both developed and developing countries. The purpose is to develop the idea of relationship between entrepreneur's cognitive style and strategic choices and decisions, and that differences are reflected in their strategic choices and decisions and in the direction of the firm. This will be done theoretically by examining the mental model under Keirsey and Bates temperaments proposition which concludes that there are two basic mental models – operational and strategic – that may explain the relationship between mental model and entrepreneurs' strategic choices and decisions.

Keywords: Entrepreneur's strategic choices; strategic decision process; the mental model propositions.

1 Introduction

Entrepreneurship is a social, and complex, and multifaceted phenomenon. The search for an understanding of the entrepreneurship activity – either by entering in a new business or modifying existing products or developing new ones by an ongoing enterprise or by creating an entire new business - has in itself theoretical and practical values. This is because the entrepreneurship is an activity of social importance that generates economic development, innovation, wealth and the development of new markets (Drucker, 2007). From a practical point-of-view, entrepreneurship has been a challenge and a continuous social search, and a way to technological development, because new business and new enterprises are a way of developing and introducing innovations to address new products and services that are new solutions for the market needs.

On the theoretical view, the main contribution refers to the identification of the impact of the entrepreneur's personal characteristics on the strategic choices and decisions that will determine the enterprise fate. Personal characteristics of decision maker have a direct influence on the diagnosis, choices and strategic directions of enterprise (Gallén, 2006). So, identifying the type and extension of the personal characteristics influences on the enterprise fate, one may be helped in the effort to build a theoretical proposition in the entrepreneurship field (McCarthy, 2003).

The importance of this approach became evident by spotting the role and the entrepreneur personal characteristics impact on the enterprise management process because personal choices and decisions are consequences of these characteristics that affect the perception and the understanding of environmental challenges, and opportunities and by consequence, the strategic decision making (Daghir e Zayde, 2005). So, the purpose of this paper is to present a basic review of the strategic concept, and the choices and the decision making process and the main concepts of temperaments as a basis for some propositions on this theme and to point out some questions as a guide to the empirical research works.

2 Strategy Definition

There are numerous perspectives on strategy and definitions of the term in the literature as well as many approaches to strategy, as it is pointed out by Porter (1998) propositions and by Mintzberg (2000) that emphasizes the need for a holistic view of strategic issues. As an illustration of the need of this holistic view, Mintzberg, Ahlstrand and Lampel (2000) refer to the analogy of the blind men trying to describe an elephant. In this analogy, each blind man touches one side of the elephant and describes it as a different animal. In the same way, they suggest that each researcher tends to focus one specific point of view on strategic matter what generates many "thinking schools", each one proposing a distinctive definition of the strategic term that sometimes are complementary and sometimes are contradictory, which may be an indicative of lacking of consensus or generic propositions for this business field. As a synthesis, they propone the existence of three strategic schools categories: prescriptive, descriptive and configuration.

When dealing with strategic business issues, one entrepreneur may ask: which strategic concept to adopt and what is the best strategy to be taken? For Hax and Majluf (1998), strategy can be seen as patterns that integrate the main policies, norms, rules, goal and the organizational actions as a whole, a coherent and consistent system. The strategy formulation process was not simply an exercise in rationality but also "reflect experimentation, exploration, intuition, instinct and learning" (McCarthy, 2003, p. 155) and it becomes a delicate balance between motivation, the learning acquired with past experiences and actions and the modeling of new ways for the business to succeed that may have no relations with the past success. In this paper, in spite of many schools of thought about strategy formation, Hax & Majluf (1998) concept is adopted:

> "a coherent, unifying, and integrative pattern of decision that determines and reveals the organizational purpose in terms of long term objectives, selects the businesses the organization is in or is to be in, attempting to achieve a long term sustainable advantage in each of its businesses, by properly responding to the opportunities and threats in the firm's environment, and the strengths and weaknesses of the organization, engaging all the hierarchical levels of the firm and defining the nature of the contributions it intends to make to its stakeholders"(Hax; Majluf, 1998, p 38)

This concept denotes that an enterprise will follow a reasonably coherent and stable pattern in its strategic decision making process, but do not necessarily doing it by the adoption of a formally structured plan. This is specially relevant for understanding the entrepreneurship, because most of enterprises usually do not have the tradition for explicitly addressing strategic planning issues, and do not have a routine for the development of a formal strategic planning. But the absence of a formal process does not mean the inexistence or absence of any strategy but it may mean that the entrepreneur is open, flexible, and responsive and is willing to learn (Hax; Majluf, 1998)

3 The Decision Making Process

Decision making is a process that involves the selection of a specific course of action that is supposed to bring enterprise desired results (Vermeulen, 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 they are 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 prospects, well-being and nature of organizations (Schoemaker, 1995).

Making decisions is a daily entrepreneur routine and, in spite of the authority delegation on operational issues, strategic decisions remain under entrepreneur direct responsibility. Under the decision process point of view, every time an entrepreneur faces the need for taking a decision it is expected she or he to adopt a planned and rational approach to decision-making. When running a business, the decision scope is reduced because wrong decisions may put the enterprise under the risk of business failure or in a fatal

risk of going bankrupt. Besides, in the case of running a business, decision and its consequences will affects organizational performance and will be the entrepreneur total responsibility.

One basic assertion to the preliminary field studies on decision making process is the rational human being, which is coherent with the economy concept and the Scientific Administration. This rational man is, by basic assumption, able to analyze all data and alternatives for a given situation or problem and then makes a perfect rational decision by selecting and choosing the best solution that optimizes the desired results. As Simon put it,

> This man is assumed to have knowledge of the relevant aspects of his environment which, if not absolutely complete, is at least impressively clear and voluminous. He is assumed also to have a well-organized and stable system of preferences, and a skill in computation that enables him to calculate, for the alternative courses of action that are available to him, which of these will permit him to reach the highest attainable point on his preference scale. (Simon, 1955, p. 99)

But 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 entrepreneur faces are complex and made up of more variables one can possibly comprehend. So, in contrast of the rational man proposition there is the 'administrative man' proposition that have the basic assertion that decisions are made in a personalized way by upper echelons which are responsible for the strategic decisions. By considering that the focus of this paper is the decision making process in highest organizational level and in the case of setting up a new, independent enterprise and managing it in a personalized way (Berry, 1998), and that the decision making process is centered on the entrepreneur, it may be analyzed two approaches: rational and the bounded rationality.

Under the rationality optic, one entrepreneur makes all decisions on a logic basis, by analyzing all the alternatives with the objective to find the best choice in a known and scanned environment. This position does not admit ambiguity and has as a basic presupposition that entrepreneurs posses or believe to posses the mental capability to know and analyze in a rational way all data and alternatives for a problematic situation that is under analysis (SIMON, 1967). In doing this, entrepreneur needs to formulate a utility equation that enables him or her to choose the alternative that will result in the best desired consequences and produces the best results.

However, this assumption that considers the decision maker as a fully rational being already have a strong opposite argument stated by Freud (in the past century): often we are under conscious control of our minds but many times our minds and decisions are governed by our unconscious, which influence and distort our perception. Although one may consider that decisions can be made in a rational way, the situations an entrepreneur faces are so complex that involves a large number of facts and contingencies and are made up of far more variables that are relevant for the decision at hand then she or he may comprehend; so, the decision making process may be characterized as a bounded rationality process and the entrepreneur will select an alternative that best fit with some personal values and beliefs system adopted instead of a rational system, being a kind of behavior that is at least "intendedly" rational (Simon, 1955).

But as rationality is valuated in the educational process and work situations (Pink, 2006) there will always be a rational drive in every decision making process but the entrepreneur bounded rationality will act as an obstacle to a pure rational decision making process. Furthermore, entrepreneur's personal temperament and preferences in conjoint with formal education and past experiences may bring meaning and "color" to the problem or context that she or he is facing and act as a strong obstacle to a perfect rational decision making process. This features allied to the entrepreneur feelings and expectations may interfere in the perception process in a manner that important facts and data may be considered irrelevant or do not have importance, building a gap between the existing and the perceived reality and

which can make different entrepreneurs face different problems and give different responses to the same situation (McCarthy, 2003)

Another factor that acts as a restrictor to the genuine rationality is the occurrence of situation requiring an impulsive or an *ad hoc* decision that may present ambiguity or may contradict values that are espoused by entrepreneur and may cause a cognitive dissonance process (Festinger, 1957). By other size, personal differences lead entrepreneurs, in spite of high intelligence quotient and competence and education level to perceive the same reality under different angles, with different characteristics and demanding different decisions and actions. In this way, for example, people with little focus on concrete and factual aspects of the reality will tend to look at opportunity from a positive side than a negative side (McCarthy, 2003) and to see less risks and threats in the decision implementation and be more risk tolerant than others.

By considering this, it may be said that, in spite of having information and the capability to analyze them, what will be perceived as the "true" reality by one entrepreneur may be very different from the other one because the entrepreneur perception and analysis processes may suffer influences that other don't (Pellegrino; Carbo, 2001). These different characteristics may lead different persons to take different strategic decisions facing the same context and information. Many research on decision making, by focusing on the role of entrepreneur cognitive styles on strategic choices process and by addressing the role of preferred way for perceiving and utilizing information, have pointed out that people act on their cognitive style and that their preferred cognitive style may drive to a specific strategic choice. All these factors seem to be a strong cue which shows that perception, organization and use of information – the cognitive style – are critical in the strategic choice and decisions. So, the next part of this paper will analyze the interaction between the decision making process and the entrepreneur personal characteristics.

4 Strategic Choice and Mental model

Entrepreneurial research has established that the perception do play a major role in the decision process and suggests that an individual's perceptions, rather than objective reality explain the decision to start a venture (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 entrepreneur'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 entrepreneur 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 entrepreneur personal characteristics. In this case, entrepreneur preferences and particularly his way of perceiving and taking information have an effect on strategies she or he tends to prefer.

In another reference to the impact of entrepreneur's personality on the strategic choice and decision making process, McCarthy (2003) study suggests that the strategic choice and strategy formation process are driven by the personality of the entrepreneur and by their experience in times of crisis, and that there are two main types of entrepreneurs, the charismatic and the pragmatist entrepreneurs, which resulted in different patterns of strategic behavior and that different types of entrepreneurs faced different problems and that their response to crises varies.

According to McCarthy (2003), the charismatic entrepreneur is visionary, risk-taker, highly persuasive, passionate, with ambitious and idealistic goals, and the pragmatist is more conservative and cautious, more rational and seems to have a more calculating and instrumental approach to the venture. Both

entrepreneurs are distinguished according to decision-making style, goals, attitude to risk, degree of commitment to venture and business background (Table 1).

Table 1: Entrepreneurs' characteristics

Strategy related variables	Charismatic	Pragmatic
Decision making style	Visionary, intuitive, creative	Planned, rational, reactive
goals	Ambitious, realistic	Achievable, conservative, down to earth, common sense, slow-growth, consolidation
Attitude to risk	"bullish", risk-prone	"Bearish", risk averse
Degree of commitment to venture	Abiding commitment. Obsessive, success against the odds	Calculated commitment, pragmatic, success within reach
Business background	No business	Combination (many of them do not know how to run a business)

Source: McCarthy, 2003

A lot of research indicates that entrepreneur's way of perception is a main factor in understand-ding the strategic choices and strategic decision (Gallen, 2006). Hambrick and Mason (1984) stated that perceptual process can be viewed under a sequential perspective. First, an entrepreneur cannot scan every aspect of the enterprise and business environment. The entrepreneur's field of vision is restrict, posing limitations to the perceptual process and on what is perceived. The entrepreneur's perception is further limited because one selectively perceives only some phenomena included in her or his field of vision, and finally the data selected for processing is also limited by the values and cognitive model filter (Figure 1).

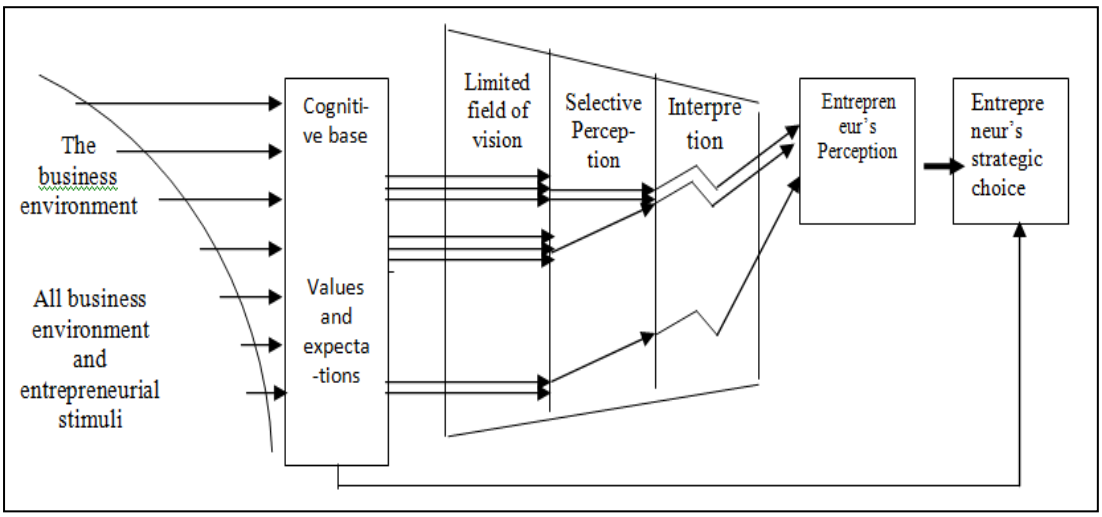

Figure 1: Strategic Choice under conditions of bounded rationality. Source: Hambrick; Mazon, 1984.

So one can ask: how one can one explain entrepreneurs' strategic choices and decisions? The answer may be found in the cognitive style approach that is widely recognized as an important determinant of individual behavior which manifests itself in entrepreneur's strategic choices and decisions. These cognitive styles are not wrong or right (Keirsey and Bates, 1978) but cognitive styles, particularly their way of taking and use information, have an affect on the strategies they tend to prefer. In this sense, the discussion can be addressed by the relationship between cognitive styles and temperaments, as proposed by Keirsey and Bates (1978)

5 Cognitive Styles and Temperaments

Cognitive styles my 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 entrepreneurs, one "can assume that their

processes of strategic choice and strategic decision making process are different if their perception and judgment are different form each other" (Gallen, 2006 p. 119).

There are many approaches to differences on cognitive styles in the literature but an recurring aspect is that, as Hambrick et al (1993) put it, some entrepreneurs are only interested in "what is" while other are more able to accept the new untested ideas about "what might be". This proposition is in accordance to the temperaments approach as developed by Keirsey (1978) that is "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. Temperaments are a useful way of grouping preferences, and allow to make consistent previsions on preference and behavior of person, on how one learns, and on how one manages (Kroeger & Thuessen, 1992), and about cognitive styles. 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. Without some understanding on how people perceive, the communication process becomes highly difficult because people first believe in their own data and information. 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 entrepreneur 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. In a synthetic form, there are four temperaments (Keirsey & Bates, 1978; Silva, 1992), representing the four mental models (Figure 2).

By considering those preferred modes of perception and behavior in facing many life situations (Silva, 1992) and the Hambrick and Mason (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.

5.1 Operational Mental Model or Cognitive Style

This style is characterized by her or his focus on what is going on and by the search for precision, reliability, efficiency, prudence and discipline, and conformity. She or he is practical (Keirsey and Bates, 1978) and demonstrate~~s~~ high focus on problem solving rather than finding it and tend to reduce problems occurrence by improving and maximizing the process efficiency, under the existing conditions; she or he has a preference to make plans and is happy with the plan accomplishment. Quick to decide, but once a decision is made, this is not a problem for her or him. The day-to-day activities of an operation-minded person are driven by responsibility, obligation and duty, and he or she rarely challenges the norms and policies. As to these person the next step is to apply the information to daily activities, they may do things in a planned way – implementer – or in an improvised way – pragmatist.

Implementer prefers decisions over options; he or she is traditionalist, stabilizer, consolidator; he or she works from a sense of responsibility, loyalty and industry and learns in a step-by-step way with preparation for present and future utility. She or he prefers the decision over possibilities, concrete over the abstract and order over flexibility; he or she tends to focus on current, here-and-now issues, but lets past experience guide him or her in solving problems.

Pragmatist prefers action over reflection, responding over planning; she or he is a fire fighter, troubleshooter negotiator; she or he works via action with cleverness and timeless - give him or her a problem to fix and she or he is in his or her element. She or he learns through active involvement to meet current needs. Having the most pragmatic temperament, she or he uses her or his sense of the obvious to scan the environment and determine the best way to outmaneuver an adversity. She or he is expeditious in handling of the out-of-ordinary and the unexpected.

Perception mode	What one does after?	use of information in life and work	**DERIVED OPERATIONAL MENTAL MODEL**
Concrete Preference for gathering information by means of the five senses which focus on the concrete, tangible realities of the present. and They also trust their own personal experience	Use of the information.	**Planned way** They prefer to have things defined, arranged and well planed; they plan and do the planned; they appreciate decided, ordered, and well planed situations; they enjoy to plan and to do the planned, because life is to be lived in a planed ordered way.	**Implementer**: Traditionalist, stabilizer, consolidator, he or she works from a sense of responsibility, loyalty and industry and learns in a step-by-step way with preparation for present and future utility. She or he prefers the decision over possibilities, concrete over the abstract and order over flexibility, tends to focus on current, here and now issues, but lets past experience guide him or her in solving problems
		Improvised way They tend to continuously search and apply the information to solve presenting problems. By preferring to live a spontaneous and flexible life, they perceive the possibilities and seem to be open to new events, suddenly changing, spontaneous, curious	**Pragmatist** Problem solver, fire fighter, troubleshooter, negotiator, she or he works via action with cleverness and timeless. She or he learns through active involvement to meet current needs. Se or he uses her or his sense of the obvious to scan the environment and determine the best way to outmaneuver an adversity.
		Use information to make decision in a:	**DERIVED STRATEGIC MENTAL MODEL**
Global They are more interested in meanings, relationships and possibilities based on facts than the facts themselves and are oriented toward the future. They prefer to look at the big picture rather than details	To organize data and make decisions.	**Logical or rational way.** They tend to make logical connections between ideas and facts. When making decisions, they analyze issues logically and impersonally and use~~s~~ objective data, validity and rationality as criterion for making judgments	**Strategist** Visionary; architect of systems and changes, imaginative and analytical, she or he works on ideas with ingenuity and logic exploring all possibilities inherent in any situation. She or he believes that an organization's daily activities must be consistent with its mission and directs her or his energy toward building systems for the future.
		Valued-based way They prefer to come to decisions by using empathy, personal values to weigh~~t~~ data, ideas and occurrences and to make a judgment.	**Energizer** She or he values fairness over consistency and ideas over policies; he or she is catalyst, spokesperson, energizer; she or he works by interacting with people about values and inspirations and by searching possibilities for people. Energizer is enthusiastic and passionate in championing people, causes and anything new.

Figure 2: Mental models according to temperaments. Source: built from Keirsey ; Bates, 1978; Kroeger; Thuessen, 1992; Silva, 1992.

5.2 Strategic Mental Model or Cognitive Style

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 chooses to describe herself or herself as innovative (Keirsey and Bates, 1978), and may be characterized as disorganized person by the low adherence to norms and rules and structures and many times are considered undisciplined. He or she is able to think strategically and to bring innovative solutions to daily problems and issues, 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. As the next step in to use the information in the decision making process, one may know if his or her decision will be taken in a rational way – strategist – or in a value based way – humanist.

Strategist prefers to look at the big picture rather than details in search for possibilities to build new systems or to solve daily and potential problems, and tends to make decisions based on logic and objective–analyzes and in an impersonal way. She or he is a visionary, architect of systems, builder, and works on ideas with ingenuity and logic, is imaginative and analytical, exploring all the possibilities in any situation. She or he learns by an impersonal and analytical process for personal mastery, and believes that an organization's daily activities must be consistent with its mission and directs her or his energy toward building systems for the future.

Energizer tends to make value-based decisions by considering possibilities, and others' interests and wishes. In this way, she or he is catalyst, spokesperson, energizer, and works by interacting with people about values and inspirations; she or he prefers to look at the big picture rather than details in search for possibilities for people, and learns for self-awareness through personalized and imaginative ways. Humanist people are enthusiastic and passionate in championing people, causes and anything new.

In this way, Keirsey and Bates' temperament approach appoint for the potential of cognitive styles for future research related to the competitive business environmental analysis and to the entrepreneurs' strategic choices and decision making process, and, in this way, for addressing the relationship between the strategic choices and strategic decision process and the entrepreneurs' personal characteristics, as derived from her or his mental model.

6 Conclusion

The main purpose of this study was to make a link between entrepreneurs' strategic making process, their strategic choices and the influence of entrepreneurs' mental model as a personal characteristic in the strategy formulation and the way of running the enterprise. Based on the previous studies and researches, it was made possible to point out same theoretical correlations between both mental models and strategic choices.

As it may be noted, the rational model presents limitations to explain entrepreneur choices and decisions because, as it is posited, the bolded rationality brings about limitations to the perception process and, in this way, to the entrepreneurs' strategic choices and decision making process. As an alternative approach, by emphasizing the role of the perception process in the strategic choices and decision process, this study proposes the mental model, as measured by the Keirsey and Bates temperaments, as a way to better understand the entrepreneurs' strategic choices and strategic decisions,

Theoretically, the development of this propositions signs an interesting research field because many studies on this issue have a main focus on the strategic decision process instead of on the entrepreneurs' mental model or cognitive style. By proposing the temperaments propositions as a way to address the strategic choices and strategic decision making process and the influence of the personal preferences, this study presents a model that may help to explain how an entrepreneur perceives the business environment and, in doing so, how she or he uses his or her cognitive style or mental model to make choices and decisions.

As the business environment is in a rapid transformation and requires entrepreneurs to bring~~s~~ forward or react~~s~~ to challenges and threats and the opportunities that appear and disappear, by knowing the one's mental model or temperament, it may be theoretically possible to make previsions about her or his chance to succeed in the strategic choice process and in the decision that will be taken in running the enterprise. In this way, this proposition may be an alternative direction for the definition of entrepreneurs' mental models, that is, their personal characteristics and their influence in the strategic

choice and decision making processes. But, this is an answer that only empirical research may confirm or disconfirm.

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