

Literature review on the Role of Intuition in Decision Making Process

Dr. Amit Kumar Gosar, Dr. Renati Solomon

Abstract—The Decision making has become an integral part of modern management. Sound, rational and quick decision making is the primary job for any manager. The Decision making involves choosing of the option from all the available alternatives. This selection can be done based on available data or past experience or gut feeling. The difference between gut feeling and Intuition is very thin. Any decision taken based on Intuition is more scientific in nature, however, it requires a skill for any decision maker. Lot of research has been done on the managerial decision making and the decisions based on Intuition. A great amount of work has also been done separately on the intuition. Hence the efforts have been made in this paper to compile the literature review and find out the research gap and based on which the future course for research can be suggested.

Index Terms— Intuition, Gut Feeling, Decision making, heuristics, cues.

I. INTRODUCTION

In management and more broadly in all Western scientific disciplines investigating decision making, there has been a tight focus on explicit deliberation, what Haidt (2001) called the “worship of reason.” This is understandable in that westerners consciously experience deliberative reasoning and hence find it readily accessible for introspection and systematic study.

However, it is increasingly apparent that deliberative reasoning is but one part of a much more sophisticated cognitive system (Evans, 2008). Conscious deliberation and reasoning are the “tip of the iceberg” in terms of how people make decisions, and it frequently is not the primary driver of behavior (Loewenstein, 1996; Reber, 1992). Although the label intuition is frequently ascribed some transcendental quality, the phenomenon is real. It is important to organizational effectiveness and the management sciences to contribute to the practice through more and rigorous research into the nature and development of intuitive decision-making skills. Intuition is how people rapidly detect coherent patterns in complex environments. It is how they generate solutions that work

(cf. mythically optimal solutions) without the luxury of limitless time.

In addition, expert (or knowledge-based) intuition can be acquired through experience. All of these factors indicate that the management sciences should pay more attention to the broader range of cognitive processing happening in organizational contexts.

Today intuition is beginning to be seen as commonly accepted decision approach (Glass, 2008) that has an important place in strategic decision making (Butler, 2002). Intuition allows for quality decisions to be made quickly, to manage the trade-off between speed and decision quality (Dane & Pratt, 2007). In fact, gut instinct or intuition is used by experienced managers under duress despite the data and analytics at their disposal (Matzler, Bailom, Mooradian, 2007). Intuition may truncate steps present in rational models; however intuition and logical reasoning go hand in hand and rely on each other (Barnard, 1938). Explicit analytical thought and implicit intuitive thought are both useful and necessary (Pretz, 2008).

Experts and experienced decision makers cannot explicitly explain their decisions, they unconsciously recognize and understand patterns, and in other words they have intuition (Simon, 1987).

II. LITERATURE REVIEW

Management researchers over the course of the past eight decades have been greatly concerned with the relationship between human beings information processing capabilities and the complexities dynamism and uncertainties that characterize managerial work. The question is how human rationality, which is by nature bounded, can be developed to deal efficiently and effectively with the ambiguous and time pressured decisions and problems that are common in managerial work.

Intuition is amongst the hardest of bounded rationalities in various perennials, appearing and reappearing in various guises from 1980, to the present day.

The early work on intuition was done in the field of basic discipline of psychology. The management researches started working on intuition more after 1990.

Study of Intuition Pre-1990s

Many researchers have carried out their research on intuition and many theories have been proposed to

Dr. Amit Gosar, Department of Masters in Business Administration, Sikkim Manipal University, Navi Mumbai, India
Saindhavi Venkataraman, Department of Social studies, Indira Gandhi National Open University, Mumbai, India

explain the process of intuition Barnard (1938) declared that mental process fall into 2 distinct categories: non-logical and logical. Intuition based on behavior was explained by Simon (1947) in Bonded rationality. Heuristics and biases was proposed by Kahneman in late 1970s. BDT (Behavioral decision theory) and NDM (Naturalistic decision making) were explained in 1940 and 1998 respectively. Roger Sperry was awarded a Nobel prize for his research of 2 brain hemisphere in 1981. The significant study was carried out by a Nobel prize winner Daniel Kahneman explaining System 1 (Intuition) and System 2 (Reasoning) model.

Study of Intuition Post-1990s

The fundamental studies in the theory development in the psychological and biological sciences to understand Intuition or role of intuition in decision making were not consolidated till 1990s. Management researchers after 1990s started working on Intuition and its application into decision making in an organization. The empirically based development witnessed in the early 2000. Few studies were carried out to explain different proposed theories.

Barnard was referring to intuition when he spoke about 'non-logical processes' that were difficult to express in words but revealed themselves in actions and decisions. (Barnard 1938). About 50 years later Simon said "Intuition and good judgment are analyses frozen into habit" (Simon 1987). Jung recognized intuition and considered it as one of his personality types (Jung, 1926) later incorporated into the popular Myers-Briggs Personality Indicator (MBTI) as a dichotomy between intuitive and analytic types (Myers, McCauley, Quenk & Hammer, 1998).

Intuition is a genuine phenomenon that involves understandings and processes that are non-hierarchical, not based on formal education or years of experience, non-analytic, unpredictable, is quick and easy, and is made without extended conscious deliberation. Managers frequently use their business intuition to direct some part of their decision making and, hence, competitive impact. However, they do not ignore available information or their experiences. Rather, they use both analysis and intuition in their decision making. That is, systematic analysis and intuition are complementary rather than exclusionary, based on what the situation needs to get the best result at the time.

Even though intuition is not fully understood, it is an acceptable and commonly used decision-making tool. (Glass, 2008) Business professionals do use intuition. For example, approximately 89% of marketing professionals frequently use their intuition to direct some part of their decision making and, hence, competitive impact. (Keen, 1996) It can be very useful when data is inadequate or unavailable. At the very least, intuitive thinking is effortless and unaffected by memory and attentional resources. But there are negative intuitional biases, too. For example, one bias is that people who use intuition are intellectually lazy and undisciplined in their thinking, relying on gut feelings. On the other hand, intuition can lead to game-changing decision making via a slower and

deeper process that requires deliberative reasoning. In general, however, the best thinking in an organization involves the combination of creative and analytic thinking. (The Business Journal, 2012).

Rational analysis is useful, but it is not a panacea for decision making. Rather, it is like the bricks of a wall with intuition being the mortar. That is, systematic analysis and intuition are complementary rather than exclusionary, based on what the situation needs to get the best result. (Vasconcelos, 2009) "Intuition enhances thoughtful decision-making, it doesn't replace it" (Smart, 2009). In fact, intuition even can play an important role in determining how to perceive, approach, and respond to a business situation or problem. Even managers who stress analytical processes actually mix intuition into most decisions (Kutschera & Ryan, 2009). "Confident decision makers blend logic and intuition (of thought and feeling), the so-called two wings that allow leaders to soar (Patton, 2003).

"Intuition is multifaceted" (Gore & Sadler-Smith, 2011). More specifically, intuition is subconscious, complex, quick, not emotion, not biased, and not part of all decisions (Khatri & Ng, 2000). However, it has been argued that good management practice by business executives should rely more on intuition and less on systematic analysis.

III. IMPORTANCE AND USE OF INTUITION

"Often you have to rely on intuition." – Bill Gates

Managers make challenging and important decisions every day. Approximately 32% of managers are intuitive, and intuition is positively related to organizational effectiveness (Andersen, 2000). Six in 10 or 62% of CEOs indicated that gut feelings are highly influential in guiding their business strategies, while only four in 10 indicated that internal metrics and financial information (44%) or competitor analyses (41%) are highly influential (Business Wire, 2006). That is, intuition seems to be a characteristic of many managers in general, and more specifically, the combination of intuition as dominant and thinking as the auxiliary function is quite often found in managers (Andersen, 2000).

In addition, entrepreneurs have a greater propensity for intuitive decision making (La Pira, 2011). However, they do not ignore available information or their experiences. Rather, they use both analysis and intuition in their decision making. That is, entrepreneurs tend towards self-sufficiency, trusting their own judgment (self-efficacy), living with ambiguities and uncertainties, and being willing to make decisions even though they do not have all the information they need at hand.

However, for routine decisions, business leaders are five times more likely to apply analytics rather than intuition across the widest possible range of business decisions; and, two times more likely to shape future business strategies and guide day-to-day operations based on analytics (Meinert, 2011).

Intuition also tends to be used when the perceived importance and potential impact of a decision is high, i.e., life or game altering decisions or high-stakes decision making. (Sinclair and Ashkanasy, 2005; Flora, 2007; Kutschera & Ryan, 2009) Intuition also can help one to be calm in the midst of change and chaos, it can give insight into the people around us, and it can help make successful decisions in all areas of life (Sheehan, 2010). Intuition allows us to speed-sort information and to make connections before reason can assemble the data (Oliver, 2007). Executives all possess this skill to some degree or other and use it constantly in other contexts." (Thompson, 2005) It is interesting that even though intuition is so valuable, executives often try to keep it a secret and hide it, afraid that their colleagues would not understand (Agor, 1990). Additionally, Kutschera and Ryan (2009) suggest that intuition be added into a systematic decision process, e.g., 1) define criteria for success or failure, 2) remain focused on the problem at hand, 3) remember that good information is gathered from many different sources, 4) balance calculated risks with intuitive judgment, and 5) change the question to test an analysis. Individuals, decision makers, and managers engage in analytical thinking and intuition virtually all the time (Kutschera & Ryan, 2009). That is, intuition is a valuable skill for any manager.

Today's cognitive science aims not to destroy intuition but to fortify it, to sharpen our thinking and deepen our wisdom. Scientists who expose intuition's flaws note that it works well in some areas, but needs restraints and checks in others.

Within the research literature the definitions of intuition also vary widely. Intuition has at various times been defined to be: a cognitive conclusion that is based on previous experience and emotional inputs (Burke & Miller, 1999), a complex, quick, nonemotional and nonbiased psychological process that is based on "chunking" that an expert hones over years of specific task experience (Khatri & Ng, 2000; Prietula & Simon, 1989, p. 59; Wierzbicki, 1997), a daring conclusive leap (Bennett, 1998), a decision-making process that cannot be expressed in words (Barnard, 1938), a decision-making rule or heuristic (Riquelme & Watson, 2002), a felt awareness for a situation as a whole (Bastick, 1982), a holistic mode of consciousness (Allinson, Chell, & Hayes, 2000; Shapiro & Spence, 1997), an ill-defined ability to spot problems or errors (Bunge, 1983), an integration of disparate information (Bastick, 1982), a knowledge gained without rational thought (Rowan, 1986), a physiological function which transmits perceptions in an unconscious way (Isaack, 1978), a process of pattern recognition (Crossan, Lane, & White, 1999), a rational, logical brain skill used to guide decision making (Agor, 1989), a right hemisphere brain skill (Lank & Lank, 1995; Olson, 1985), a smooth automatic performance of learned behavior sequences (Isenberg, 1984), a subconscious form of intelligence not accessible through rational thought (Khatri & Ng, 2000; Parikh, 1994; Wierzbicki, 1997), a subjective feeling rooted in

past experience (Covin, Slevin, & Heeley, 2001), or a synthetic psychological process that comprehends the totality of a given situation (Vaughan, 1989). Given the number, scope, and possibilities for potential contradictions among the above definitions, it is our view that the task of defining intuition as a construct in entrepreneurship research remains unfinished.

The Merriam-Webster Online Dictionary defines intuition as "quick and ready insight," "immediate apprehension or cognition," and "the power or faculty of attaining to direct knowledge or cognition without evident rational thought and inference." A review of the intuition literature reveals two points of agreement for intuition definitions. First, intuition is defined as an unconscious process, and second, it is defined in contrast to rational thought processes.

As early as 1916 George van Ness Dearborn in the *Psychological Review* declared the concept of intuition to be 'a live one and real, worthy therefore of at least brief scientific discussion'. Chester Irving Barnard (1886–1961) was one of the first management writers to attempt to articulate what intuition is, to speculate on its nature and origins and on the circumstances and particular job roles to which it is relevant. Barnard declared that mental processes fall into two distinct categories: 'non-logical' and 'logical'. Barnard did not provide a set of formal scientific criteria for distinguishing between 'logical' and 'non-logical'. Barnard did not regard non-logical processes as mystical (cf. Wild 1938); on the contrary, he felt they were grounded chiefly in knowledge and experience, and their sources lay in physiological conditions or factors, or in the physical and social environment

This study defines what is meant by the term intuition and discusses its use and importance in business. Thereafter, the attributes of intuition and of the intuitive manager are presented as well as a discussion of how intuition works. The study seeks to strike a balance between what the literature says about intuition and what managers actually do with intuition, augmented by an understanding of strategic thinking.

IV. RESEARCH GAPS

- 1) The specific study in to identifying underlying processes of different types of intuition can be considered.
- 2) Integrating aspects of ethical decision making like essential, principles, Egoism with prior experience, emotional behavior and domain knowledge for studying intuition can be considered.
- 3) Scale development for intuition measurement can be considered.
- 4) Application of intuition based decision in the area of human resource management like recruitment or conflict management to be studied.

V. SCOPE

Intuition is the result of the way our brains store, process and retrieve information on a subconscious level and so is a real psychological phenomenon which needs further study to help us harness its potential. There are many recorded incidences in the field of business and medical environment where the decision based on intuition have saved the life of people or the business. Through analysis of a wide range of research papers examining the phenomenon, the researchers conclude that intuition is the brain drawing on past experiences and external cues to make a decision – but one that happens so fast the reaction is at a non-conscious level. All we're aware of is a general feeling that something is right or wrong.

The scientific research is the area where the scientist is not aware at the initial stage about the success of the invention and he has to take decisions based on his gut feeling to conduct certain experiments, which will lead either to success or to failure. It is also noticed that certain people have better capability of taking such decisions than other. This can be accounted to their intuitive skills. How the Job performance is linked with the skill of intuitive decision making.

VI. UTILITY

When many research articles have described the importance of intuition in the strategic thinking also not all the scientific aspects are sufficient to explain the process of decision making, intuition becomes very interesting subject for the management researchers. In today's fast moving world, making decision very fast is of at most important for any business to be successful. A small delay in decision making may give an opportunity to the competitor to excel. In such a scenario, it is not always possible to generate empirical data for making decision. The utility of further research work will be in assessing the use of intuition in managerial decision making. The effort can also be made to understand how intuition is useful in taking fast and correct decisions based on limited available resources.

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