Conceptualizing Thoughtful Intelligence for Sustainable Decision Making

Musarrat Jabeen

Abstract—Thoughtful intelligence offers a sustainable position to enhance the influence of decision-makers. Thoughtful Intelligence implies the understanding to realize the impact of one's thoughts, words and actions on the survival, dignity and development of the individuals, groups and nations. Thoughtful intelligence has received minimal consideration in the area of Decision Support Systems, with an end goal to evaluate the quantity of knowledge and its viability. This pattern degraded the imbibed contribution of thoughtful intelligence required for sustainable decision making. Given the concern, this paper concentrates on the question: How to present a model of Thoughtful Decision Support System (TDSS)? The aim of this paper is to appreciate the concepts of thoughtful intelligence and insinuate a Decision Support System based on thoughtful intelligence. Thoughtful intelligence includes three dynamic competencies: i) Realization about long term impacts of decisions that are made in a specific time and space, ii) A great sense of taking actions, iii) Intense interconnectivity with people and nature and; seven associate competencies, of Righteousness, Purposefulness, Understanding, Contemplation, Sincerity, Mindfulness, and Nurturing. The study utilizes two methods: Focused group discussion to count prevailing Decision Support Systems; 70% results of focus group discussions found six decision support systems and the positive inexistence of thoughtful intelligence among decision support systems regarding sustainable decision making. Delphi focused on defining thoughtful intelligence to model (TDSS). 65% results helped to conceptualize (definition and description) of thoughtful intelligence. TDSS is offered here as an addition in the decision making literature. The clients are top leaders.

Keywords—Thoughtful intelligence, Sustainable decision making, Thoughtful decision support system.

I. INTRODUCTION

IN present perplexed world the decisions have drastic impact on our lives, our work and the people around us. The task of the decision makers has become more challenging and nerve-striking. Facing decision making, individuals must consider a range of sustainable options. The constructed biases push the decision makers towards less sustainable choices. The intervention of thoughtful intelligence can help to get sustainable outcomes.

Decisions that are sustainable depend upon the level of thoughtful intelligence of the individuals who hold the power to decide.

It is a long haul enthusiasm to cultivate sustainable decision making. Sustainable decision making is portrayed by the decision with positive dimensions and the decision which bears the perspective as well as realization of human beings

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over the globe and future generations. Sustainable decision making is a determinant in positive effect on human and natural assets in the two dimensions of time and space. Thoughtful perspective has been deemed largely unimportant in the process of decision making, mostly because of the reasoning limit of leaders subject to self, social, political and controlled Decision Support Systems. In this paper, we propose to streak thoughtful intelligence to assemble the remarkable TDSS.

Globalization has given a new, heightened sense of contest between individuals, institutions, and states. The decision makers will undoubtedly adjust to new surroundings. Gabriel established that it is alluring that decision makers ought to be cautious to rising situations [1]. Prevalent systems and frameworks hamper the method for broad insights [3]. Thoughtful intelligence guarantees a new landscape of power. The paper advances through the comprehension of thoughtfulness.

Thoughtfulness is the limit of demonstrating comprehension of what affect any demonstration or word have on other individual and avoiding it on the off chance that one feels the effect will be negative; or trying to do it if the effect is to be positive for sure [5].

Consideration of thought process proposes attentive insight in light of uprightness, consented to look after human, common assets and standards of reasoning to deal with the present and future. Thoughtful intelligence comprises of particular limit whereby the leader yearns for sustainability of his/her decision, regardless of whether his/her power/ leadership status proceeds or not. Thoughtful intelligence appears to be differing participant in the writing of decision making; yet certain writing audit is referred to build up connection with existing literature.

II. THE CONCEPT OF THOUGHTFUL INTELLIGENCE

Intelligence is the capacity contained intellectual competence and bent to understand; to reap the benefit from considering. Intelligence depicts the reasoning/learning limit of an individual [6]; and intelligence absorbs the learning into practice. 1

The existing literature bears less regarding thoughtful intelligence. The paper inclines the adjoining literature about 'social intelligence'; 'multiple intelligence'; 'emotional intelligence'; 'moral intelligence' and 'ethical intelligence.'

Social intelligence: In 1920, for instance, Thorndike described "social intelligence" that enables to understand and manage the people in family and society [6].

Multiple intelligence: In 1983, the concept of Multiple

Intelligence was introduced by Gardner [7] in his book named, 'Frames of Mind'. The book gathered data from the fields of psychology, sociology, biology, arts, and humanities in order to explain multiple intelligences in a systematic and scientific manner. He envisages that the concept of intelligence is beyond IQ, since a higher IQ in absence of productivity does not compliment intelligence. In this description, "Intelligence is a bio-psychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture" Gardner suggests that ethnographic data and cross-cultural information is vital when it comes to observing intelligence in context and in action. Hence it can be said that the decision making process is always distinctive and in relevance to the situation. The book explains the concept of Multiple Intelligence through combining the knowledge coming from the fields of psychology, sociology, biology, arts, and humanities.

"--------------monopoly of those who believe in a single general intelligence has come to an end" [7].

Seven ways (intelligences) have been identified by Gardner [7] (a scholar of multiple intelligences) in which people perceive and understand the world as follows:

- Linguistic: The use of words through speech or writing
- Logical – Mathematical: The expression of inductive and deductive thinking through the use of logic, reasoning, abilities, and numbers.
- Visual – Spatial: The visualization of spatial dimensions and objects.
- Body – Kinesthetic: Regulating physical motion and the body's wisdom.
- Musical – Rhythmic: The art of learning music, rhythms, tones, and beats.
- Interpersonal: The art of communication and developing relations.
- Intrapersonal: Understanding self being internally through recognizing emotions, inner state of being, and self-reflection.

Conventionally the school curricula employ the verbal-linguistic and logical-mathematical intelligences. In order to involve all intelligences in the learning process it is important to have a balanced curriculum incorporating arts, self-awareness, communication, and physical education as well.

Cumulative Intelligence: The application of available historic data and record in decision making is called cumulative intelligence. The application of historical data in general practice is complicated due to the prolonged wait for it availability and the ignorance of the relevant data in the process of decision making [8].

Emotional Intelligence: The first use of the term "emotional intelligence" is often attributed to "A Study of Emotion: Developing Emotional Intelligence" [9]. But the concept of emotional intelligence was initiated by [10]. Greenspan [11] also put forward an EI model, followed by [12] and [13].

To [13], the outstanding performance depends on emotional competencies that can be struggled for and acquired. His book 'Emotional Intelligence: Why It Can Matter More than IQ Learning' explains how the reason and emotions work together to shape intelligence, citing neuroscience and psychology of the brain. Goleman [13] details why IQ is not the sole predictor of success; furthermore, he demonstrates how emotional intelligence can impact important life outcomes.

The literature is also found important about emotional intelligence as sometimes the emotional intelligence is known and recognized as concern of 'pop psychology'. Scholars like Weinstein [14] working on intelligence count the utility of emotional to build blocks to deliberate the management of business.

Ethical Intelligence: Weinstein [14] premises that ethical intelligence helps to better relationship at job, business and family. Most strikingly, Weinstein shows that ethical principles are not just good; they are good for us, benefiting our health, happiness, and prosperity. Weinstein presents four rules of ethical intelligence. The first is to prevent harm; the harm can be from minor harm to death. The second is to respect the others' values and preferences. The third is fairness; the fairness is to allocate the resources equitably among the human beings. The fourth is loving; the love can be for the children or family [14].

Supremacy of Morals: Morals are appreciated by everyone and everywhere; while the ethics are specific and normative. Individual values promote individualism in other words it reduces the much appreciated connectivity of the individual with the system. Moral reasoning process depends on moral values of the individual. A decision is morally befitting when it is found on ethical reasoning manners, character and what he believes is righteous behavior. Moral reasoning is the mental process that sets in motion to come to some decision of right or wrong in any moral dilemma

Morals are universal in time and space; Morals are ever appreciated as they move from past into present and then to future because of human experience and tradition. Morals provide structure to construct social functionalism to connect the individual with the society and society with the individual. It is found that the leaders of nations always possessed the characteristics of justice, perseverance and responsibility believed the best human traits. Human traits work to preserve and sustain humanity [15].

Moral Intelligence: "Moral intelligence is the capacity to understand right from wrong and to behave based on the value that is believed to be right" [16]. Moral development can be acquired and struggled for. Beheshtifar et al. [19] emphasize that moral intelligence is the "'central intelligence' for all humans." "It is considered a distinct form of intelligence, independent to both emotional and cognitive intelligence."

Lennick & Kiel, [18] authors of *Moral Intelligence* and the pioneers of the concept, presented four competencies of moral intelligence: compassion, integrity, responsibility, and forgiveness.

'Building Moral Intelligence: The Seven Essential Virtues that Teach Kids to Do the Right Thing' by Borba [16] presents 7 virtues to compose moral intelligence. They are fairness, tolerance, kindness, respect, self-control, conscience, and empathy. Families are encouraged to rear these virtues in

children step by step. Being thoughtless is the real threat to mankind receding livability on earth.

Livability is composed of natural and socio-economic environments around the individuals and the societies [8].

In shades of above content we move on to thoughtful intelligence (see Fig. 1). It pertains to beliefs, values, rules and practices in past-present-future vis-à-vis moral capacity of an individual.

[17] Jabeen reported that "Thoughtful intelligence is higher order of thinking to train the mindset produces the intentions and actions. Thoughtful intelligence can be struggled for and acquired. It comprises of capacity to understand and realize the impact of one's thoughts, words and actions on others (individual, group, and nation) survival, dignity[1] and development in time[2] and space[3]. It establishes thoughtful thoughts. **As per the inner paradigm [4]:** Thoughtful intelligence establishes and defends moral values in the individual against internal and external threats. This defense includes detection, prevention and response to threats through the use of moral beliefs, values, rules and practices. Thoughtful intelligence betters the eyes to observe and gives the COURAGE[5] to understand befittingly suited to difficult times; and reveals COMPASSION[6] for moral development."

Fig. 1 Thoughtful intelligence

Prevalent content of thoughtfulness bases righteousness in the experience of decision makers. Different decision makers choose diverse alternatives to decide in a situation as per their thoughtful competencies. Human and natural resources are utilized with creative thinking having thoughtful intelligence.

Argument of the Study: Sustainable decision making depends on the level of thoughtful intelligence imbued in the decision maker (see Fig. 2).

Thoughtful intelligence proposes attentive knowledge in view of honesty, consented to administer human and natural assets; standards innovative reasoning to deal with the present and future. Having acquired thoughtful intelligence the leader/ administrator always yearns for sustainability of his/her decisions regarding human and natural resources in future perspective; while he/she does not continue his/her authority. Thoughtful Intelligence comprises of three dynamic competencies and seven associate competencies of Righteousness, Purposefulness, Understanding, Contemplation, Sincerity, Mindfulness and Nurturing.

The Thoughtful Decision Support System (DSS) incorporates the ideas alluded to an extreme feeling of activity and not of inaction, and super-association with people and nature, also with the awareness of future impacts of choices in time and space. These three dynamic competencies gather up meet to seven associate competencies to assemble the

metaphysics of thoughtfulness. The presence of all or some of these competencies in a leader may show the level of thoughtfulness. Seven associate competencies of thoughtful intelligence could be as follows:

1. Righteousness: sticking to moral standards
2. Purposefulness: filling in as or demonstrating the presence of reason or objective; e-g Man is supplied with reason and fit for recognizing great and abhorrence [20]. Man and animals have the same desires of thirst, hunger and sex. What makes the man distinctive is the purpose of life referred fellow human beings and the natural environment around. It is the astute connectivity full of care (thoughts) leads to sustainable decision making.
3. Understanding: the limit with respect to balanced idea or surmising or segregation e-g "We are informed that man is supplied with reason and fit for recognizing great from abhorrent" , keen, thankful, and kind.
4. Contemplation: to consider something genuinely and finally, particularly so as to comprehend it all the more completely.
5. Sincerity: Purity and honesty composes sincerity.
6. Mindfulness: Taking care of human and natural environment around.
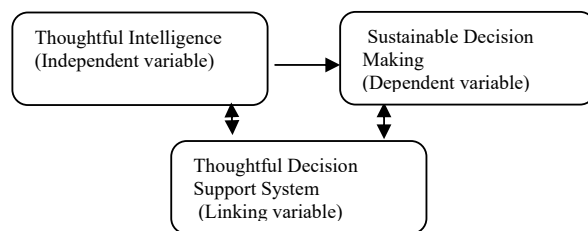7. Nurturing: Making the people to feel their importance and worth in the system.

Fig. 2 Conceptual Framework of Thoughtful Intelligence and Sustainable Decision Making

III. THE CONCEPT OF TDSS

TDSS includes three dynamic competencies: 1) A great sense of taking actions, 2) Interconnectivity with people and nature and, 3) Realization about long term impacts of decisions that are made in a specific time & space; and seven associate competencies, of Righteousness, Purposefulness, Understanding, Contemplation, Sincerity, Mindfulness, and Nurturing.

Normally the five DSSs named Self DSS, Social DSS, Organizational DSS, Political DSS and Power DSS pressure the higherdecision makers (see Fig. 3). It is through DSS examination that the rank of the leader in power is depicted. The system is seen as far as relations to sustainability with positive elements.

In certain context the different decision support systems referred a decision maker may interrupt each other and affect each other as all of them are reinforced by certain match of human natural resources. In such moments of discrepancies the thoughtful intelligence forwards a set of care and responsibility to decision makers for sustainability. The study

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[1] See Alquran, Sura Bani Israel, Ayat 70 'And We have certainly honored the children of Adam'
[2] Time: days, weeks, months or years
[3] Space: geographical land with or without human beings
[4] Inner Paradigm is a framework containing all the accepted views of an individual about human life referred past-present-future; inclusive social, economic, political and security dimensions.
[5] Ability to do something that frightens one: bravery.
[6] Ability to give and forgive.

emphasizes that thoughtful intelligence can help the coherence among diverse decision support systems available to decision making.
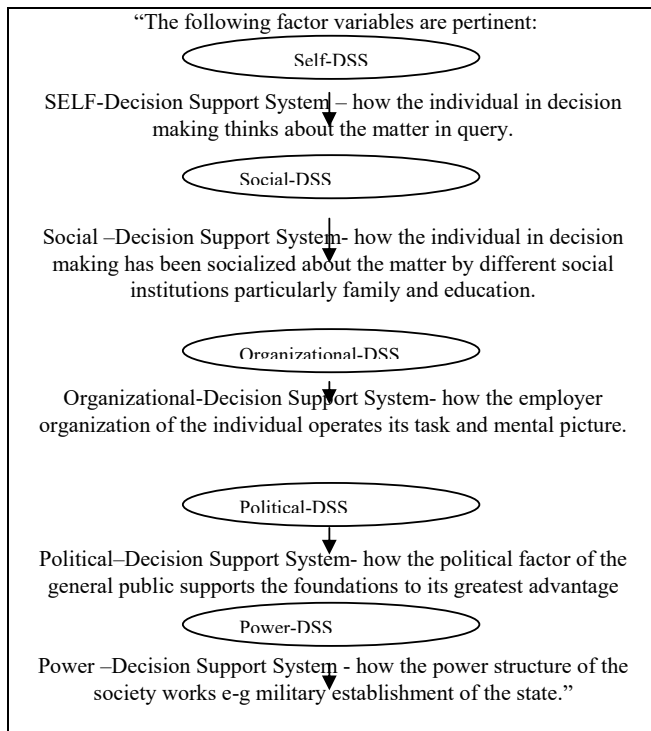

"The following factor variables are pertinent:

Self-DSS

SELF-Decision Support System – how the individual in decision making thinks about the matter in query.

Social-DSS

Social –Decision Support System- how the individual in decision making has been socialized about the matter by different social institutions particularly family and education.

Organizational-DSS

Organizational-Decision Support System- how the employer organization of the individual operates its task and mental picture.

Political-DSS

Political–Decision Support System- how the political factor of the general public supports the foundations to its greatest advantage

Power-DSS

Power –Decision Support System - how the power structure of the society works e-g military establishment of the state."

Fig. 3 Decision Support Systems (DSSs) [8]

IV. METHODOLOGY

Thoughtful intelligence was conceptualized in two phases. The first phase was engaged focused group discussions. Six groups each of 8-12 members involved staff, students, employees in national governing bodies and military and civil bureaucracy. As a conclusion of this arrangement, the five Decision Making Support Systems were created (see Table I). This phase was finished up to search for TDSS.

Delphi Focused survey method consists of two or more than two rounds. The respondents are supposed to respond initiating questions in the first round, in second round they respond to questions based on responses recorded in the first round, likewise in the third round the participants reply the questions formatted on the bases of results of the second round. The method is known to facilitate the interaction among the experts. The participants can respond freely as the survey is done anonymously and they can alter or stick to their original opinion [2] whereby the questionnaire is the medium of interaction [4]. The communication effect of Delphi studies and therefore the value of the process as such are also acknowledged. Moreover, in the second set of analysis, the Delphi Focused Technique was utilized, 15 specialists (see Table I) with decision information judged the rundown of thoughtful competencies. The outcomes were: definition of thoughtfulness, three dynamic competencies of thoughtful

intelligence and seven associate competencies of thoughtfulness; to build up the platform of Thoughtful DSS. This stage was deemed important to set up the legitimacy of thoughtful DSS in light of thoughtful intelligence. This phase was pertinent to establish the validity of thoughtful DSS based on thoughtful intelligence. This demonstrated thatthoughtful intelligence was seen to the most imperative of sustainable decision making. So, the investigation might be imitated for different regions of economic advancement. Thoughtful intelligence is not something unequivocal as it changes in various settings and references to which the decision makers have a place.

TABLE I
DELPHI FOCUSED SAMPLING

No of experts	Domain	Cognate	Slot
5	Sciences and Technology	Sustainable Development	Decision making
5	Management	-	-
5	Social Sciences	-	-

Thoughtful intelligence philosophy may bring leaders to understand the effect of their decisions. In this way, understanding thoughtful intelligence might be advanced through particular instruction modified for supervisors, consultants, academia and political leaders.

V. CONCLUSION

"By unrighteousness man prospers, gains what appears desirable, conquers enemies, but perishes at the root" [21].

Thoughtful intelligence is feasible however more averse to exist in regulating, arranging and carrying out. Thoughtful intelligence is conscious act. It is discovered that for the most part the leaders from business, organization/military-civil-regular citizen and legislative issues are not outfitted with thoughtfulness. The study establishes that thoughtful intelligence is the ability to utilize past knowledge at present to construct future. It concludes that the thoughtful intelligence has positive relationship with sustainable decision making. Thoughtful leaders think and after that demonstration. They fundamentally build up value questions and fact questions. Thoughtful leaders combine routinely achieved learning about the multi domains they live in. Thoughtful intelligence is not just to utilize the accessible data yet to acknowledge more data assets — to assign as well as to find resources. Thoughtful DSS has turned out to be attractive because of the expanding influence; wherein financial valuation of decisions is over astounding. Thoughtful intelligence transfers empathy and control to oversee human and natural resources.

VI. FUTURE TRENDS

Thoughtful intelligence decision support system appears to be various in the current writing of sustainable decision making. It would need to experience examinations to build up its legitimacy. The thoughtful intelligence created through this investigation ought to be highlighted to evaluate the sustainability of decisions in certain period of time and context

of the regions. The elements building and destructing thoughtful intelligence ought to be resolved. The seven associate competencies should be kept on being approved in decision procedures; which may advance thoughtful intelligence for sustainable decision making.

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