

ON EXECUTIVE’S RESILIENCE: DOES MENTAL MODEL MATTER?

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In facing disruptive environmental changes, companies must cope with unexpected challenges, threats, and opportunities. To succeed, executives need to overcome severe stress to find new ways to survive and thrive. They need resilience, a dynamic process encompassing positive adaptation within the environment of significant turbulence. Different executives will present different resilience patterns. This paper proposes Mental Models (MM) as a way for explaining these differences. Through the analysis of the 10-item CD-RISC scale by five independent judges, the paper concludes the Strategic MM as presenting a better resilience pattern and proposes its development as a way to enhance executives’ resilience.

Palavras-chave: Executives’ resilience; mental models; resilience development



1. Introduction

Disruptive events occur far more frequently than previously anticipated. They may have different impact on different people and in different business. Therefore, the major business paradigm may become irrelevant and not valid anymore. When the paradigm shifts, everything goes back to zero (Kuhn, 2012). This unpredictably and disruptive changing circumstances has forced executives and firms to adapt their business operation with many new and unexpected challenges, threats and opportunities. The big challenge that is faced is not only to survive, but also, to prosper during such environmental upheavals (Billington & Billington, 2010). Here the past success guarantees nothing (Writt, & LaCaze, 2001). It will not help in understanding and analyzing complex and dynamic situations, which cannot be understood and managed using existing norms and routines (Sprogøe & Elkjaer, 2010). They are demanding flexible and extemporaneous and innovative strategies and actions (Kimani, 2017).

To succeed in this challenging environment, executives need support the severe stress and to perceive and understand a broad variety of emerging drivers of change to find new ways for surviving and prospering (Jurse & Vide, 2010). They need to perceive and understand the nature of opportunities, uncertainties and risks, and their possible consequences for the performance of their firms. The keys for not only surviving such events, but to prospering in such business environment upheavals are resilience and a strategic mental model.

The main purpose of this study is to make a link between the executives' resilience and mental model and to point out same theoretical correlations between them. Next is presented some concepts on resilience, the mental models proposition and a proposed relationship between executive mental model and resilience.

2. Resilience

The business environment is becoming turbulent and disruptive faster than organizations are becoming assertive and resilient (Hamel & Valikangas, 2003). Hence, becoming resilient is mandatory; it is needed not only to survive but emerge stronger after crisis (Mitroff, 2005). 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. To be effective, an executive need to be resilient. Resilience made possible for an

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executive being more prepared to create and implement sustainable approaches and strategies towards the environmental threats and challenges, for preserving organizational adaptive capacity (Zolli & Healy, 2013).

Resilience may be referred to the maintenance of a positive adjustment under a dramatically evolving environment or context (Sutcliffe & Vogus, 2003); and it is a dynamic process encompassing positive adaptation to the environmental adversity or turbulence (Luthar, Cicchetti & Becker, 2000). This positive adjustment requires the capability to perceive weak and anticipatory environmental signs for the coming crisis and turbulences. In the literature we find two ways of understanding resilience: reactive resilience or active resilience.

Reactive or passive resilience is “the ability to bend and not to break” (Bridges, 1995: 5) or as a form of passive absorptive capacity, the capacity to perceive, adapt and utilize perceptions and knowledge for adaptive purposes (Zahra & George, 2002). Many times, because the passive resilience, organizations, by defending the product-market domain (Miles & Snow), may became vulnerable because their limited capacity to deal with information and feedbacks coming from the environment.

Active resilience refers to the anticipated preparedness to cope with surprise and disruption in anticipation, and to deal with turbulences and disruption as sources of opportunities for organizational growth (Clair & Dufresne, 2007). In this way, active resilience may mean anticipation and be prepared for the opportunities that disruption brings. In the first case, resilience refers to a defensive strategy and refers to survival in the face of turbulence or threat; in the second, it refers to a prospective strategy; it refers to perceive the opportunities it brings and the competence to grow with the challenge and to transform the entire organization. The active resilience may be “characterized by a transition to a new state of functioning, rather than a return to the pre-trauma state” (Tomyn & Weinberg, 2017).

But, despite the many research and publications on resilience, one question remains without a consistent answer: Why some people are resilient, and most aren't. The mental model's

propositions may be a way to address this question. By knowing one's mental model, it may help executives for a better understand of themselves and understand their resilience capability. Follow we discuss what mental model is.

3. Mental Models

Mental models (many times called cognitive styles) may be described as characteristic models of perceiving, processing and using information gathered. Everyone has his or her proper

mental model. Different mental models may lead to different strategic choices facing the same business environment. When one knows the mental model of leader, one can assume that their choices and decision-making process are different if their perception and judgment are different from each other (Gallén, 2006 p. 119).

Differences in perception - concrete or sensorial and global or intuitive (Jung, 1991) - are the first to be considered because perceptions are the ways 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, it became possible to make a synthetic classification of leaders' mental model into two types: operational and strategic.

An **Operational Mental Model (OMM)** leader may be characterized by her or his focus on what is going on and by the search for precision, reliability, efficiency, prudence and discipline, and conformity. Practical, this leader tends to reduce problems occurrence by improving and maximizing the process efficiency and 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. She or he tend to see the 'organizational trees and their issues, but to fail in seeing the organizational forest.

A **Strategic Mental Model (SMM)** leader will see and understand the 'organizational forest'. She or he tends to be hardwired to pick up on patterns, future possibilities, and the big picture rather than details and specifics. He or she leads toward the future by exercising her or his vision, and drive to change and develop the team and the organizational system. In leading, he or she can think strategically and to bring innovative solutions to daily problems and issues. She or he links factual and disconnected information and perceptions to form a pattern or trend, which are connect to new possibilities, ideas and facts for building a vision of the future and uses it to drive creative change and innovation. She or he may be sensible to people or privileges rationality.

In this way, Keirsev and Bates' temper approach (1978) shows the potential of mental model for future research related to the competitive business environmental analysis and to the marketing professionals strategic choices and decision making process, and, this way, for

addressing the relationship between the strategic choices and strategic decision process and the personal characteristics, as derived from her or his mental model.

4. Mental Model and Resilience: does Mental Mode Matter?

Because Mental Models bring their own strengths and weakness to the workplace, executives need to be aware of their own mental model before they attempt to understand their resilient behavior and their team resilience. Mental Models may be considered as the prime determinant of resilient behavior. Managers need to access their own mental model and their inherent strengths and weakness before assessing the resilience exhibited by current or potential staff members.

One thing literature appoint is that “resilience can only be demonstrated in face of adversity, which makes the exploration of resilience problematic on ethical grounds (Tomyn & Weinberg,2016). This measurement approximate actual resilient behavior by capturing the perceived resilience, or by having executives rate their level of agreement with the variables that typically describe resilient people. To make our proposed analysis of the relationship between mental models and resilience we decide for the 10-item CD-RISC scale. (Connor & Davidson, 2003) that is a short-form of the original Connor-Davidson Resilience Scale (CD-RISC). It has a strong conceptual clarity and a very low redundancy in items (Campbell-Sills & Stein, 2007). The variables used in the questionnaire constitute a single factor that represents resilience and they express adequately the ability to face and recover from the challenges and adversities encountered in life. By analyzing the variables of the 10-item CD-RISC scale it may be proposed that a low score in the scale will be related to the OMM and a high score will be a cue for SMM (Figure 2)

Figure 2. Mental Model and 10-item CD-RISC scores

LOW SCORE = OPERATIONAL MENTAL MODEL	10- ITEM CD-RISC SCALE	HIGH SCORE STRATEGIC MENTAL MODEL
They feel more comfortable with what is familiar. They prefer to live and work in environments where everything is predicted and planned. They like to follow the procedures, so things flow smoothly. It is their difficulty to adapt to the change of company.	1. Able to adapt to change	Ability to adapt to change is a person's characteristic of the strategic mental model. SMM is characterized by being able to perceive subtle signs of the environment and for diagnosing, anticipating the need for change, and to act for its realization.
Because they prefer predictability, they usually are not prepared for the unexpected.	2. Can deal with whatever	These people have a high capacity to deal with unforeseen situations in a creative and

As OMM people base their actions and decisions on past experiences, unforeseen is always something that can generate stress and tension

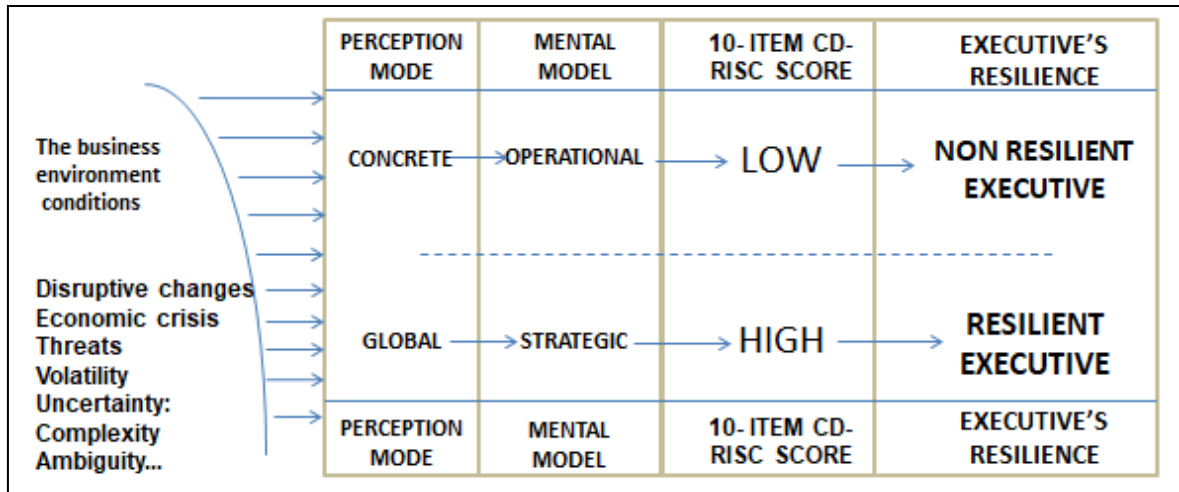
comes innovative way.

LOW SCORE = OPERATIONAL MENTAL MODEL	10- ITEM CD-RISC SCALE	HIGH SCORE STRATEGIC MENTAL MODEL
<p>Generally speaking, they are serious people and have a relatively low sense of humor. Concentrated, they work focused on results with a sense of responsibility and loyalty. They will present this ability only in the case they have an improvised lifestyle</p>	<p>3. Tries to see humorous side of problems</p>	<p>One of the characteristics of this mental model is his constant good humor, which manages to trigger even in highly problematic situations.</p>
<p>They have difficulty coping with stress, especially in situations where their skills and experience are not sufficient to solve new and emerging problems. They are more likely to present a defense reaction.</p>	<p>4. Coping with stress can strengthen me</p>	<p>Stress situations are appreciated for being opportunities for creativity to flourish and for solving complex problems</p>
<p>Their energy pattern and their willingness to work with what is known within established norms and procedures may lead them to have difficulty recovering in these situations. When they see other people succeeding, they tend to justify themselves by failing to do so</p>	<p>5. Tends to bounce back after illness or hardship</p>	<p>Relentless workers, as they have a high energy standard, they have a high level of activity and a high standard of recovery after illness or difficulties.</p>
<p>They seek efficiency and routine to solve problems. They make continuous improvements because creativity is not a talent. When obstacles come from areas outside of their specialty, they may feel pressured for facing these issues.</p>	<p>6. Can achieve goals despite obstacles</p>	<p>They seek and appreciate challenges and are skilled in dealing with emerging and unprecedented situations. The difficulties they face become challenges to their capacity</p>
<p>Under pressure they tend to exhibit repetitive or inappropriate behaviors, such as trial and error, acting or done without forethought, or even to dodge, evade the situation or aggressive behavior towards the source of pressure.</p>	<p>7. Can stay focused under pressure</p>	<p>In dealing with adverse conditions, these people think clearly and remain focused and calm and with an open mind, which allows appropriate and decisive actions, despite the uncertainties and demands,</p>
<p>These people are focused on efficiency for getting the planned results: "I did everything right, but it did not work!". Failure can have a severe and discouraging effect because of its impact on self-esteem. They can use rationalization to justify failure and reduce their impact.</p>	<p>8. Not easily discouraged by failure</p>	<p>Failure is considered a usual result for attempts to solve problems. As they perceive possibilities, a failure is nothing more than the opportunity for learning from mistakes, and they are an opportunity to try again, but differently.</p>
<p>Their self-confidence is derived from the consistent achievement of plans and goals and operational results. But in facing of disruptive demands, they may feel weak because of the lack of competence to deal assertively with them.</p>	<p>9. Thinks of self as strong person</p>	<p>They are self-confident and believe in their ability to overcome difficulties. In facing disruptive demands, they act creatively to get the desired results, which give them the sense of strength.</p>
<p>They may find it difficult to deal with unpleasant feelings, because of their focus on the reality of the moment, these feelings can acquire centrality and permanence leading to suffering.</p>	<p>10. Can handle unpleasant feelings</p>	<p>As they have a focus on possibilities and a global view of life, these people tend to suffer momentary impact from unpleasant feelings. The effect of these feelings can quickly dissipate due to the reduction of their centrality in vital issues.</p>

Source: build on Tomy & Weinberg (2016); Bressan (2018), Keisey & Bates, 1978; Jung, 1991; Myers & Myers, 1995, Tieger & Baron-Tieger, 1999; Myers & Briggs, 1988.

So, by knowing one's mental model, it may be possible to make predictions about the way an executive will deal with disruptive events that occur far more frequently than previously

anticipated and by knowing his/her preferences – mental models – it made possible to do previsions about the resilience pattern – passive or active - he or she will adopt (Figure 3). **Figure3.** Proposed relationship between Mental Models and resilience



Source: Author proposition

5. Crossing-Over from Operational to Strategic Mental Model for building resilience

In addressing the issue of executive development and within it the development of resilience, a question that arises concerns the ability of people to change themselves.

6.1. Are Human Being Modifiable?

A person is capable of acquiring for him-herself not only quantities of knowledge or skills but also new cognitive structures, by which are opened new areas that are not previously included in the stockpile of knowledge and abilities. This is the human being modifiability (Feuerstein, Falik & Feuerstein, 2014).

Human being modifiability enables the acquisition of additional abilities that are not previously present or accessible. We are not referring to abilities that are the result of developmental age, mental maturation, or the response to developmental experience. These relatively direct learning experiences enable trainees to use their accumulated experience in order to repeat successful actions and to avoid mistakes (the Operational Mental Model). Here we are talking about changes that lead one to interact with the world differently than what had been previously experienced. This type of substantial change requires a whole array of

thinking strategies and perspectives about the manner of its taking place: how to attend the stimuli, how to operate (manipulate, sequence, compare and so forth).

5.2 Changing the Mental Model: Crossing over from Operational to Strategic for developing resilience

Cognition processes involve the way whereby new perception, and information and data are assimilated and integrated in the existing cognitive schemata, and remains stable and available, even when it is applied to new situations. When one integrates a new perception in the cognitive schemata, the schemata remains changed. According to Feuerstein, Feuerstein & Falik (2010, p. 13), “every change that takes place in a part changes the whole which it belongs”. In order to adapt themselves to new additional situations, the cognitive processes will expand itself by the assimilation (taking it) and accommodation (integrating it to the schemata) processes. These processes cause modifications in one’s cognitive structure. If the learning has been structurally integrated and a structural change has occurred, it will be recalled with a high degree of accuracy many times following the learning. One will retain and preserve what is learned and will be able to apply the learned to solve problems permanently. The objective is to obtain the trainee applies the acquired and integrated knowledge and skills in conditions that differs from those where assimilation has occurred. This process refers to the plasticity of change.

For the challenge of crossing over from operational to strategic thinking, the first subject is perception. The larger underpinning purpose is to bring the strategic mental model into focus and to teach people how to function in new ways, with hopes that they would transfer new perceptual skills to dealing resiliently with adverse situations and in new problem-solving. The program may provide trainees with exercises that cause a cognitive shift from operational to the strategic letting the dominant OMM out of the task.

The conception of neuroplasticity (Kolb & Whishaw, 1998), the capacity for a brain constantly changes itself with experience, for reorganizing and transmuted and even developing new cells connections, is in direct contrast to the previous judgments of the human brain as a fixed ‘hard-wired machine’, with its parts genetically determined and unchangeable except for development in early childhood and deterioration in old age (Feuerstein et al 2014). In this way, plasticity opens new research possibilities and reaffirms the proposition on learning as a way for changing the way people live and think and for developing the resilience competence as a new goal of the executive education.

Brain plasticity opens the possibility of questioning the concept of creative talent and resilience. Nowhere has the idea of the hardwired brain, with its notion of given or not-given

talent. Our brain isn't a fixed mass that shapes our behavior. Our behavior also shapes our brain (Feuerstein, 2014). And yet we know now, from knowledge of brain plasticity and from

decades of research that resilience may be a simple skill that can be taught and learned by someone of sound mind who has learned other skills, such a reading, writing, and arithmetic.

5.2 Changing the Mental Model: Crossing over from Operational to Strategic for resilience development

For the challenge of crossing over from operational to strategic mental model, the first subject is perception. The larger underpinning purpose is to bring the strategic mental model into focus and to teach people how to function in new ways, with hopes that they would transfer new perceptual skills to creativity and problem-solving. The program may provide trainees with exercises that cause a cognitive shift from operational to the strategic mental model by letting the dominant OMM out of the task

One main goal of executive education should be enabled trainees to acquire and apply the understanding to what they have learned. Usually, executive education addresses the development of a rational, orderly thinking process - the operational mental model - compatible with the investigation, reduction, examination, summary, and analysis. If we also teach the global perceptual skills, these skills will help them “see things in context”, “see the whole picture”, and observe and apprehend- in short, to understand and bring meaning to the fragmented world of the operational mind and to be creative. In other words, it teaches to run and think in the strategic mental model.

One of the most encouraging new discoveries in the competence for strategic mental model development challenge is that human brain has made about itself is that it can physically change itself by changing its accustomed ways of thinking, by deliberately exposing itself to new exercises, ideas and routines, and by learning new skills. According to Edwards (2012) and Biswal et al (2010), as some scientists have noted, the human brain has the property for observing and studying, and wondering about itself, trying to analyze why it does what it does, and try to maximize its capabilities.

Now, at least, we can move beyond the ideas of fixed intelligence limits and special gifts for the lucky few and look for new ways to enhance potential brainpower. And yet we know now, from knowledge of brain plasticity and from decades of research that the strategic mental

model may be an alternative way for brain functioning that can be taught and learned by someone of sound mind who has learned other skills, such as reading, writing, and arithmetic

6. Conclusion

In this paper, the purpose was to study why resilience is so difficult and why some executives are resilient and most aren't. To address this issue it proposes the mental model as a way to

understand the difficulty for these managers to be resilient. The mental model is the usual working neurocognitive pattern of a person; it is the characteristic models of perceiving, processing and using information gathered. When the relationship between resilience and mental model are established it becomes easier to understand why for the some executives are resilient and most of them aren't: they have trouble to deal with environment VUCA the strategic issues of the executive positions

Every organizational intervention on executive development necessarily relies on some implicit or explicit model of human behavior and beliefs about the determinants of individual and organizational performance. It seems to be therefore just logical that success or failure is determined, in part, by these ways of viewing and managing people and organizations. In order to develop effective executive development programs and interventions, organizations need to put the mental models –operational and strategic - on focus of his or her attention.

There are some straightforward implications of these propositions for the executive's resilience development. One implication may be that before intervening with programs and specific techniques and practices, it is necessary to focus much more on helping managers and executives enhance and improve their strategic mental models. For face this task, the first thing to do is to help executives to identify their mental models. By identifying the executives' mental model, it made possible to improve or change those mental models. By the way, develop executives' strategic mental model possibly is among the most critical capabilities an organization need to develop. Mental models have broad implications for organizations success: they impact strategic management, decision-making process, leadership styles, creativity and innovation, and so on.

Changing how people think – their mental model - is going to be more difficult than just changing what they do since mental models are often deeply embedded below the surface of conscious thought (deep memory). But in spite of the apparent difficulty and its less tangible nature, working on the mental model and the way people think and act is, in fact, the most powerful and useful way to ultimately change executives' behavior and develop resilience, thereby to affect organizational results and success. In this way, we believe that the proposal made in the study appoints for the potential of Mental Model for future research related to executive's resilience development programs. It can be an open door to a new perspective on



how mental models may explain executives' behaviors and creates avenues for future empirical investigation on this issue. In this way, we also believe the proposal made will

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inspire other researchers to design and conduct research projects to address the impact of the mental model on the managers and the executives' resilience and success.

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