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### SPIRITUAL INTELLIGENCE AS SCHEMA FOR DECISION MAKING - THE UNTAPPED FRONTIER

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**I Alam; Spiritual Intelligence As Schema For Decision Making - The Untapped Frontier--  
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#### **Abstract**

The bedrock of all major religious beliefs has been that 'Man is a spiritual being, in search of the ultimate knowledge'. However, it is only recently that this aspect has been investigated from a scientific and analytical perspective and how it influences an individual's personality construct. The paper analyses the transformative potential of Spiritual Intelligence (SI) and effect on the decision-making ability of an individual and how it affects the cognitive capability of the human mind. The research extends the SI idea as a schemain order to suggest that it works both to restrict choices and to perceive cognitive information. This model provides a more detailed picture of the SI's impact and focuses the hypothesis on current human cognition theory. The paper, based on conceptual based theoretical evidence,proposes an Analytical Framework, which has been verified by quantitative data analysis on individuals in various leadership roles in the field of information technology. "Our culturesencourage us to learn both 'spiritual' and 'worldly' knowledge. If one learns spirituality, then worldly knowledge will become founded on spirituality."

#### **Introduction - Concept of Intelligence**

Intellectual ability depends upon the quantum of the 'intelligence' possessed by an individual. The quantitative measurement of intelligence dates back to 1905, when Binet and Simon propounded their first set of intelligence tests. Intelligence, a common word today, was almost unknown in popular speech

less than a century ago. During the latter part of the last century, the philosopher Herbert Spencer and Francis Galton, influenced by Darwin's research on the origin of species, studied mental ability and aspects of their individual differences. Subsequent studies dwelled on that there is an inborn human characteristic of general intelligence, distinct from special abilities (Aiken, L.R.; 1976:109). Conger(1997:141) observed that "intelligence is a hypothetical construct invented to help, explain and predict behaviour, and therefore no single specific definition could define it".

However, an explanation of intelligence that is widely agreed describes it as the mental ability of a person, in a spatio-temporal context and situation, that enables her or him to control practical manipulation of objects, things, or events in the environment, based on theoretical appreciation or understanding in a way that can adjust or solve problems and challenges being encountered, effectively. This ability or mental resource may only be measured as it manifests into the quality of an individual's performance or behaviour. Based on these characteristics, the outcome or manifestation of intelligence is the 'quality of behaviour or performance'. Behaviour, definitely cannot be a result of only formal learning, i.e. Intelligence Quotient (IQ), but is a much deeper aggregated assessment by the human mind.

### **Motivation**

SI (Spiritual Intelligence) is elaborated as 'the adaptive use of spiritual information to facilitate everyday problem solving and goal attainment' (Robert Emmons (2000)). While intelligence quotient and emotional quotient have been aptly measured and researched upon, the spiritual quotient (SQ), even after having biological evidence to support its presence (Newburg et al., 2002; Joseph et al., 2003) has yet to come under an analytical scanner due to which it has been insufficiently investigated. The decision-making capability of individuals relies significantly on the environment and an individual's 'human intellectual capital'. A plethora of literature was surveyed, which pointed towards several studies conducted for mapping human intelligence and its effect on the performance of job, leadership, and stress level on an individual. The common objective in all these researches is to explore and assess the contributing factors of different intelligence types on human skills.

Price et al., 1985 came up with a mathematical process of describing human emotions concerning expectations and intensity. Correspondingly, different models have evolved for simulating the human brain. Pfeifer, 1988 offers a summary of emotional models, evolved during the period of 1960s-1980s. An expert model framework has been presented by Scherer, 1993, to model emotions. All of these models have tried to map basic human emotions and reactions but have not addressed the complex interactions of the basic emotions with spiritual intelligence. In more general terms, the earlier conducted research did not include the complex system of human decision-making in totality, as a very salient aspect of spiritual intelligence has not been considered. The earlier research also does not adequately model interactions

among IQ, EQ, and SQ, the way these overlap with each other, and how these are inhibited. This research has been conducted to plug this research gap of how SI influences the decision-making process.

### **Problem Statement**

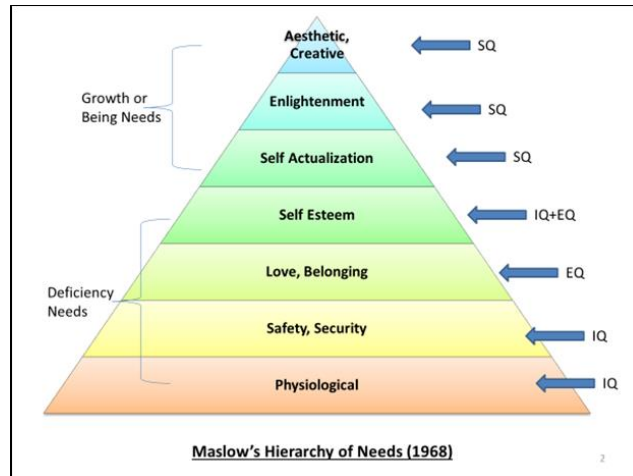
Extensive literature survey reveals that SI is a critical aspect in the process of decision-making (DM). Considering the complex process of making decisions, it can be stated that S.I. brings in a significant effect on the decision-making ability, mainly if it involves an individual working as part of a larger community/organisation, wherein the decisions made are in real world scenario. Therefore, it becomes imperative and essential for understanding the impact of Spiritual Intelligence (SI) on the decision-making traits of individuals. Since the research aspires to map effect of SI dimensions on an individual's DM traits, the study has been undertaken on individuals working in high technology area viz. information technology sector. Subsequently, a framework and a corresponding model is proposed, and a prototype realization of a computational model has been evolved.

### **Evolution of Analytical Intelligence - From IQ to EQto SQ.**

The thought of 'what makes us what we are?' and 'What makes a human be called as smart?' would have crossed our minds, and this was the seed for research on the concept of Intelligent Quotient (IQ) in the last century. One of the early experiments on testing a human's intelligence commenced in early 1900. French psychologist, Alfred Binet, came up with one of the first objective methods to measure intelligence. Numerical, as well as Standard verbal tests, were propounded. Binet's IQ. Tests have been known for 60 years, yet intelligence theories started to evolve in the 1970s, and objective empirical studies on 'Emotional Intelligence' (EQ) started somewhere in 1990. Subsequently, researchers viz. Howard Gardner, Robert Ornstein and Tony Buzan came out with the concept of multiple intelligence, and how the level of development of each of these intelligences in humans determine the skill sets and personality. Therefore, evolved the concept that a truly intelligent individual is one who is capable of mature handling and reacting to the environment which provides him stimulations and problems. Real intelligence comes from amalgamation and harnessing all faculties of the brain in the day-to-day aspect of life.

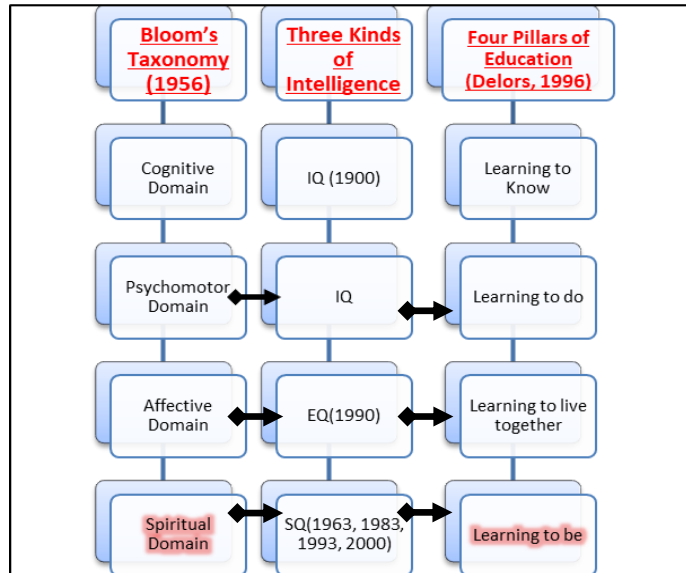
The book on 'Spiritual Intelligence' by Danah Zohar & Ian Marshall published in the year 2000, formally introduced the "Spiritual Intelligence" (SI) concept, which eventually brought it under the scanner for empirical investigations. Here it is important to mention that the concept of 'Spiritual Intelligence' was officially crystallised by three primary academic studies in the previous decade. The first one being by Abraham Maslow, who as a humanistic psychologist in 1954 announced his "Hierarchy of Needs," by classifying the entirety of human need into two general categorisations namely as 'Growth or

Being Needs' and 'Deficiency Needs'. For accomplishing the 'Being Needs', self-actualisation is required to be achieved, as illustrated in figure 1, only when Spiritual Intelligence is found active.



**Figure 1: Illustration of Types of Intelligence when mapped on Maslow's Hierarchical needs**

Benjamin S. Bloom conducted the second main academic event in 1956, wherein in Taxonomy of Educational Objectives, the objectives were classified into three domains viz. Affective Domain, Psychomotor Domain along with Cognitive Domain. The third academic event was when the study Delors under the title of "Learning: The Treasure Within" was published under UNESCO in 1996. The report propounds four cornerstones of modern education as the fundamental global educational curriculum framework. The aspect of 'Learning to do' and 'Learning to know' are concerned undoubtedly with IQ. (Intellectual Intelligence). The third aspect of "Learning to live together", is concerned unequivocally with EQ (Emotional Intelligence) and the last one being "Learning to be" is concerned with Spiritual Intelligence/ Spiritual Quotient (SI/ SQ). It is interesting to understand the inter-relationship between these three major studies which may form the formal foundation of further work on Spiritual Intelligence as well as its potential as a transformative element in day to day dealings and decision making. Representation of the inter-relationships between these three studies is illustrated in Figure 2.



**Figure 2: Inter-relationships between major studies towards assessing the potential of SI as a transformative element**

### Concept of Multiple Intelligences

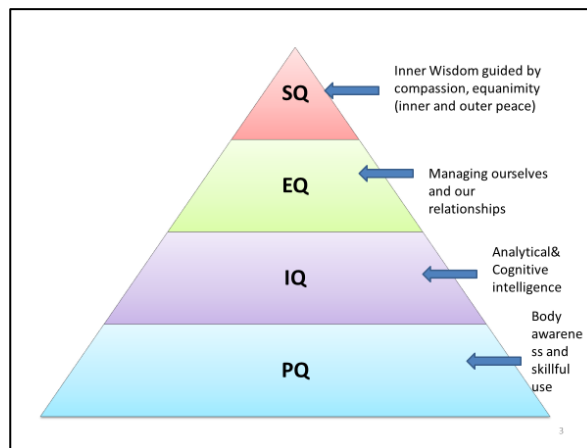
Gardner and Hatch(1989) brought out the Multiple Intelligence (MI) Theory concept in that humans have seven distinct attributes of intellectuality or cognitive styles. These attributes constitute intelligence, with their corresponding observable and measurable parameters. The novelty in Gardner's approach is that every factor/attribute has a distinct construct that qualifies as intelligence. The seven intelligences include *Logical-mathematical*, which manifests in Scientist, Mathematician; *Linguistic* (i.e. sensitivity towards various sounds and meanings of words as well as various language functions), which manifests in Poets/ Journalists; *Musical* (i.e. appreciation for forms of musical expressiveness), which manifests in Musicians/ Composers; *Spatial* (ability to perceive the spatio-temporal world accurately), which manifest into Sculptor/ Navigator; *Bodily-kinesthetic* (capability to control movements of the body), which manifest into Dancer or Athlete; *Interpersonal* (Capacity to differentiate as well as accordingly answer to the desires, aspirations, needs and temperaments of other people), which manifest in Therapist/ Salesman; *Intrapersonal* (ability to understand someone's feelings as well as strengths and harness them to guide suitable behaviour) which manifests in accurate self-knowledge.

It has been observed that the nature of various intelligence manifests in different personalities. Linguistic Intelligence and Logical-Mathematical Intelligence are defined as "sensitivity" and "capacity". Bodily-Kinesthetics Intelligence and Music Intelligence are defined as "skills" and "abilities".

Interpersonal Intelligence and Spatial Intelligence are defined as “capabilities”, along with the Intrapersonal Intelligence is defined as “access to one’s own feelings”.

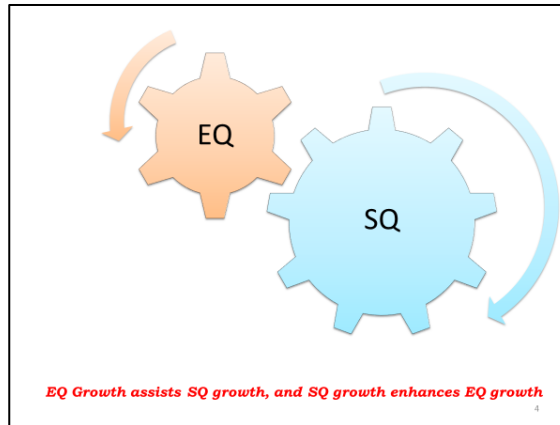
### Relationship Model - IQ, EQ and SQ.

Development of multiple intelligences begins with Motor Intelligence (or physical) “PQ”, which develops in a child, then IQ or verbal and logical intelligence that generally our educational system focuses on, and then EQ or EI. In researches conducted in last three decades, a strong correlation between EQ and professional success has been found as compared to plain IQ. However, IQ is acknowledged as the gateway to a professional career. However, once an individual is into a job, it is the EQ which makes a successful professional. The concept of ‘Multiple Intelligences’ when mapped onto the Maslow’s Hierarchical Model, as seen in Figure 1, can be illustrated as in Figure 3.



**Figure 3: Multiple Intelligences Concept mapped onto the Maslow’s Hierarchical Model**

The above hierarchical order brings out the inter-dependence of EQ and SQ. Some EQ is required in an individual for him to develop Spiritual Intelligence (SI/ SQ). Self-awareness and empathy form the foundation for this, and as a person reinforces his spiritual practices, SQ can reinforce EQ growth, and EQ growth may encourage SQ. growth, thereby both positively reinforcing each other. This self-reinforcing mechanism can be visualised, as illustrated in Figure 4.



**Figure4: Self Re-enforcing mechanism between EQ and SQ.**

### **Transformative Potential of Spiritual Intelligence**

Although, the concept of SQ or Spiritual Intelligence was introduced in recent past, however, it is interesting to note that this “new” idea is also oldest of humankind, as all major religion emphasise the development of ‘spiritual quotient’, through various practices. FC Happold, 1963 in the book titled “Mysticism,” has used the phrase “Spiritual Intelligence”. In his book “Frames of Mind: The Theory of Multiple Intelligence (1993)” Howard Gardner acknowledged the significance of spiritual intelligence. Subsequently, the construct “Spiritual Intelligence” was recognised as an area of qualitative/quantitative research. Thereafter, several treatises on Spiritual Intelligence as well as related concepts/ constructs were published. Zohar, Danah, and Ian Marshall (2000) concluded that three basic intelligences (SQ, EQ and IQ) work and support each other, and the human brain is designed to do this. However each of them - SQ, EQ as well as IQ - has its strength area, and they can function distinctly and independent of each other.

Physiological research indicates the presence of 40 Hz brain waves throughout the entire brain, which can be termed its natural substrate. Just as serial neural tracts network facilitate rational intelligence and logical reasoning (IQ), parallel neural networks allow unconscious as well as preconscious associative reasoning (EQ), the 40 Hz brain-oscillations (also called Gamma wave in the brain) facilitate our experiences to be bound together and be visualised in the broader frame meaning.

The following aspects of Spiritual Quotient (SQ) have been enumerated based on the narrations, descriptions, assertions and findings in the last three decades:

- SQ. helps us differentiate between evil and good and to discover possibilities.

- SQ connects emotion and reason/body and mind. This provides the realisation for self-improvement as well as transformation.
- It is an innate and internal capability of the human mind, drawing its resources from something unexplained.
- It is the soul's intelligence, which makes us complete.
- SQ is neither value-dependent nor culture-dependent.
- SQ is independent of religion but is the seed for religiousness.
- It is responsible for what we are and gives us the potential for more development, evolution and transformation of human potential.
- SQ enables creativity, flexibility of ideas, visionary or creative spontaneity.
- It makes us aware of existential complications and enables us for solving them or at least for finding peace about them. This provides an appreciation of struggles of life.
- It is SQ, which enables us to appreciate good and evil, empathise with human suffering without heartless rationalisation.

Therefore, based on the researches till now, signs of a developed SQ would manifest as following characteristics into the personality of an individual.

- Flexibility of ideas and being impulsively adaptive.
- Ability to face suffering as well as transcend pain.
- Self-awareness.
- Ability to be inspired by values.
- Not deliberately causing harm to anyone.
- Ability to be holistic, i.e. seeing higher connection among various things
- Seeking fundamental answers to 'what' or 'why'? if? questions
- Having the courage and capability to take a stand against convention

### **Dimensions of Spiritual Intelligence**

Spiritual Intelligence is the supreme intelligence which matters and instills purpose that put our acts in a broader, deeper and more profound light so that we can see that one course of action is more meaningful than the other. Spiritual Intelligence is an essential aspect of relationships as it adds a dimension to everyday structured life and provides it with spirituality and depth. According to Danah Zohar 2000, the ten qualities/ dimensions essential for SQ are Spontaneity in responding to a situation, compassion, celebrating diversity, being independent, being holistic, succeeding on adversity, value led, being vision and self-awareness, and having the courage to risk being unpopular, the inclination to ask critical questions and capability to stand back and see the better depiction. Therefore, research indicates that high Spiritual Intelligence manifests into heightened consciousness; transcendence; capacity to look at daily activity with a sacred sense; apply spiritual resources to practical issues; engage in virtuous behavior viz. gratitude, compassion, forgiveness, wisdom and humility (Robert A. Emmons).

### Effect of SI on an Individual's Personality

The Holland test (JL Holland, 1958) identifies six personality types, which has, over time, been substantiated with wide-ranging research. The six personality categories include *enterprising*, *realistic*, *artistic*, *investigative*, *social*, and *conventional*. A propensity to show characteristics from various groups is maturity and symbol of high SQ. An inexperienced person could only have developed one ego type, whereas an enlightened person (highly SQ) could have a balance of all six of them. When the SQs are high, an individual is in contact with wholeness, compared to when the SQs are low, the emotional behaviour becomes a caricature of a healthy human response, which restricts and fractures the response. This lack of spontaneity and reaction eventually paralyses the capacity of an individual to take care of actions. This may have a 'negative feedback' response on IQ, leaving an individual in doubt of the rational decisions taken or in some cases unable to solve problems, resulting in the person to behave like strangers when faced with situations. Nevertheless, natural progression towards higher SQ results from reflection, awareness and experience. In order to address any issue, it requires visualising it spiritually in a broader context from which it can be viewed more holistically. Spiritual wisdom exhibits the acquirement of this contemplation viewpoint, the emphasis on which problems occur and the reasoning of how those difficulties emerged.

Past researches reveal various perspectives regarding the aspects and dimensions of SI viz. *Vaughan* (1979) believes that Spiritual Intelligence can be developed/ enhanced by anyone, similar to feeling, sensing, thinking, and intuition; *Richards* (1999) states that Spiritual Intelligence is essential for constructing correct judgements that contribute to psychological well-being and spiritual growth. SI is knowing what difference being successful or unsuccessful would make in one's life, and therefore, enables to get "in control" of oneself, internally, which manifests in outwardly actions. SI enlightens the heart and mind and helps people recognise virtues viz. forgiveness, selfless love and virtuous behaviour (wisdom, compassion, humility, gratitude, and forgiveness) (*Robert A. Emmons*). maturity of not blaming others enables us to make amends to those we have acted toward in an irresponsible way. This requires wisdom to understand the difference between positive and negative emotions. This is where EQ and SQ overlap. We raise our Spiritual Intelligence when we discover how to access our inner peace, which is also one of the attributes of SI, and transcends 'rational' and 'emotional' dimensions of an individual's mental ability. A Spiritually mature individual is one whose actions express wisdom and compassion as well as ethical behaviour. Spiritual Intelligence may have its linkages to cognitive, moral or emotional, development; however, this is not similar to any of them.

### **Cognitive Aspects of Spiritual Intelligence**

Among the various descriptive aspects, one of the most inclusive definitions of Spiritual Intelligence is proposed by White (2006), which defines SQ in terms of a set of seven cognitive characteristics, i.e. a higher level of consciousness which affects intellectual development, providing an individual with the unique ability to form a vision with a notion of ultimate purpose; the ability of instinctively seeing connections between existential ideas and life experiences; providing a grounding for self-efficacy (i.e. one's belief in own capability to accomplish a task) coupled with an empathy for others and to seek existential answers that support a rational theoretical orientation. Further, Zohar (2005) also addressed spiritual aspect of leadership, with defining characteristics viz. Self-Awareness, Spontaneity, Vision- and Value-Led (actions based on principles), Holism (seeing connections and relationships) and Vocation sense (suitability feeling to serve a higher purpose).

The multiple dimensions, as brought out, make SQ an inevitable factor in the decision-making process. Not only as it involves a capacity for deep understanding of multiple dimensions to a situation, but also an assessment of possible solutions, by an individual based on his/ her own personality that determines decision-making and the final choice. Organisations where there is a need for a person to maintain the view of the big picture, Spiritual Intelligence achieves its true significance.

### **Interpersonal Aspects of Leadership and Spirituality**

Research on spiritual and leadership aspects (from decision-making perspective) have generally underlined relational facets, e.g., motivation, empowerment, self-care, ethics, employee satisfaction, and the creation of a meaning sense for employees (Milliman et al. 2003; Fry 2003). Some studies indicate that spiritual organisations enjoy a strategic advantage over their rivals (Mitroff and Denton 1999; Marques et al. 2005). These studies, linking organisational output and spirituality, have also been referred to as workplace spirituality (Gotsis and Kortezi 2007). Strategic leadership and decision-making have not been explicitly addressed or connected in any of these or related studies. Strategic leadership is focussed on the mission and vision of an organisation (Hooijberg and Boal 2001; Aditya and House 1997), which is a direct manifestation of their effective decision-making. If organisations are reflections of their leaders, then a leader's IQ, EQ and now SQ level determines how effectively that leader functions in his role.

### *Influence of SI on Strategic and Supervisory Leadership*

Strategic decision-making is closely linked to strategic leadership, which is focused on those leaders who are responsible for the fate of an organisation (Hunt and Phillips 1992). On the other hand, Supervisory leadership is more connected to the day-to-day functioning of an organisation, which also determines its productivity. Supervisory leaders focus on directing, guiding, as

well as supporting subordinates, whereas strategic leaders create organisational meaning and purpose (Boal & Hooijberg 2001). An aspect of strategic leadership applicable to spirituality is that organisational culture is in effect the reflection of the personality of its leadership as well as the people (Cannella and Monroe 1997). Therefore, it can be said that a manager's knowledge, experience and values, which transforms into his choices and preferences, are reflected in his decisions and appreciation of the situations.

According to one of the previous hypotheses in this area, called “*Upper Echelons Theory*” (Hambrick and Mason 1984), results achieved by an organisation are a replica of the values being followed as well as cognition by the leader. *Upper Echelons theory* has developed into the *Strategic Leadership Theory* (Hambrick and Finkelstein 1996). Contemporary strategic leadership often recognises the interpersonal composition and background considerations of leaders in addition to values and cognition. The theory of strategic leadership also explores organisational results, which a coalition of leaders affects (Cannella and Monroe 1997). It was also noted that strategic leaders do not have the same influence as line managers in an organisation (Lewis and Jacobs 1992). Their decisions may have significant consequences for the corporation because of their level of control; however, Hitt et al. (2010) observed that various strategic leaders failed effectively to deal with turbulence on the ground level. In strategic leadership, the failures are generally attributed to greed, hubris, short-term focus, as well as unethical practices. Such failures emphasise the significance of leaders' Spiritual Intelligence and its influence on their decision-making as well as ultimately the fate of the organisation.

#### *Effect of Spiritual Intelligence in an Organisation*

In addition to effect at an individual level, SI also manifests as a positive influence in organisations, by influencing the value system of the community. The following are the manifestations of spirituality in the workplace: -

- **Emphasises Sustainability.** When work contributes to the larger welfare of the society and the world, promotes sustainability and awareness of limited resources. This organisational approach seeks to contribute to the larger good / betterment of society.
- **Values Contribution.** More than providing service to customers, it indicates a larger sense of responsibility to contribute to the betterment of the society viz. Corporate Social Responsibility (CSR) initiatives.
- **Prizes Creativity.** Organisations promote creativity to harness the hidden potential in employees which enables a sense of fulfilment.
- **Cultivates Inclusion.** Organisation values and respects individuals' life experiences and the lessons learned from them. This type of organisation is sensitive to the needs and capabilities of its people and endeavours to include individuals who bring appropriate skill sets to a particular job, but hitherto have

been left out viz. people with physical disabilities, ethnic origin, caste, discriminated against due to gender or sexual orientation.

- **Develops Principles.** Organisations have now realised the need of inculcating and recognising ethical values that promotes personal growth, character development, and personal connections of faith. Employees are encouraged to develop a sense of influence that other people have on them and what they have on others.
- **Promotes Vocation.** Organisations have long been aware of the benefits of shared ownership of corporate values by every member of the organisation. It has been now acknowledged that a person's spiritual growth and fulfilment need not be separate from his work; in fact, it promotes honesty and commitment towards his work and understanding among employees.

The six aspects brought out above serve as building blocks towards how spirituality influences the workplace environment and positively influences the overall productivity. The above argument highlights the importance of SI as an important aspect of the cognitive framework utilised by a leader and its deep impact on the decision-making process. This can also be seen as a cognitive map, paradigm, or *Strategic schema* used by managers as a compass for setting organisational/ work direction. The schemas help to make the information accessible to the leader, appear in a manageable format by combining it into a cohesive whole and therefore minimising and prioritising the presentation of gathered data. Thus, schema affects the information available to the leader and eventually, how it is perceived (Hewlin and Lant 2002).

Interestingly, the dominant logic or value system is also called strategic schemas (Narayanan and Nadkarni 2007). This acts as a filter through which the manager/ individual filters information in context to his work and the Organization when making decisions. When work-related issues get characterised by ambiguity, the modern-day professional/ manager interprets the environment through his life experiences.

The Strategic Schema literature outlines three processes by which schemas affect decision making, i.e. action, interpretation and scanning (Thomas et al. 1993; Weick and Daft 1984; Milliken 1990). The definition of a schema is regarded as important for current research because it offers a model of how the moral wisdom of professional influences strategic decision-making ability. If an individual's cognitive system is a part of spiritual wisdom, then it will act as a schema. Therefore, an individual's SI filters the available information and enables him/ her to assign relative importance to the available options. The principle of strategic leadership asserts that the attitude of a boss determines his vision (Monroe and Cannella 1997). The concept of SI as a schema thus correlates with the philosophy of strategic leadership. Several other scholars have examined the influence of a person's religious values/ spirituality (Worden 2005; McIntosh 1995) and ethical principles (Hitt and Ireland 1999), however these works only indicate that beliefs are used to screen out or

filter the alternatives towards decision-making.

The framework suggested in this paper extends the idea of spirituality as a schema towards proposing the transforming potential which operates both in terms of restricting options (filtering available information) and interpreting options (framing). This extension provides a more detailed picture of SI's effect on current information/ cognition theory.

In an Organisation, if SI acts as a Decision-Making schema for a Leader, other variables, which could influence the operation of SI as schéma, could be as follows: -

- *Constructive Development.* Constructive development is based on the concept that reality perception evolves over a person's lifetime. Accordingly, Kegan (1982, 1994) suggested that a person's capacity for constructive development grows his/ her potential to think and discern complex environment, expands.
- *Belief System.* It addresses the aspect of what an individual believes about his/her own value system/ belief structure, i.e. self-awareness of belief. Each individual places his spiritual belief system and values in context and accordingly uses in a way. Therefore, *the belief system concept is not about the belief itself but about how that belief is held* (Lewis and Jacobs 1992).
- *Organisational Context.* Organisational context has an impact on the understanding of available information by leaders in strategic decision making (McDaniel and Thomas 1990). Organisational context is a broad category that can include several different attributes viz. communication channels, Organisational structure, and decision rules (Ocasio 1997). Organisational culture moulds the members' perspective (Smith and Vecchio 1997). Considering the broad organisational context, John's (2006) distinguished between two contexts (e.g. global and organisational culture, organisational structure and time) and the discrete context (i.e. national and organisational culture) (e.g. nature of the task, social dynamics, and physical setting). The effect of a strategic leader's moral conviction in decision-making may moderate these two contexts. Both of such context types could moderate the impact of a strategic leader's spiritual belief on decision making.
- *Leadership Style.* The leadership style practised and adopted by a strategic leader and will moderate an individual's spiritual belief and values, thereby influencing strategic decision making.

### **Summary of Research/ Focus Areas and Corresponding Gaps in Research on SI.**

The transformative power of SI has been brought out in the preceding

paragraphs. This is significant to understand that SI being a relatively nascent field, researches are delving into various aspects. Accordingly, a map of the research undertaken, in the last seven decades, on the effect of SI on diverse aspects/ attributes, has been summarised and presented in Table 1. On the vertical axis of table 1 are the name of the prominent researchers and along the horizontal axis is the focus / research area of Spiritual Intelligence. The 'shaded boxes' indicate the link of corresponding research with respective researchers.

**Table 1 : Map of the major researches undertaken in the last seven decades on the effect of SI on diverse aspects/ attributes**

Focus/ Research Area of SI	Self-actualization	Transcendence	Heightened states of consciousness; sense of sacred in activities/ solve problems; virtuous consciousness; grace, meaning, truth, peaceful surrender, inner directedness; connectedness	Self-Realization; Professionalism; Self-worthiness; Intellectual; Community	SQ in Educational objectives	Mysticism; faith and spirituality	Developing SI	Spirituality and dimensions of life	Influence on health and mood	Personality, transpersonal aspects	Multiple Intelligence	Dimensions of Spirituality/ SI/ SQ	Relation between IQ, EQ & SQ	Problem solving ability & Goal attainment	Towards intellect, emotions & consciousness	Organizational / workplace performance & Spirituality	Cognitive Capability	Multi Criteria Decision Making in Teachers	Ethical Decision Making	Framework for HRD
Abraham Maslow; 1954																				
Benjamin S. Bloom; 1956																				
F.C. Happold; 1963																				
Vaughan; 1979																				
Paloutzian and Ellison; 1982																				
Idler (1987) and Marcoe (1994)																				
Griffin; 1988																				
Costa & McRae; 1992, Piedmont; 1999																				
Wuthnow; 1998																				
Roof; 1999																				
Gardner; 1993, 99																				
Piedmont; 1999																				
Bowling (1999) and Emmons (1999, 2000)																				
Douglas A. MacDonald; 2000																				
Danah Zohar & Ian Marshall; 2000																				
Margot Cairnes; 2001																				
Woolman; 2001																				
Tanis Helliwell; 2001																				
Vaughan; 2002																				
Sisk, 2002; Wolman, 2001																				
Capra, Fritjof; 2003																				
Marques; 2005																				
Amram, 2007																				
Baba 2007																				
Cherian P. Tekkeveettil; 2005, Kadkhoda et al.; 2012																				
White; 2006																				
Tombaugh, Mayfield and Durand; 2011																				
D. Anbugeetha; 2015																				
Prem Shankar Srivastava; 2016																				
Upadhyay S and Parashar 2013; 2017																				
Upadhyay, S.; Upadhyay, N; 2012; 2016																				
Ahmed, A., Arshad, M.A., Mahmood, A., & Akhtar S.; 2016																				
Shahram Arsang-Jang, Ashraf Khoramirad; 2017																				

## Decision Making

Decision-making is a rational process wherein a course of action is intelligently selected among several possibilities and is an important component of the process of cognition. The consequence of the decision-making process is the availability of choice of possible action. This process embeds within itself the personality of the decision-maker, which is an amalgamation of his IQ (Intelligence Quotient), EQ (Emotional Quotient) and Spiritual Intelligence/

Quotient/ (SI/ SQ). Decision-making is a problem-solving ability, which terminates into a solution, deemed to be optimal/ satisfactory by the decision-maker. Thus, the process may have aspects of rationality or irrationality based on knowledge and beliefs. Human's intelligence-based performance, as an outcome of his decision-making abilities, has been a topic of active research from the following perspectives:

- Psychological: decisions in context of value preferences of an individual.
- Cognitive: decisions for understanding and interaction with the environment.
- Normative: individual decisions adhering to prescriptive norms.

Decision-making includes analysing the best out of the alternatives and prioritising these alternatives based on the criteria of success. Any assessment of decision-making capability essentially is based on six steps, which are part of the decision-making procedure. If the structure as well as process of following six basic elements are improved, it will enable better overall decision-making: -

- Creating a suitable environment which enables decision making.
- Finding all possible alternatives.
- Evaluation of alternatives.
- Conclusion on alternatives
- Examination of the alternative chosen.
- Executing.

### **Influencers of the Decision-Making Process**

The complexity of the environment (multiple factors) influences the cognitive function of the decision-maker. A complex environment comprises of many possible dynamic states, which evolves over time. Consequently, Decision-making can be modelled through multiple methods, among which some of the well-known include garbage-can, cybernetic, incremental, rational and political (Harrison 1999, Daft 2001, Beyer 1981, Bazerman 2002, March 1994).

The epicentre of any decision-making procedure involves the individual who, based on demands of the environment must take decisions to 'shape the environment' in favour of a situation. The decision-maker role in a managerial capacity is a complex one, as, she/he works in an organisational environment wherein, besides expectations to perform assigned tasks they have to interact with various stakeholders in the organisation, which influences their behaviour. The decision-making process is affected by a person's personal characteristics, i.e. values, belief system, skillset and his needs, which makes an individual react to the environmental / task demands.

Spiritual Intelligence shapes our value system and ideas, and in the decision-making process of an individual, it plays an important role. SI-based

decision-making may be related to what is generally called an intuitive decision-making mechanism. As per the Miller and Burke (1999), intuitive decision-making involves choosing subconsciously and spontaneously, based on accumulated experience which shapes judgment. Aspects related to intuition-based decision making is characterised by; subconscious decisions, decisions based on values or ethics, decisions based on experience, affect-initiated decisions as well as reasoning-based decisions.

Strategic decision-making benefits from SI of the decision-maker; however, there has been little research work integrating the two fields, due to the unique challenges in this field. Ashforth and Pratt 2003, work treats spirituality as a personal endeavour, wherein the organisation is an enabler for the manifestation of spirituality. On the other side, some studies e.g. Mitroff and Denton 1999, look at an Organisation is having its own spiritual values, which draws a parallel with organisational culture. Another perspective is that every entity, i.e. individual, group or an Organisation, has a 'spirit' (Marques et al. 2005).

There are several different and diverse views on this subject in literature. However, in this paper, the spirituality of individuals is under examination at different levels of leadership and how it influences decision-making capability. Accordingly, a framework has been proposed which links aspects of spirituality with decision-making. We also note the essential consistency in constructs and calculating thresholds, as spiritual wisdom analysis and its influences on the decision-making processes go from theory to evaluation.

Whereas IQ and EQ have been aptly measured and researched upon, the spiritual quotient (SQ), even after having a biological proof for supporting its existence (Joseph et al., 2003; Newburg et al., 2002) has yet to come under an analytical scanner due to which it has been insufficiently investigated. With workplace productivity and environment assuming a significant role in human resource management, the focus is shifting to values-based leadership and therefore, spiritual intelligence takes centre stage. Work by Rosner (2001) is towards work serving to spirituality, rather than spirituality to work. Spirituality incorporates more concretely our spiritual beliefs and needs into a professional environment.

### **Mapping of Research Areas and Identification of Research Gaps**

As part of the literature survey, factors/ variables contributing to strategic decision making and the influence of SI were analysed. Table 1 maps this research with respect to SI, and correspondingly highlights the research gaps. As can be seen till now, the following research gaps exist which justifies this research: -

- No dedicated study has been undertaken on how SI effects Decision Making (DM) ability of an individual, in general and in those involved in R&D in the technology sector, in particular.
- No study towards establishing correlation/ relationship between SI and various Decision Traits (GDMS Five-Factor model by Scott and Bruce, 1995 which classifies these traits into Impulsive, Intuitive, Avoidant, Rational and Dependent) has been undertaken till date.
- No decision-making model/schema relating to SI and DM has been formulated to date.

### Research Analysis

In this research, two main measurement instrument (questionnaires) have been used, which map *decision Making attributes* of an individual, (from Bruce's and Scott, 1995; GDMS instrument development) and the *Influencing factors* (which encompasses Spiritual Intelligence aspect based on Gardner, Howard. (1983) work on the theory of multiple intelligences, Emmons, Robert. (2000) work on SI, Motivation and cognition; and Zohar, D., Marshall, I. (1999) work on Spiritual Intelligence as the ultimate intelligence), respectively, for collection of statistical data. The questionnaire enables identification of an individual's Decision Making and Cognition styles or approaches they adopt such as avoidant, dependent, intuitive, spontaneous and rational, which helps in identification of decision-making behaviour of an individual and maps it to the degree by which that individual has been affected by the 'Influencing Factors'. For measuring the internal consistency and measuring instrument's reliability, Cronbach Alpha reliability test has been used. This is usually utilised when the questionnaire is established utilising numerous Likert scale statements as well as for determining if the scale is reliable or not. Cronbach Alpha value of 0.707 indicates good internal consistency of the measuring instrument.

### Population Distribution considered for the study

The total numbers of R&D professionals in the technology sector (hardware and software engineering) who have been considered for this study, working in an R&D Centre, at New Delhi were 500 working in various roles. The population distribution of the sample population is normally distributed, with Mean ( $\mu$ ) = 3.29 and Std Dev = 1.37. The small deviation of the different statistics from the optimal values for a perfectly natural distribution has been recognised as functionally appropriate. Therefore, this distribution has been accepted as a regular distribution curve in shape as well as form. This justifies the utilisation of relevant comparisons of subsequent nonparametric data.

### **Inferential Statistical Analysis**

Salient findings/ relationships established in this research, between various variables, are highlighted in succeeding paragraphs.

#### ***Relationship Between SI and Intuitive Trait***

A high correlation value of 0.8 has been observed **indicating a strong positive relationship between SI and Intuitive trait** of decision-making. Intuitive decision-making trait is described by attention for describing in the information flow instead of systematic search and information processing and a tendency to rely on feelings as well as premonitions. In other words, decision-making is characterised by the reliance on hunches, gut feelings, impressions instinct experience and feelings. This is an outcome of a developed SI; therefore, individuals with higher SI tend to exhibit intuitive trait during decision making.

#### ***Relationship Between SI and Dependent Trait***

A -0.787 correlation value is observed that shows a **strong negative relationship**. An individual looking forward to advise as well as guidance from others before making significant decisions defines a dependent style. This trait has been found to be negatively related to SI traits, as it exhibits under confidence, lack of self-awareness and inability of an individual.

#### ***Relationship Between SI and Rational Trait***

A high correlation 0.886 value suggests that SI and **rational trait** of decision-making have **strong positive**, constructive relationships. A comprehensive information search, inventory of alternative solutions, and objective examination of alternatives represent a rational style of decision-making. This is ascribed by utilisation of structured, logical as well as reasoning methods to decision-making. The strong positive correlation between these two variables indicates this decision-making trait, possibly, an outcome of awareness and self-mastery.

#### ***Relationship Between SI and Avoidant Trait***

A high negative correlation value of -0.748 observed between SI, and avoidant trait indicates a **strong negative relationship**. Avoidant decision-making trait is described by negating, moving back, postponing, and withdrawing the decision scenarios. That is, described by attempts for avoiding decision making, whenever possible, indicating an underdeveloped SI.

#### ***Relationship Between SI and Impulsive Trait***

A high negative correlation value of -0.751 between impulsive trait and SI, indicates a **strong negative relationship**. This decision-making style is described by making impulsive, quick, rapid and prone for making “snap” or “spur of the moment” decisions. It is defined as easily as possible by a sense of immediacy and an ability to make choices.

### Validation of Relationship Between SI and Decision Making

Chi-Square test has been undertaken on pairs of data set for testing the 'Null Hypothesis' (i.e. "there is no impact of spiritual intelligence on the strategic decision-making ability of personnel involved in R&D in the technology sector"), the outcomes are as illustrated in Table 2, as follows: -

**Table 2: Results of Chi-Square Test**

<u>SI</u>	<u>Variables</u>	<u>Null Hypothesis</u>	<u>Relationship</u>
(a)	SI v/s Intuitive DM Trait	Rejected	<ul style="list-style-type: none"> <li>Relationship exists. Higher intuition is observed in individuals having higher SI with <math>\chi^2(16)=239.67</math>; <math>p=0</math>.</li> </ul>
(b)	SI v/s Dependent DM Trait	Rejected	<ul style="list-style-type: none"> <li>Relationship has been observed, <math>\chi^2(16) = 162.25</math>; <math>p=0</math>.</li> <li>Individual having high dependent trait has been observed to have low SI.</li> </ul>
(c)	SI v/s Rational DM Trait	Rejected	<ul style="list-style-type: none"> <li>Relationship has been observed, <math>\chi^2(16) = 245.5</math>; <math>p=0</math>.</li> <li>SI and Rational DM trait have a strong direct relationship</li> </ul>
(d)	SI v/s Avoidant DM Trait	Rejected	<ul style="list-style-type: none"> <li>Relationship has been observed, <math>\chi^2(16) = 126.69</math>; <math>p=0</math>.</li> <li>Avoidant DM trait and SI are inversely related</li> </ul>
(e)	SI v/s Impulsive DM Trait	Rejected	<ul style="list-style-type: none"> <li>Relationship has been observed, <math>\chi^2(16) = 121</math>; <math>p=0</math>.</li> <li>Impulsiveness and Spiritual Intelligence are inversely related</li> </ul>

### Exploratory Factor Analysis

Interpreting the underlying component/ factor clustering of variables in SI measurement instrument, the following principal components emerge, which significantly contribute towards assessments: -

- Social Mastery
  - Awareness of eternal nature of Universe, the interconnectedness of life, world views of others, limitations of human perceptions, spiritual principles.
  - Spiritual Presence/Social Mastery, being an effective and wise facilitator/teacher/leader of change, being a calming presence, making wise as well as compassionate decisions, dynamism, being=doing.
- Inner Aspect of SI.
  - Awareness of your Higher Self and ego Self, purpose of your life, your values, your worldview/ perspective, complexity of decision
  - Inner aspects of spiritual intelligence; they are hard for the outer world to see. You can know them about yourself. Others infer you based on your behaviours.

- Value based living
  - keeping higher self in charge mostly, living your values/purpose, seeking spiritual growth, sustaining faith
  - keep matters of spirituality personal and not interfering in others

### ***Kruskal-Wallis H-Test***

Kruskal-Wallis H test has been used for understanding whether decision-making traits differ based on Spiritual Intelligence (SI) levels, wherein the dependent variable is 'Decision Making' and independent variable is 'SI'. The results of this test indicate  $\chi^2(2)$  value between 93 to 117. Based on these results, the following inferences can be drawn: -

- There is a statistically significant association between decision-making traits and SI dimensions.
- The low 'p-values', which are less than 0.05, for all five decision-making attributes, indicates that the null hypothesis, i.e. 'no impact of Spiritual Intelligence on Decision Making', is incorrect.

### **Model for Relationship Between SI and Decision-Making Traits**

To establish relationship and formulate model, six cases have been defined, defining the dependent and independent variables, and the regression models have been presented in Table 3.

**Table 3: Regression Models establishing a relationship between SI dimensions and Decision-making traits**

<b>SI</b>	<b>Dependant Variable</b>	<b>Regression Models of Final Survey</b>
(a)	Intuitive	Intuitive DM Trait = $-0.088 \times \text{QUAD 2} + (0.416 \times \text{QUAD 3}) + (0.514 \times \text{QUAD 4})$
(b)	Impulsive	Impulsive = $-0.075 \times \text{QUAD 2} - 0.134 \times \text{QUAD 3} - 0.3 \times \text{QUAD 4}$
(c)	Avoidant	Avoidant = $(-0.151 \times \text{QUAD 1}) - (0.114 \times \text{QUAD 3}) - (0.273 \times \text{QUAD 4})$
(d)	Dependant	Dependent DM Trait = $3.171 + (-0.161 \times \text{QUAD 2}) - (0.60 \times \text{QUAD 4})$
(e)	Rational	Rational DM Trait = $0.308 + (0.471 \times \text{QUAD 1}) + (0.449 \times \text{QUAD 2}) + (-0.063 \times \text{QUAD 3})$

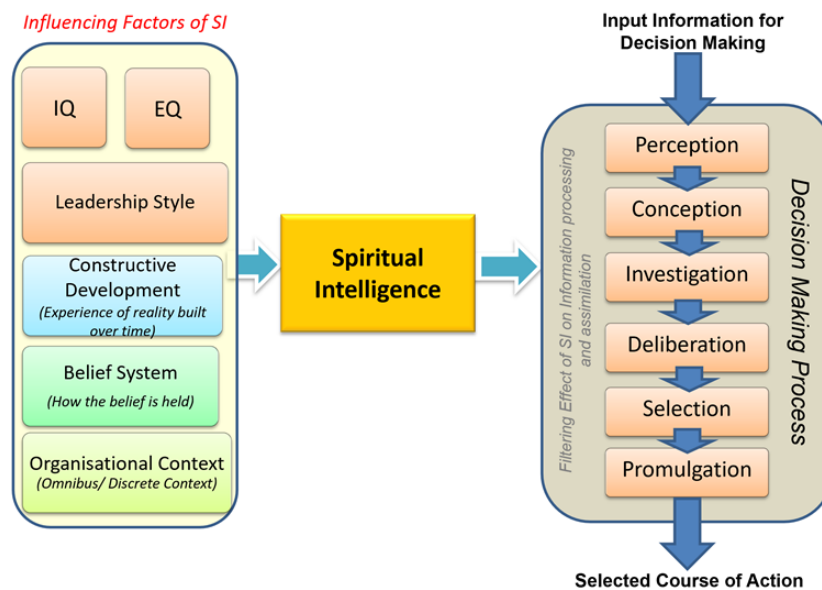
### **Framework for effect of Spiritual Intelligence on Decision Making in an Individual**

Individuals adapt to a particular environment based on congruence between personal style, perceptions and SQ, and so it is expected that differences in

decision-making (DM) style would be found in different groups working in different environments. For example, the military environment is highly structured; therefore, the decision making of Military Officers is higher on rational decision-making style and lower on avoidant, intuitive and spontaneous DM styles. Similarly, for personnel working in R&D positions, where technical proficiency and analytical thoughts are necessary, rational DM style would be higher. In the case of personnel in an R&D environment, DM style has been linked to innovativeness (Woodman, Sawyer & Griffin, 1993). Campbell (1960) modelled creativity as part of the process based on trial and error learning. Thus, it has been suggested that for rational DM style, focus on logic, order and systematic analysis limits the boundaries on problem formulation.

In contrast, the intuitive decision-maker, being data sensitive and focusing on 'correctness' about decisions, is more open to alternatives. The dependent decision-maker is likely to lack confidence in developing alternative problem formulations. Thus, the dependent DM style is hypothesised to be negatively related to innovative behaviour.

An individual is as good as the decision he/ she makes. Therefore, life is an aggregated outcome of the decisions a person takes at each stage, event and instant. Thus, it would be apt to say that the potential of a person bears a direct bearing on the appreciation of his environment and how he/ she shapes that environment for a favourable outcome. Decision-making is all about appreciation of the environment, analysing the choices or courses of action available based on various criteria and solving it cognitively. Any action we take often involves the balancing, sometimes consciously and sometimes without careful consideration of several variables - i.e., parameters. The information considered by a person and the way that information is assimilated will be affected by his/her spiritual inclinations and beliefs. This influence is influenced by the leader's value system and institutional growth as well as by the organisational sense and the style of leadership. These aspects thereby define the spiritual attributes of an individual in the workplace. This thereafter influences and acts as a filter to the way the information is assimilated and processed whilst arriving at a decision. This schema/framework has been illustrated in Figure 5, which indicates the relationship between various factors, discussed in this paper.



**Figure 5: Framework for Effect of SI on Decision Making**

### Applicability

In this paper, important findings arrived have been summarised. Relationships have been established based on analytical assessment, in context to the population under study. This study provides a potential for selection of individuals for key critical jobs/ positions, based on the traits which are considered essential for that level. The conceptual model/ framework proposed establishes the relationship between various external and internal factors, particularly in a workplace/organisation, which influences an individual's SI and hence decision-making.

### Conclusion

The analytical results obtained in this research suggests that the style of decision-making is in "surface" manifestation fact of more stable fundamental dimensions that individuals can change or adapt, as has been brought out in the 'framework' above. Personality, cognitive style, belief system, constructive development and organisational context are '*influencing factors*' (Figure 7) which shape an individual's spirituality attributes, and influence his Decision-Making Styles (such as spontaneous, avoidant, dependent, intuitive, and rational). However, the core of this model remains the '*Attributes*' or the moderators i.e. Spiritual Quotient/ Intelligence, which is a constant and is shaped based on Individual (*i.e. self-control, contentiousness, trustworthiness, adaptability, initiative, holism, self-realisation and self-effacement*) and Social Level factors (*i.e. empathy, conflict management, collaboration, building*

*bonds, teamwork and leadership*). The cognitive construct/ mechanism in the human mind is an amalgamation of these two factors i.e. influencing factors (which are dynamic) and attributes / moderators (which can be developed). This construct acts as a 'filter' through which he processes information and arrives at decisions. It is pertinent to mention that although the input variables may be dynamic in nature, however, the Spirituality schema remains constant and Centre of this model, and the dynamicity aspect is balanced by the Decision-Making Styles adopted (such as spontaneous, avoidant, dependant, intuitive, and rational). This paradigm provides a fuller picture of the SI influence in strategic decision-making process.

Spiritual Intelligence is not religiousness, nor is it philosophy, theology, or a moral code of ethics. It is neither linked to a person's intellectual and analytical ability. Surreptitiously, it is an untapped potential within an individual, which is continuously and sub-consciously evolving the reality. However, a person has to consciously align other faculties to create the reality, which he/she wants. SI is the path to fulfilment, provided we differentiate our belief, faith and religion. Every idea and belief that brings about negative influences and undermines us must be abandoned. The multiple dimensions, as brought out above make SI the ultimate intelligence and inevitably the untapped frontier for further researches. It has a unique transformative power which enables an individual to view a problem with an 'enlightened perspective' and effects decision-making process. There is an old adage that, 'a man is as good as the decision he makes in life', therefore, it is apt to say that the 'untapped potential' within an individual is the dormant mental capabilities which enable him/ her to react to diverse, dynamic and ambiguous environmental variables to affect a favourable outcome. SI is the key towards unlocking this hidden potential, as it has an enormous effect on decision-making performance and it has a larger, more profound and rich sense in which to analyse the course of action in the most appropriate ways.

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