Research

INTEGRATED USE OF RATIONAL AND INTUITIVE DECISION MAKING STYLE: MODERN TRENDS IN ORGANIZATIONAL DECISION MAKING

Naila Batool1¹, M. Naveed Riaz² and M. Akram Riaz³

Abstract

The present study reviewed the literature based on a century of the theoretical and empirical work on decision making styles. Both in theory and research, the traditional trends limited the decision makers to either rational or intuitive strategies in decision making. Limited amount of literature emphasized on both rationality and intuition in decision making until in the recent decades when some researchers emphasized the use of mixed strategies in decision making. Thus the present study illustrates the importance of combining the rational and intuitive style and using a mixed-style in decisional scenarios. Thus the rational-intuitive and the intuitive-rational style double the benefits as both styles have some shared and some other unique qualities which maximize the outcomes when used in connection. Finally, the present study suggests a transition from uni-style tradition to mixed style decision making.

Keywords: Rational style, Intuitive style, Mixed style.

JEL Classification: Z 000

¹⁻Dept of Psychology, University of Haripur, Haripur, Pakistan

²⁻Dept of Psychology, University of Haripur, Haripur, Pakistan

³⁻Dept of Psychology, International Islamic University Islamabad, Pakistan

Introduction

Decision making is an ancient art. Its imprints can be traced back into prehistoric regimes when human beings were used to obtain guidance from stars. With the passage of time, they developed more refined tools to solve their problems in a more sophisticated manner and now the decisions are as fast as an eye blink (Buchanan & O'Connell, 2006). From the ancient times until now, individuals used to make decisions in different modes and ways. Behaviourists labelled these individual's typical model of interpreting and responding to decisional tasks as decision making style (Driver, 1979; Harren, 1979). Scott and Bruce (1995) defined decision making style as "the learned, habitual response pattern exhibited by an individual when confronted with a decision situation" (p. 820). Right after the illustration of rigidly held trait-based human distinctions, behaviourists proposed the concept of style in order to describe individual differences (Andersen, 2000). Some researchers linked the decisional styles to cognitive styles in order to describe the sharp brain-based differences among individuals (Hunt, Krzystofiak, Meindle, & Yousry, 1989; Rayner & Riding, 1997). Such cognition-based sharp distinction limited decision researchers to uni-style trends and served as a barrier for the conception of mixed strategies in decision making (Riaz, 2009). But in the current decade, a bit transition taken place in the traditional unistyle trends and the conception of mixed-styles in decision making emerged (Singh & Greenhaus, 2004; Williams, 2003).

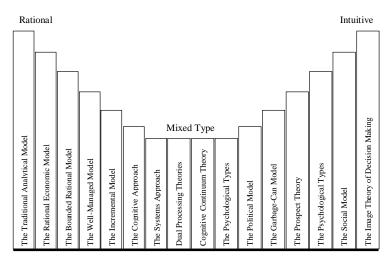
Decision making is a multifaceted and multi-dimensional phenomenon. The focus in decision making varies from discipline to discipline. The most important decision related disciplines are economics and psychology (Harrison, 1999). Rational style is the brainchild of economics (Chater, Oaksford, Nakisa, & Redington, 2003; Mangalindan, 2004) whereas intuitive style is the creation of psychology (Jung, 1976; Luthans, 2000). Harrison (1999) illustrates

that an eclectic approach to decision making may better facilitate in understanding the scope and importance of decision making because both disciplines have different doctrines. The rational economic approaches advocated 'the economic man' who is maximizer in nature and uses all the means to reach at an ideal end (Hendry, 2000). On the other hand, intuitive decision making style is more satisfying in nature (Driver et al. 1990) which is more related to feelings, emotions, and impressions (Scott & Bruce, 1995). The present study is in part an attempt to integrate the economic-based rational style and psychology-based intuitive style of decision making into a mixed strategy.

Past literature indicates that decision theorists limited themselves to either rational or intuitive choices as two separate ways of making decisions. Like Wedley and Field's (1984) traditional analytical model of decision making completes the decisional tasks into structured eight step procedures which are led by rationality. Similarly, rational economic model based on neo-classical economic ideology was also governed by logic and rational analysis in decision scenarios (Hendry, 2000). All the options are considered, rationally evaluated, and the final decision is based on optimal choices (Hellreigel, Slocum, & Woodman, 2001; Mangalindan, 2004). The perfect rationalism was challenged with the passage of time. Simon (1957) criticized the mean-end sequence and proposed a bounded rational model which is well known as normative or administrative model of decision making. Thus the perfect rationality turned into bounded rationality based on limited information processing, judgment heuristics, and satisfying choices. In the later years, Lindblom's (1959) incremental model and Peter and Waterman' (1982) well-managed model were also based on limited rationality although these models were more flexible than perfect rationalism. The major transition took place when Kahneman and Tversky (1981) rejected the legacy of perfect rationality and proposed prospect theory of decision making.

Time constraints, decision speed, and cost of acquiring information restricted twentieth-century theorists to make decisions with an adequate amount of information (Buchanan & Connell, 2006). Intuitive decision making style earned much popularity in the recent years although its imprints can be traced back to Chester Barnard (1938). In his book, Functions of the Executive, Bernard not only introduced the term decision making in the business world but also introduced the rationality based logical and intuition based illogical process of decision making (Novicevic, Hench, & Wren, 2002). The garbage-can model of organizational decision making (March, Olsen, & Christensen, 1976; March & Olsen, 1984), the dysfunctional conflicts based political model (Hoy & Miskel, 1991), and the social model of decision making (Fiske & Taylor, 1991; Luthans, 2000; Sherman, Judd, & Park, 1989) were more intuitive in nature. Finally, Beach and Mitchell's (1990) image theory introduced the concept of perfect intuitive decision making. In the heart of the theoretical work on decision making which limited theorists to either rational or intuitive strategies, Jung (1976) emphasized rationality and intuition in decision

Figure 1.Theories of organizational decision making based on rationality, intuition and mixed type i.e. rationality and intuition



PAKISTAN BUSINESS REVIEW APRIL 2015

making at the same time and proposed that individual's decision making styles can be identified by assessing these two functional dimensions in conjunction (Andersen, 2000).

Decision literature depicts that past researchers introduced numerous unique decision making styles according to their cultures, contexts, and circumstances. But the shared aspect of the research on decision making styles is the consideration of rational and intuitive decision making style by almost all of the decision researchers (Arroba, 1977; Briggs & Myers, 1943; Harren, 1979; Mitroff & Kilmann, 1975; Phillips, Pazienza, & Ferrin, 1984; Scott & Bruce, 1995) although they considered both styles as distinctive dimensions of human nature. Researchers (Klaczynski, 2001; Stanovich & West, 2000; Sternberg, 1997) illustrated that the line of distinction between cognitive style, learning style, thinking style, and decision-making style is based on the distinction between rational and intuitive approaches. The past literature indicates that decision researchers were stick to the assumption that decisions are solely based either on rationality or on intuition.

Decision making researchers are of the view that mental processes operate in two distinct ways. Traditional rational deliberation or reasoning is the one mode and the rapid, mechanical and effortless intuition is the other mode (Kahneman, 2003). Dual process theories considered both sides of human nature i.e. rationality and intuition (Sloman, 2002; Hogarth, 2001; Gilbert, 2002; Kahneman & Frederick, 2002). In the heart of dual process theories, Stanovich and West (2002) introduced system 1 and system 2 as two types of cognitive systems that influence decision making. System 1 is characterized as a speedy, mechanical and effortless process (Slovic, Finucane, Peters, & MacGregor, 2002). These processes are related to the intuitive side of human nature (Payne & Bettman, 2004). Similarly system 2 is the effortful and logical process (Cobos, Almaraz & Garcia-Madruga, 2003). Time pressure and cognitive burden are considered

as two determinants of the choice of a specific system (Gilbert & Gill, 2000).

The most important issue to be considered is that these systems are not perfectly independent but are relatively independent (Sadler-Smith, & Sparrow, 2007). In spite of their relative nature, past literature indicates that researchers attempted to acknowledge the unique nature of these styles, but not many efforts were made to merge these two styles in order to unite their in-built benefits. Keeping this issue in consideration, Payne and Bettman (2004) suggested that attempts should be made to understand the interaction between these two systems instead of considering them as separate dimensions. According to researchers (Stanovich & West, 2002) these systems do not stand apart on the poles and are more interactive in nature.

The secondary important sources of distinction and integration in rational and intuitive decision making style are based on individual differences, organizational, contextual and environmental factors (Rowe & Boulgarides, 1992). In the present decade, decisions are made under mixed labour, mixed climate, mixed culture, and mixed environments. Due to the breakdown of glass-ceiling, now men and women work together. Less experienced employees in the growing organizations are mentored by more experienced employees. Less aged workers are welcomed from and replaced with freshmen. Similarly, mixed cultures prevail in the modern multinational organizations. In the large organizations, multiple layers exist and employees perform tasks under top, middle, and lower level management. Both programmed and nonprogrammed decisions are made by the managers. Similarly, both operational and strategic decisions are taken. Sometimes managers make decisions under time pressure, ambiguity, risk and uncertainty. Other times manages are certain and clear regarding decisions. Thus, the present-day decision environments are more suitable for mixedstrategies rather than simple rational or intuitive choices.

A good deal of research is evident that both rational and intuitive decision making style results in positive personal and job outcomes in organizations (Bruine de Bruin, Parker, & Fischhoff, 2007; Mau, 2000; Scott & Bruce, 1995; Riaz, 2009; Singh & Greenhaus, 2004; Shiloh & Shenhav-Sheffer, 2004; Thunholm, 2004). However, in the past years, the most prominent assumption in the body of literature was that decision makers are rational (Shafir & LeBoeuf, 2002). Past researchers (Harren, 1979; Holland, 1985; Super, 1980) considered it as an ideal style of decision making although evidence of its superiority is inconsistent (Philips, Pazienza, & Farrin, 1984). Rationality based decisional trends dominated in the organizations till 1980s when intuition was considered a neglected topic. In the early 1990s a transition took place from methodological rational analysis to emotions-related intuitive decision making (Bohm & Brun, 2008). Consequently, intuitive decision making was recognized as a hot and popular topic in the recent decade (Hogarth, 2001; Peters, Vastfjall, Garling, & Slovic, 2006).

Although both rational and intuitive style is related to positive organizational outcomes but still each style holds some unique features. In the times of emergency, complexity, ambiguity, uncertainty, risk, and time pressure, intuitive decision making style in more appropriate that involves a creative solution based on overall situational recognition instead of making a feature-by-feature analysis (Bergstrand, 2001; Bryant, 2002; Callan & Proctor, 2000). Similarly intuitive decision making style is more appropriate in strategic decisions (Khatri & Alving, 2010). Evidences indicate that both rational and intuitive decision making style results in mixed outcomes. Some researchers (Cooksey, 2000; Dunwoody, Haarbaur, Mahan, Marino & Tang, 2000) advocate the superiority of rational style over intuitive style. Others illustrate that both are similar in effectiveness (Hammond, Hamm, Grassia & Pearson, 1997). Similarly, in the absence of the consensus and in the presence of uncertainty, rational style is inappropriate (Dean & Sharfman, 1993).

Hammond, et al. (1997) illustrate that both rational and intuitive style can be used on a continuum with reference to their relative position instead of considering them as two opposite poles of the continuum. In management, theories considering psychological constructs as ends are now more flexible in nature. Just like transactional and transformational leadership theory of Burns (1978) considered both styles as opposite poles but recent advancements in the theory suggested that both styles stands on a continuum on which an individual leader rates his or her leadership (Bass & Reggio, 2006). Now no one is perfectly transformational or transactional instead both share some qualities and their relative standing on the continuum determines their position as a leader (Bass & Avolio, 2003). Similarly keeping in view the stand point of Hammond, et al. (1997), rational and intuitive style should not be rigidly placed on the ends of a continuum instead an individual's relative standing between these two styles should determine his or her style. Thus an intuitive decision maker should share some rationality and a rational decision maker should consider some intuition to make superior choices.

The prior illustration depicts that both styles are related to positive outcomes. But rational decision making style is considered appropriate in well-planned, well-managed, and well-organized conditions where less time pressure, less ambiguity and less risk and uncertainty is present. In the opposite conditions, intuitive decision making style is considered suitable (Scott & Bruce, 1995). Therefore if the rational style serves the practical concerns, the intuitive style serves the time concerns. Beside these in-built qualities, intuitive decision makers are prone to miss some important information in haste and rational decision makers are more likely to involve in too much processing. Consequently, a balanced approach in decision making can be more appropriate for effective decision making (Spicer & Sadler-Smith, 2005). Rationality is head and intuition is heart. When both are considered at the same time, effective decisions can be made. Effective managers from different levels in organizations opt both rational and intuitive choices (Riaz, 2009).

Transition from Multiple to Mixed Strategies in Decision Making

No doubt some past researchers suggested the use of multiple styles in decision making. Decision research shows that only few people opt for one dominant decision making style. Most of the people are inclined toward opting for two or three decision making styles (Rowe & Mason, 1987). The majority of mangers are predisposed to adopt a dominant style of decision making which is known as primary style other then they employ backup style by adjusting their styles according to situational demands. Individuals have one primary, one secondary and one least prefer style. It is one of the many reasons that most individuals employ decision styles in conjunction (Driver et al., 1993). But the issue is that most managers adopt the backup style or secondary style when the primary style fails. In this way, the managers limit themselves to one decision making style at one point in time. Singh and Greenhaus (2004) illustrate that decision makers are not limited and they must not limit their selves to one strategy while making important decisions. Continually involving in multiple decisional strategies is pretty effective. Therefore, it is more appropriate to use a mix-type style of decision making considering the rationality and intuition at the same time.

Williams (2003) illustrates that through brainstorming both left (rational) and right (intuitive) sides of the brain functions can be integrated which leads to creative problem solving and decision making. When the methodological based rational analysis is combined with emotion-laden intuitive style, it maximises it outcomes by incorporating the benefits of the both styles.

In fact in real decision scenarios, individuals use mixed strategies either consciously or without conscious awareness. When individuals claim to be rational decision makers, they are no longer perfectly rational (Simon, 1957). Similarly, when individuals claim to be intuitive, they are no longer perfectly intuitive because intuition involves synthesis of the information (Mitchell & Beach, 1990). Thus

integrating rational and intuitive decision making style into a mixstyle which incorporates the inbuilt characteristics of the both styles can leads to superior organizational outcomes (Nygren & White, 2002). When managers make decisions solely based on the rationality, employees are less likely to accept the mechanic and rigidly defined methodological choices. Similarly, when managers make decision on the bases of intuitive decision making style involving feeling, emotions, and impressions, there is the probability that some practical concerns can be missed (Scott & Bruce, 1995). But if the head is combined with the heart and both are taken into consideration at the same time, an ideal decision is inevitable.

Conclusion

The present study is based on the review of the theoretical and empirical literature on rational and intuitive decision making styles. The current review suggests a new insight to change the traditional trends of uni-style usage in decision making and introduces the concept of mixed strategies. Thus the current study suggests that instead of using rational or intuitive styles, the managers should use rational-intuitive or intuitive-rational styles i.e. mixed styles in decision making. The mixed style can lead to various productive outcomes because of the integration of the in-built qualities of the both styles of decision making.

References

- Andersen, J. A. (2000). Intuition in managers: Are intuitive managers more effective? *Journal of Managerial Psychology*, 15(1), 46–63.
- Arroba, T. (1977). Styles of decision making and their use: An empirical study. British *Journal of Guidance and Counselling*, 5, 149–158.
- Barnard, C. I. (1938). *The functions of the executive*. Cambridge, MA: Harvard University Press.
- Bass, B. M., & Avolio, B. J. (2003). *Multifactor Leadership Questionnaire feedback report*. Redwood City, CA: Mind Garden.
- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership*. (2nd ed.). Mahwah, NJ: Lawrence Erlbaum.
- Beach, L. R., & Mitchell, T. R. (1990). Image theory: A behavioural theory of image making in organizations. In B. M. Staw & L. L. Cummings (Eds.), *Research in Organizational Behaviour, 12*, 1–41. Greenwich, CT: JAI Press.
- Bergstrand, B. (2001). Situating the estimate: naturalistic decision making as an alternative to analytical decision making in the Canadian Forces. Retrieved on June 13, 2009, from http://wps.cfc.dnd.ca/irc/nh9798/0021
- Bohm, G., & Brun, W. (2008). Intuition and affect in risk perception and decision making. *Judgment and Decision Making*, 3(1), 1–
- Briggs, M. I., & Myers, P. B. (1980). *Gifts differing: Understanding personality type*. Mountain View, CA: Davies-Black Publishing.
- Bruine de Bruin, W., Parker, A. M., & Fischhoff, B. (2007). Individual differences in adult decision-making competence. *Journal of Personality and Social Psychology*, 92, 938–956.
- Bryant, D. J. (2002). *Making naturalistic decision making "fast and frugal"*. Toronto: Defence Research Development Canada.
- Buchanan, L. & O'Connell, A. (2006). A brief history of decision making. In T. A. Stewart (Ed.), *Decision making: Better, faster, smarter.Harvard Business Review, 6*(8), 33–41.
- Burns, J. M. (1978). *Leadership*. New York: Harper & Row Publishers Inc.
- Callan, J., & Proctor, S. (2000). Tactical decision making under uncertainty: Experiments I, and II. *Technical Report*, 1821, April,

- Pacific Science and Engineering Group. California: SSC San Diego, Inc.
- Chater, N., Oaksford, M., Nakisa, R., &Redington, M. (2003). Fast, frugal, and rational: How rational norms explain behavior. *Organizational Behavior and Human Decision Processes*, 90, 63–86.
- Cobos, P. L., Almaraz, J., & Garcia-Madruga, J. A. (2003). An associative framework for probability judgment: An application to biases. Journal of Experimental Psychology-Learning Memory and Cognition, 29(1), 80-96
- Cooksey, R. W. (2000) Commentary on 'Cognitive adaptation and its consequences: A test of cognitive continuum theory'. *Journal of Behavioural Decision Making*, 13, 55–59.
- Dean, J., & Sharfman, M. (1993). Procedural rationality in the strategic decision-making process. *Journal of Management Studies*, *30*, 587-610.
- Driver, M. J. (1979). Individual decision making and creativity. In S. Kerr, (Ed.), *Organizational behaviour*. Columbus, OH: Grid Publishing.
- Driver, M. J., Brousseau, P. L., & Hunsaker, P. L. (1993). *The dynamic decision maker.* San Francisco: Jossey Bass Publications.
- Dunwoody, P. T., Haarbaur, E., Mahan, R. P., Marino, C., & Tang, C. (2000). Cognitive adaptation and its consequences: a test of cognitive continuum theory. *Journal of Behavioural Decision Making*, 13, 55–59.
- Fiske, S. T., & Taylor, S. F. (1991). *Social cognition* (2nd ed.). New York: McGraw Hill.
- Gilbert, D. T. (2002). Inferential correction. In T. Gilovich, D. Griffin & D. Kahneman (Eds.), Heuristics and biases (pp.167–184). New York: Cambridge University Press.
- Hammond, K. R., Hamm, R. M., Grassia, J., & Pearson, T. (1997). Direct comparison of the efficacy of intuitive and analytical cognition in expert judgment. In W. M. Goldstein & R. M. Hogarth (Eds.), Research on judgment and decision making: Currents, connections, and controversies (pp. 144-180). Cambridge: Cambridge University Press.
- Harren, V. A. (1979). A model of career decision making for college students. *Journal of Vocational Behaviour, 14*, 119–33.
- Harrison, E. F. (1999). *The managerial decision-making process*. Boston, MA: Houghton

- Hellriegel, D., Slocum, J. W., & Woodman, R. W. (2001). Organizational behaviour (9th ed.). Cincinnati, Ohio: South-Western College Publishing.
- Hendry, J. (2000). Strategic decision making, discourse, and strategy as social practice. *The Journal of Management Studies*, *37*(7), 955–977.
- Hogarth, R. M. (2001). *Educating intuition*. Chicago: University of Chicago Press.
- Holland, J. L. (1985). *Making vocational choices: A theory of careers*. (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Hoy, W. K., & Miskel, C. G. (1991). *Educational administration: Theory, research, and practice* (4th ed.). New York: McGraw-Hill
- Hunt, R. G., Krzystofiak, F. J., Meindl, J. R., & Yousry, A. M. (1989). Cognitive style and decision making. *Organizational Behaviour and Human Decision Processes*, 44, 436–53.
- Jung, C. G. (1976). TYPOLOGI. Till fragan om den psykologiska typerna (Typologie-Zur Frage der Psychologischen Typen (Translated from German). Stockholm: Berghs Forlag.
- Kahneman, D. (2003). Maps of bounded rationality: Psychology for behavioural economics, *American Economic Review*, **93**(5), 1449–1475.
- Kahneman, D., & Frederick, S. (2002). Representativeness revisited: Attribute substitution in intuitive judgment. In T. Gilovich, D. Griffin & D. Kahneman (Eds.), Heuristics and Biases (pp. 49–81). New York: Cambridge University Press.
- Kahneman, D., & Tversky, A. (1981). Prospect theory: An analysis of decision making under risk. *Econometrical*, 47, 263–291.
- Khatri, N., & Alving, H. (2010). Role of intuition in strategic decision making. Unpublished Research. Nanyang Business School. Nanyang Technological University.
- Klaczynski, P. A. (2001). Analytic and heuristic processing influences on adolescent reasoning and decision-making, *Child Development*, 72, 844–861.
- Lindblom, C. E. (1959). The science of muddling thought. *Public Administrative Review*, 19, 79–99.
- Luthans, F, (2000). *Organizational behaviour*. (19th ed.). New York: McGraw-Hill.
- Mangalindan, M. (2004, March 29). The grow-up at Google. *The Wall Street Journal*. p. B1.

- March, J. G., & Olsen, J. P. (1984). *The new institutionalism organizational factors in political life*. Washington, D.C: American Political Science Review.
- March, J. G., Olsen, J. P., & Christensen, S. (1976). *Ambiguity and choice in organizations*. Bergen: Universitiesforlaget.
- Mau, W. (2000). Cultural differences in career decision-making styles and self-efficacy. *Journal of Vocational Behaviour*, 57,365–378.
- Mitchell, T. R., & Beach, L. R. (1990). Do I love thee? Let me count...Toward an understanding of intuitive and automatic decision making. *Organizational Behaviour and Human Decision Processes*, 47, 1–20.
- Mitroff, I., & Kilmann, R. H. (1975). Stories managers tell: A new tool for organizational problem solving. *Management Review*, 64, 18–28
- Novicevic, M. M., Hench, T. J., & Wren, D. A. (2002). Playing by ear in an incessant din of reasons: Chester Barnard and the history of intuition in management thought, *Management Decision*, 40(10), 992–1002.
- Nygren, T. E., & R. J. White (2002). Assessing individual differences in decision making styles: Analytical vs. intuitive. *Human Factors and Ergonomics Society 46th Annual Meeting, Baltimore, MD, HFES.*
- Payne, J. W., & Bettman, J. R. (2004). Walking with the scarecrow: the information-processing approach to decision research. In: Koehler D J, Harvey N (eds) *Blackwell handbook of judgment and decision making*. Blackwell Publishing, Malden, MA, p 110–132.
- Peter, T. J., & Waterman, R. H. (1982). *In search of excellence: Lessons from America's Best run companies*. New York: Hyper & Row.
- Philips, S., Pazienza, N., & Farrin, H. (1984). Decision making styles and problem solving appraisal. *Journal of Counselling Psychology*, *31*, 497–502.
- Rayner, S., & Riding, R. J. (1997). Towards a categorization of cognitive styles and learning styles, *Educational Psychology*, 17, 5–27.
- Riaz, M. N. (2009). Leadership styles as predictors of decision making styles. Unpublished M. Phil dissertation, National Institute of Psychology, Quaid-i-Azam University Islamabad, Pakistan.
- Rowe, A. J. & Mason, R. O. (1987). *Managing with style*. San Francisco: Jossey Bass Publishers.
- Sadler-Smith, E., & Sparrow, P. R. (2008). *Intuition in organizational decision making*. The Oxford Handbook of Organizational Decision Making. Oxford: Oxford University Press.

- Scott, S. G., & Bruce, R. A. (1995). Decision-making style: The development and assessment of a new measure, *Educational and Psychological Measurement*, *55*, 818–831.
- Shafir, E., & LeBoeuf, R. A. (2002). Rationality. *Annual Review of Psychology*, 53(1), 491–517.
- Sherman, S. J., Judd, C. M., & Park, B. (1989). Social cognition. *Annual Review of Psychology*, 40, 281–326.
- Shiloh, S., & Shenhav-Sheffer, M. (2004). Structure of difficulties in mate-selection decisions and its relationship to rational and intuitive cognitive styles. *Personality and Individual Differences 37*, 259–273.
- Simon, H. A. (1957). *Administrative behaviour* (2nd ed.). New York: Macmillan.
- Singh, R., & Greenhaus, J. H. (2004). The relation between career decision-making strategies and person–job fit: A study of job changers. *Journal of Vocational Behaviour*, 64(1), 198–221.
- Sloman, S. A. (2002). Two systems of reasoning. In T. Gilovich, D. Griffin & D. Kahneman (Eds.), Heuristics and biases (pp.379–396). Cambridge: Cambridge University Press.
- Slovic, P., Finucane, M. L., Peters, E., & MacGregor, D. G. (2002). The affect heuristic. In T. Gilovich & D. Griffin & D. Kahneman (Eds.), Heuristics and biases: The psychology of intuitive judgment (pp. 397-420). New York: Cambridge University Press.
- Spicer, D. P., & Sadler-Smith, E. (2005). An examination of the general decision making style questionnaire in two UK samples. *Journal of Managerial Psychology*, 20(2), 137–149.
- Stanovich, K. E., & West, R. F. (2000). Individual differences in reasoning: Implications for the rationality debate? *Behavioural and Brain Sciences*, 23, 645–726.
- Sternberg, R. J. (1997). *Thinking styles*. Cambridge University Press, Cambridge
- Super, D. E. (1980). A life-span, life-space approach to career development. *Journal of Vocational Behaviour,* 16, 282–298.
- Thunholm, P. (2004). Decision-making style: Habit, style or both? *Personality and Individual Differences*, 36(4), 931–944.
- Wedley, W. C. & Field, R. H. G. (1984). A pre-decision support system. *Academy of Management Review*, 9, 696–703.
- Williams, M. R. (2003). *Mastering leadership: Key techniques for managing and leading a winning team* (1st ed.). New Delhi: Viva Books.