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Improving strategic thinking: a multilevel approach

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Abstract

Purpose – Following a multilevel approach, the purpose of this paper is to develop a framework of strategic thinking, which integrates the micro-domain's focus on individuals and groups with the macro-domain's focus on organisations.

Design/methodology/approach – The paper first defines strategic thinking, outlines its elements and examines some of the conceptual issues surrounding the construct, especially those concerning levels of analysis. The following questions are addressed. What are the characteristics of an individual strategic thinker? What are the dynamics that take place within groups and how do they influence strategic thinking? What are the contributions of the organisational context to strategic thinking?

Findings – Strategic thinking at the individual level is discussed in terms of diversity in representational systems. Strategic thinking at the group level looks at heterogeneity and conflict. Strategic thinking within the organisational context examines middle management involvement, the role of organisational structure, and reward and compensation systems.

Practical implications – The paper may help senior managers to develop practical interventions for improving strategic thinking in their organisations. This includes the design of appropriate selection, recruitment and development strategies as well as paying attention to group and organisational level factors that create the enabling conditions for the individual characteristics associated with strategic thinking to be utilised.

Originality/value – The paper outlines a theoretical framework of strategic thinking that integrates previous fragmented research from a number of areas and disciplines into a more comprehensive theory of strategic thinking. It represents an important antecedent to strategic decision making and may provide a key to a better understanding of organisational change phenomena and, ultimately, organisational performance and survival.

Keywords Decision making, Strategic planning

Paper type Conceptual paper

Introduction

Strategic decision-making has long been a topic of great interest in the field of strategic management (Eisenhardt and Zbaracki, 1992). Previous studies have provided important insights into rational and bounded rational processes of decision-making (Eisenhardt, 1989; Nutt, 1989), the role of power and politics (Pettigrew, 1973), and the importance of chance and the random confluence of events (Cohen *et al.*, 1972).

Most of these studies, however, have failed to address the cognitive dimension of decision-making, namely the question of how strategic decision-makers actually think. Stubbart (1989, p. 326), for example, described managerial thinking as a vital but neglected element in strategic decision-making. He argued that "since strategic management studies the activities of managers, and since managers must think about strategy, why don't researchers allocate more research to studying how strategic managers think?" Similarly, Garratt (1995a, p. 2) called for more research "in the



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underrated study of strategic thinking” and a panel of experts (conference authors) in the US identified strategic thinking as one of the ten most critical and important issues for future management research (Zahra and O’Neill, 1998).

Empirical studies have confirmed the need for more research in the area of strategic thinking. Garratt (1995b, p. 242), for example, found that the majority of directors and vice-presidents from the Institute of Directors in London “had no induction, inclusion or training to become a competent direction giver of their business”. Similarly, Bonn (2001) showed that the majority of senior executives in 35 of the 100 largest manufacturers in Australia identified lack of strategic thinking as the main problem in their organisations.

The above review suggests that there is a need for more research that can help us to better understand strategic thinking. Such understanding would provide an important missing link in strategic management research and enable us to obtain a more realistic picture of strategic decision-makers and decision-making. In addition, it would help practicing managers to develop strategies for improving strategic thinking in their organisations.

Building on earlier work on strategic decision-making and strategic thinking, this paper aims to contribute to our understanding of strategic thinking by proposing a multilevel approach that aims to better integrate the construct strategic thinking with existing theories of organisations. Based upon the idea by Argyris and Schön (1978, p. 331) that the “principal challenge to present-day organisation theory is to invent a productive synthesis of fragmentary approaches”, this paper argues that strategic thinking is an integrative process that encompasses a variety of organisational dimensions spanning multiple levels of analysis. It draws on theories of managerial and organisational cognition and explicitly incorporates analyses at the micro- and macro-levels, as well as their interaction.

The paper proceeds as follows. The first sections define strategic thinking, outline its elements and examine some of the conceptual issues surrounding the construct, especially those concerning levels of analysis. The following sections develop a framework of strategic thinking, which is summarised by propositions for each level of analysis: the individual level, the group level and the organisational level. The final section concludes by discussing the implications of the theoretical framework for academic research and for the development of practical interventions to foster strategic thinking in an organisational setting.

What is strategic thinking?

This paper defines strategic thinking as a way of solving strategic problems that combines a rational and convergent approach with creative and divergent thought processes. Such process orientation focuses this investigation on how senior managers in an organisational setting attempt to understand and take strategic action in an environment that is highly complex, ambiguous and competitive. It represents an important antecedent to strategic decision-making and may provide a key to better understand organisational change phenomena and ultimately, organisational performance and survival.

It is important to note that strategic thinking is closely associated with acting in an ongoing and intertwined process. As Mintzberg *et al.* (1998, p. 42) have argued “there are times when thought should precede action, and guide it . . . Other times, however,

especially during or immediately after major unexpected shifts in the environment, thought must be so bound up with action that 'learning' becomes a better notion than 'designing' for what has to happen. And then, perhaps most common are a whole range of possibilities in between, where thought and action respond to each other". Weick (1983, p. 225) has called this process the ability to "act thoughtfully" – meaning that managers can act quickly, yet the actions are informed by a framework of previous thinking and, at the same time, inform future thinking. Strategic thinking is thus action oriented and concerned with identifying how to resolve ambiguity and make sense of a complex world.

Elements of strategic thinking

The literature suggests a number of key elements that have relevance for strategic thinking, namely systems thinking, creativity and vision. These elements will be discussed in the following sections.

Systems thinking

Kaufman (1991, p. 69) has characterised strategic thinking as "a switch from seeing the organization as a splintered conglomerate of disassociated parts (and employees) competing for resources, to seeing and dealing with the corporation as a holistic system that integrates each part in relationship to the whole". This requires the ability to distance oneself from day-to-day operational problems (Garratt, 1995b) and to see how different problems and issues are connected with each other, how they influence each other and what effect one solution in a particular area would have on other areas (Liedtka, 1998).

Senge (1990, p. 43) has called this approach "systems thinking". He argued, "We must look beyond personalities and events. We must look into the underlying structures, which shape individual actions and create the conditions where types of events become likely". This involves thinking in terms of processes rather than events to enable a reconciliation of apparent contradictions and the development of innovative solutions.

Such integrated perspective of the organisation requires a thorough understanding of the internal and external dynamics of organisational life, in particular of how organisations and managerial actions change over time and of the feedback processes that lead to such changes (Stacey, 1996). This includes an understanding of how organisations are embedded within large and complex systems such as markets, industries and nations (Stacey, 1996) and how they are influenced by the dynamics, interconnection and interdependency of these systems (Liedtka, 1998).

Creativity

Strategy is about ideas and the development of novel solutions to create competitive advantage. Strategic thinkers must search for new approaches and envision better ways of doing things, in other words, be creative. Creativity is an area which has been widely researched (Amabile, 1983, 1998; Drazin *et al.*, 1999; Oldham and Cummings, 1996; Woodman *et al.*, 1993). Most researchers have adopted a definition that focuses either on the outcome of a creative process or on the process of engaging in creative acts. Woodman *et al.* (1993, p. 293), for example, defined creativity as "the creation of a

valuable, useful new product, service, idea, procedure, or process by individuals working together in a complex social system”.

A key element of most definitions of creativity is novelty and relevance for the organisation. Robinson and Stern (1997, p. 14) stated that creativity “often involves recombining or making connections between things that may seem unconnected”. Amabile has argued along similar lines. In her view creative thinking refers to “*how* people approach problems and solutions – their capacity to put existing ideas together in new combinations” (1998, p. 79). Accordingly, the most frequently studied creative thinking skills are the abilities to generate many alternative solutions to a problem and to develop or identify unusual associations or patterns (Ford, 1996).

The ability to use creativity for imagining multiple alternatives and for exploring whether there might be alternative ways of doing things is critical for the development of unique strategies and action programs. De Bono (1996, p. 17) has made this point very clear: “Without creativity we are unable to make full use of the information and experience that is already available to us and is locked up in old structures, old patterns, old concepts, and old perceptions”.

Vision

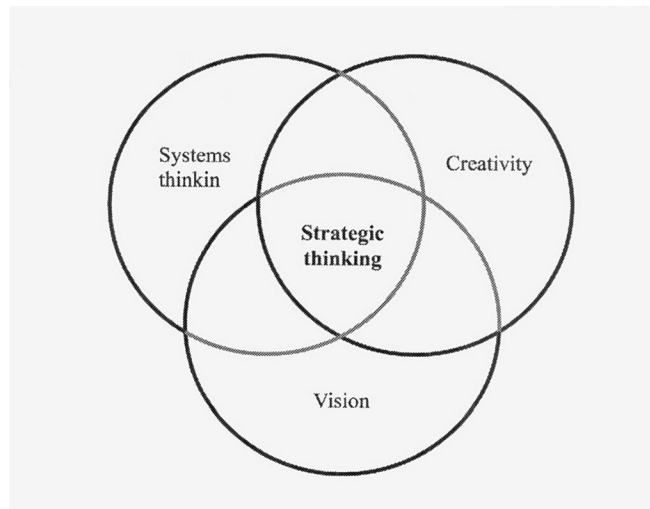
Senior managers are faced with a high level of uncertainty, incomplete information and equivocality. They need to make sense of complex, multifaceted projects and synthesize many possible meanings (Boland, 1984). People who face such a situation, need some sort of guidance – or as Weick (1995, p. 27) has argued “values, priorities, and clarity about preferences” – to help them develop viable strategies and design appropriate courses of action. A number of authors have stressed the importance of common beliefs and of a vision of the desired future (Collins and Porras, 1998) to convey a sense of direction and provide a focus for all activities within the organisation.

The research of Collins and Porras (1998) has shown that companies with a strong sense of purpose or vision outperformed the general stock market by a factor of 12 since 1925. Leaders in these companies placed great emphasis on building an organisation that has a deep understanding of its reason for existence and of its core values, those fundamental and enduring principles that guide and inspire people throughout the organisation and bind them together around a common identity. A vision that is shared throughout the organisation, according to Collins and Porras (1998), fosters commitment rather than compliance and creates a sense of commonality that permeates the whole organisation. It inspires people’s imagination and provides a focus that allows individuals to contribute in ways that make the most of their expertise and talents. At the senior level, a common vision helps to provide meaning and gives a sense of direction in the decision-making process (Liedtka, 1998). Figure 1 shows the elements of strategic thinking graphically.

Strategic thinking from a multilevel perspective

Strategic thinking does not simply occur in a single mind, but is affected by the social context in which an individual operates. As Chatman *et al.* (1986, p. 211) have argued “when we look at individual behaviour in organizations, we are actually seeing two entities: the individual as himself and the individual as representative of this collectivity Thus the individual not only acts on behalf of the organization in the

Figure 1.
Elements of strategic
thinking



usual agency sense, but he also acts, more subtly ‘as the organization’ when he embodies the values, beliefs and goals of the collectivity”.

Hence, what goes on in the mind of individuals is influenced by their participation in social interactions (Jelinek and Litterer, 1994), or as Weick (1995, p. 40) put it, “what a person does internally is contingent on others”. An understanding of strategic thinking would, therefore, benefit from a research design that investigates the characteristics of an individual strategic thinker as well as the dynamics and processes that take place within the organisational context. For example, to obtain an accurate picture of the effects of different compensation and reward systems on strategic thinking, we need to look at their impact on individual managers and on the way this influences the wider organisational climate and structure.

Consequently, a framework for strategic thinking needs to integrate the micro-domain’s focus on individuals and groups with the macro-domain’s focus on organisations and their context. In other words, it needs to acknowledge the influence of individual characteristics and actions on the organisational context and the influence of the organisational context on individual thinking and behaviour. Clearly, the characteristics of an individual strategic thinker are only of value if supporting structures and processes at both the group and the organisational levels co-exist. Similarly, structural forms and processes at the group and the organisational levels reinforce the emergence of the appropriate individual characteristics associated with strategic thinking. Research on strategic thinking, therefore, should address the following levels:

- (1) the characteristics of an individual strategic thinker;
- (2) the dynamics that take place within a group of individuals; and
- (3) the organisational context.

The gestalt of strategic thinking for the entire organisational system then stems from the complex interaction of individual, group and organisational characteristics and behaviours.

The paper proceeds by addressing the three levels of strategic thinking and develops a number of propositions that can guide the development of an integrated framework for improving strategic thinking in an organisational context.

Characteristics of an individual strategic thinker

When individuals are confronted with an equivocal set of events, they try to make sense of them (Weick, 1995). According to cognitive theory, individuals construct meaning and make sense by building mental representations that guide their thinking and the direction of their decisions (Rumelhart and Norman, 1985).

Research on representational systems has investigated cognitive concepts such as schemas (Rumelhart, 1980), frames (Minsky, 1975), scripts (Schank and Abelson, 1977), cognitive maps (Tolman, 1948) and how they are constructed, manipulated and applied in the decision-making process (Durand *et al.*, 1996). They represent organised generic knowledge that is used to simplify the large amount of data presented in organisational settings (Floyd and Wooldridge, 2000), to organise and interpret data (Jelinek and Litterer, 1994) and to guide action (Weick, 1979).

Hence, these representational systems structure the unknown, but they also define what decision-makers regard as relevant and act as a filter that influences their perception of organisational events and what should be done about them. Decision-makers who receive the same stimuli may use different frameworks to interpret them and, therefore, disagree about meanings, causes or effects (Starbuck and Milliken, 1988). By "enacting" their environments (Weick, 1979), decision-makers develop subjective representational systems that influence how problems are framed and how managerial and organisational meaning is developed.

The image of a single representational system for strategic thinking is adequate for a situation of high familiarity that has been encountered many times in the past, but it does not explain how senior managers deal with decision-making tasks that are novel, highly complex and ill-structured (Boland *et al.*, 1990). Such tasks require senior managers to handle the presence of multiple potential ways to obtain a desired outcome and to integrate diverse sources of information to judge about the likelihood of future events (Campbell, 1988).

To deal with these tasks senior managers must be able to understand and conceptualise different and possibly conflicting information and scenarios. Starbuck and Milliken (1988) argued that complex decision-making tasks require managers to use multiple sense making frameworks, which may be inconsistent with one another or even contradict each other. Similarly, Fiol and Huff (1992) stressed the importance of managing a portfolio of multiple representational systems to improve strategic decision-making and encourage strategic thinking. Hence, decision-makers need to be able to hold several seemingly paradox and conflicting positions simultaneously in their mind and to tolerate the resulting uncertainty and ambiguity.

- P1.* Decision-makers with high strategic thinking abilities will show a greater diversity in representational systems than decision-makers with low strategic thinking abilities.

Strategic thinking in groups

The previous section has drawn on theories of managerial and organisational cognition and developed a proposition that deals with characteristics of an individual strategic thinker. However, strategic thinking is not purely an individual mental activity, but is influenced by the decision-maker's participation in social interactions as well as the social and institutional context of the organisation. Hence, an understanding of strategic thinking in complex organisational settings requires that we go beyond a focus on individuals and carefully examine the group context and its influence on an individual's strategic thinking ability.

Walsh and Ungson (1991, p. 60) have described organisations as "a network of intersubjectively shared meanings that are sustained through the development and use of a common language and everyday social interactions". This description focuses on the social aspect of organisational life and stresses the importance of interactions in making sense of organisational events. On a group level, Kahlbaugh (1993) highlighted the importance of interactions by arguing that an individual creates novel thoughts in the context of interactions with others. Eisenhardt (1989), focusing on senior executives, noted that recurring interaction patterns among this group profoundly influenced strategic decision-making.

As senior executives engage in strategic decision-making, the type and variety of cognitive perspectives represented on the team shape the interactions of the group members (Wiersema and Bantel, 1992). Strategic decisions then reflect the representational systems employed in the decision-making process. Walsh and Fahey (1986) argued that the processes within the group determine whose representational systems are represented in the group's collective frame of reference. In their view, a group draws on the different representational systems available among its members and develops a "negotiated belief structure" during the decision-making processes. These shared, but not identical cognitions enable individuals to select actions that fit with those of other organisational members and to create meaning in a co-operative setting (Jelinek and Litterer, 1994).

Hence, the process of group interaction in the decision-making process transcends the representational systems, which have been developed at the individual level and facilitates the creation of negotiated mental models and belief systems. Consequently, strategic thinking within a group is not the simple aggregate of all group members' strategic thinking ability, but a function of the interplay between the strategic thinking abilities of individual members, the preserved diversity in negotiated belief structures of senior manager groups, and organisational influences.

The literature has identified two areas, which are important for the process of group interaction, namely heterogeneity and conflict. The remainder of this section deals with these two areas and investigates their importance for strategic thinking.

Heterogeneity

Walsh *et al.* (1988) argued that groups with a broad range of perspectives are better in reading and defining their complex decision environments. Such groups draw upon the diverse representational systems available among their members and achieve high-realised coverage of the decision domain. Diverse representational systems are more likely to be present if a senior management group is heterogeneous with respect

to members' demographics and cognitions rather than homogeneous (Simons *et al.*, 1999).

According to theories of managerial and organisational cognition, heterogeneity represents diversity in a team's cognitive bases (Wiersema and Bantel, 1992). Heterogeneous teams tend to gather information from a variety of sources and use diverse interpretations and perspectives. Such diversity of perspectives results in more extensive discussion of strategic alternatives (Lant *et al.*, 1992) and leads to a larger set of alternative potential solutions (Bantel and Jackson, 1989). Consequently, it can help to reduce "blind spots" (Zahra and Chaples, 1993) and "groupthink" (Janis, 1982).

Simons *et al.* (1999) differentiated between diversity, which is highly job-related (e.g. diversity in educational and functional background) and diversity, which is less job-related (e.g. age, gender and nationality). Job-related diversity captures distinct experiences, skills or perspectives relevant to cognitive tasks at work (Pelled, 1996) and provides an increase in a group's total pool of task-related skills and information (Williams and O'Reilly, 1998). Job-related diversity, according to Milliken and Martins (1996), translates into a greater variety of skills and knowledge related perspectives being brought into the decision-making process and consequently increases the likelihood of creative and innovative solutions. Simons *et al.* (1999) showed that job-related diversity, in particular diversity in functional background and educational level has greater impact on organisational performance than less job-related diversity such as age. Bantel and Jackson (1989) found that diversity in educational level and functional background was associated with higher levels of creativity and innovation. Functional heterogeneity was also related to greater planning openness (Bantel, 1994), indicating that the wider variety of perspectives available stimulated the group to focus on a broader range of information and to consider more options in the decision-making process.

In their review on the effects of diversity, Milliken and Martins (1996) concluded that research on educational and functional diversity tended to be associated with cognitive benefits in top management groups. In particular, job-related diversity in groups forces their members to think in more realistic and complex ways about their context (Milliken and Martins, 1996) and to rethink their own points of view and consider factors they had not previously considered (Simons *et al.*, 1999). The need to reconcile differing information and various viewpoints stimulates effective group discussion, leading to high quality decisions and to solutions, which are characterised by greater novelty and comprehensiveness (Bantel and Jackson, 1989; Wiersema and Bantel, 1992). Hence, the above research suggests that job-related diversity among the top team provides the potential for more thoughtful decision-making and the generation of more novel ideas.

- P2. Senior manager groups that are heterogeneous in terms of job-related forms of diversity have higher strategic thinking capabilities than senior manager groups that are heterogeneous in terms of non job-related forms of diversity.

Conflict

While the presence of job-related diversity may be beneficial for groups engaged in strategic decision-making, organisational theorists have identified potential costs associated with heterogeneity. Williams and O'Reilly (1998), for example, described

diversity as a mixed blessing, which can lead to difficulties in communication and co-ordination. Similarly, Milliken and Martins (1996, p. 403) have argued that heterogeneity is a "double-edged sword" that increases the opportunity for creativity, but also the likelihood for dissatisfaction among group members.

Groups that are heterogeneous in terms of demographic attributes are also likely to be heterogeneous in terms of attitudes and values (Bantel and Jackson, 1989). According to Eisenhardt *et al.* (1997), a diverse team is not only likely to have different views and perspectives, but its members expect and experience more conflict. Similarly, Amason (1996) has argued that an attempt to bring the different viewpoints of diverse team members into close contradistinction will accentuate the underlying dissimilarities and may produce acrimony and conflict.

Researchers have usually differentiated between two different types of conflict. Jehn (1995, 1997), for example, distinguished between task conflict and relationship conflict. Amason (1996) and Amason and Schweiger (1994) characterised the two types of conflict as cognitive conflict and affective conflict. Task conflict or cognitive conflict exists when group members disagree about the content and the goals of the task to be performed by putting forward different viewpoints, ideas and opinions. Conversely, relationship conflict or affective conflict exists when there are personal incompatibilities or disputes among group members (Amason, 1996; Jehn, 1995, 1997).

A number of researchers have argued that task-related conflict has a positive effect on strategic decision-making, because it provides a more inclusive range of information and helps people identify and better understand the key issues involved (Eisenhardt *et al.*, 1997). Amason and Schweiger (1994) suggested that task-related conflict allows group members to identify and discuss diverse perspectives and Baron (1991) provided evidence that task-related conflicts encourage group members to develop new ideas and approaches. Schweiger and Sandberg (1989) found that task-related conflict facilitates critical evaluation of assumptions that underlie alternative solutions and hence, decreases the groupthink phenomenon. Similarly, Amason (1996) and Jehn (1995) showed that task-related conflict produced better quality decisions, since it stimulates the discussion of ideas and promotes the critical evaluation of issues and decision alternatives.

In summary, the above review of previous research suggests that task-related conflict has beneficial effects for decision-making. It helps individual members to reflect on their own thinking and to develop more diverse frames of reference and representational systems. In addition, it forces senior management groups to establish interaction processes, in which they identify, discuss and synthesize the different perspectives of their members. Such an approach facilitates the development of a broader range of ideas and options and a better understanding of possible alternatives.

P3. Task-related conflict increases the diversity in representational systems of individual senior managers.

P4. Task-related conflict increases the strategic thinking capabilities of senior manager groups.

Conversely, research on relationship-related conflict has suggested that this type of conflict has negative effects on strategic decision-making, group productivity and group performance. Deutsch (1969), for example, argued that relationship-related

conflict decreases goodwill and mutual understanding and hinders the completion of organisational tasks. According to Evan (1965), time that is normally spent on technical or decision-making tasks is redirected towards discussing and resolving personal conflicts or towards attempts to ignore them. Similarly, Jehn (1997, pp. 531-2) argued that relationship-related conflict interferes with completing a task because "members focus on reducing threats, increasing power, and attempting to build cohesion rather than working on the task....The conflict causes members to be negative, irritable, suspicious, and resentful".

Baron (1991) found that communication and co-operation among group members was affected if relationship-related conflict was present. Pelled (1996) contended that relationship-related conflict reduces the ability of group members to assess new information and makes members less receptive to the ideas of others. Similarly, the study of Roseman *et al.* (1994) suggested that the threat and anxiety associated with relationship-related conflict inhibit member's cognitive functioning in processing complex information.

As a consequence of relationship-related conflict, group members with negative sentiments towards one another or towards the entire group are more likely to withdraw emotionally from the group and less likely to contribute constructively in the decision-making process, hence reducing group performance and productivity.

P5. Relationship-related conflict decreases the strategic thinking capabilities of senior manager groups.

Strategic thinking within the organisational context

The above sections have taken a micro-domain's focus, investigating characteristics of an individual strategic thinker and the dynamics that take place within a group of senior managers. However, as discussed previously, individual strategic thinkers and senior management groups are influenced by the socio-political context of the organisation. Hence, to better understand strategic thinking, we need to include the organisational context, because the context forms the underlying foundation for the processes within the organisation, shaping managerial thinking and helping people to act collectively (Jelinek and Litterer, 1994).

According to Weick (1995), the "collective structure" of an organisational system develops through a process of negotiating multiple and competing interests between different individuals, communities and groups. It is through these interactions that organisational members form shared understandings around issues of common interest and develop common frames of thought and action (Schall, 1983). These frames of reference enable members to define their position within the organisation and lead to the development of socially shared beliefs that guide strategic choices and actions (Porac *et al.*, 1989). Hence, organisational characteristics create the context within which organisational members form a shared frame of reference that influences the strategic thinking ability of senior managers.

The literature has identified three characteristics that are important to understand the influence of the organisational context on strategic thinking: organisational culture, organisational structure, and the reward and compensation system. These three characteristics will be dealt with in the remainder of this section.

Organisational culture

An organisational culture consists of a complex set of assumptions, beliefs and core values that is shared throughout the organisation and influences the way it conducts business (Schein, 1985). One aspect of organisational culture is whether it is participative as opposed to hierarchical and authoritarian (Soonhee, 2002; Zamanou and Glaser, 1994). Participation in decision-making processes requires that senior managers are willing to share decision-making with lower level managers and that lower level managers are willing to share responsibility for these decisions.

Participation by lower level employees in the strategy development process has been linked to higher job satisfaction by employees (Soonhee, 2002) and to improved decision-making by senior managers (Wooldridge and Floyd, 1990). Liedtka (1998) argued that senior managers must develop, guide and facilitate the strategic thinking skills of organisational members. Involving middle managers in the strategy process enriches the repertoire of ideas and frameworks that senior managers have to work with (Liedtka, 1998) and helps them to accommodate new knowledge and develop innovative strategies (Floyd and Wooldridge, 2000). Bonn (2001) suggested that organisations establish a Strategic Thinking Forum comprising of middle managers who explore issues that will be of strategic importance for the organisation in the next 5 to 10 years and who challenge the organisation's current strategies. Involvement of middle managers in the strategy process, according to Floyd and Wooldridge (2000), helps to connect divergent ideas from within the organisation to strategic issues and provides the impetus for new strategic initiatives. In addition, the input from middle managers may challenge an individual's existing representational systems.

- P6. The involvement of middle managers in the strategic decision-making process fosters strategic thinking within an organisation.

- P7. The involvement of middle managers in the strategic decision-making process increases an individual's diversity in representational systems.

Organisational structure

The structure of an organisation is important since it institutionalises the interaction between people, the flow of communication, the job division and co-ordination, and the types of power relationships (Tata *et al.*, 1999). Burns and Stalker (1961) differentiated between organic and mechanistic structures. Organisations with an organic structure are characterised by flat structures with few hierarchical levels, loosely defined work roles and decentralised decision-making (King and Anderson, 1995). Organic structures stress co-ordination through horizontal communication across departments, organisational levels, functions, product lines and locations (Tata *et al.*, 1999). Individuals perform their tasks with knowledge of the overall situation of the organisation and interactions between people of different ranks tend to resemble lateral consultation rather than vertical command. People within the organisation tend to develop shared beliefs about the values and goals of the organisation and work closely with others to achieve these goals (Burns and Stalker, 1961). Hence, organisations with organic structures tend to encourage co-operation between their members and the spreading of ideas within the organisation (Barker, 1993).

Conversely, organisations with a mechanistic structure are hierarchical with stable divisions or departments based around functions (King and Anderson, 1995). Individuals carry out their assigned tasks as prescribed by their functional roles and tend to work on their own. The tasks are governed by instructions and decisions issued from superiors, with vertical communication and co-ordination (Tata *et al.*, 1999). The decision-making authority is centralised, based on the assumption that knowledge and expertise is predominantly located at the top of the organisation (Burns and Stalker, 1961). Such an organisation form lacks collaborative structures such as cross-functional teams, leading to reduced communication and consequently, inhibiting the free exchange of ideas within the organisation (Barker, 1993).

A number of authors have argued that organisations with organic structures tend to be more innovative than organisations with mechanistic structures, due to the greater autonomy of individuals and groups, the greater availability of information and the stronger involvement of organisational members (Burns and Stalker, 1961; Aiken and Hage, 1971). According to Pierce and Delbecq (1977) organic structures facilitate idea initiation and proposal development and are more predisposed to innovation, whereas organisations with mechanistic structures tend to resist change efforts. Organic structures also permit rapid responses to market and industry demands (Quinn, 1985) and enable organisations to engage in entrepreneurial endeavours, because such structures make decision-makers aware of the need for change and provide the expertise and resources to do so (Miller, 1983). Covin and Slevin (1988) found that organic structures promote entrepreneurial activities and enable the organisation to respond rapidly to actions of their competitors, whereas mechanistic structures facilitate the accomplishment of routine tasks and provide certainty, order and uniformity.

The above discussion suggests that organic structures are more conducive to strategic thinking because they enhance interaction and communication and encourage the generation and presentation of new ideas. Conversely, mechanistic structures are more likely to restrain interaction, communication and the exchange of ideas.

P8. Organic organisation structures foster strategic thinking within an organisation.

Reward and compensation system

The reward and compensation system is critical in an organisational context, because it can either encourage or impede managerial actions (Hambrick and Snow, 1989). Compensation design is likely to influence behaviour and has important consequences for managerial decision-making, firm strategy and performance (Gomez-Mejia, 1992; Finkelstein and Boyd, 1998).

Compensation can take the form of a fixed wage or salary and/or variable long-term contingent pay such as stock options. The long-term contingent pay is regarded as an important form of incentive that can be used to align the actions of managers with desired organisational outcomes (Tosi and Gomez-Mejia, 1989; Jensen and Murphy, 1990). Incentive alignment is achieved by making a certain proportion of a manager's compensation dependent upon satisfying performance targets specified in the contract. Hence, one major issue in the design of reward and compensation schemes concerns the

allocation of an appropriate pay mix, that is the balance between fixed pay and variable long-term contingent pay.

The incentive alignment can be linked to quantitative performance criteria, either accounting or market-based, or it can include qualitative criteria. While a great deal of empirical research has used accounting or market-based measures of performance (Gomez-Mejia, 1994; Gomez-Mejia and Wiseman, 1997), only limited research has been conducted using qualitative criteria. Balkin and Gomez-Mejia (1990, p. 154), for example, stated that “surprisingly little empirical investigation has been conducted that could serve as a guide in designing reward systems that are aligned with corporate and business unit (SBU) strategies”.

A number of authors have stressed the importance of evaluating senior executives using qualitative measures. Lawler (2000), for example, argued that strategic success depends on how well an organisation’s compensation and reward system supports its strategies. Similarly, Maciariello *et al.* (1989) suggested that rewards should be tied to long-term rather than short-term performance and should be based more on qualitative than on quantitative evaluations. They suggest the use of qualitative goal-congruent measures of performance in addition to accounting-based measures.

A reward system that includes long-term and qualitative aspects of executive performance can be a key contributor to the achievement of an organisation’s strategic objectives due to its influence on executive behaviour. Maciariello *et al.* (1989, p. 300), for example stated, “If top executives knew that they would be evaluated at the end of major project milestones instead of on an accounting calendar schedule, they might be more likely to think in terms of the long-run ramifications of their decisions”. Similarly, Bloom and Milkovich (1998) argued that the long-term focus of some forms of compensation might show a greater relationship to strategic decisions with future pay-offs. Hence, rewards systems that are based on long-term and qualitative performance criteria are likely to encourage senior executives to think in longer time horizons and adopt a more strategic approach.

P9. Rewards systems that include a high proportion of long-term and qualitative performance measures in the pay mix of total compensation foster strategic thinking within an organisation.

Figure 2 shows the framework developed in the previous sections.

Conclusion

This paper has drawn on theories of managerial and organisational cognition and proposed that a better understanding of strategic thinking requires a multilevel approach, which includes a micro-focus on individuals and groups and a macro-focus on the organisational context. Both management research and practice can benefit from such a multilevel view of strategic thinking. On the academic side, this paper outlines – to the author’s knowledge – the first theoretical framework of strategic thinking that seeks to integrate previous fragmented research from a number of areas and disciplines into a more comprehensive theory of strategic thinking. It represents an important antecedent to strategic decision-making and may provide a key to better understand organisational change phenomena and ultimately, organisational performance and survival.

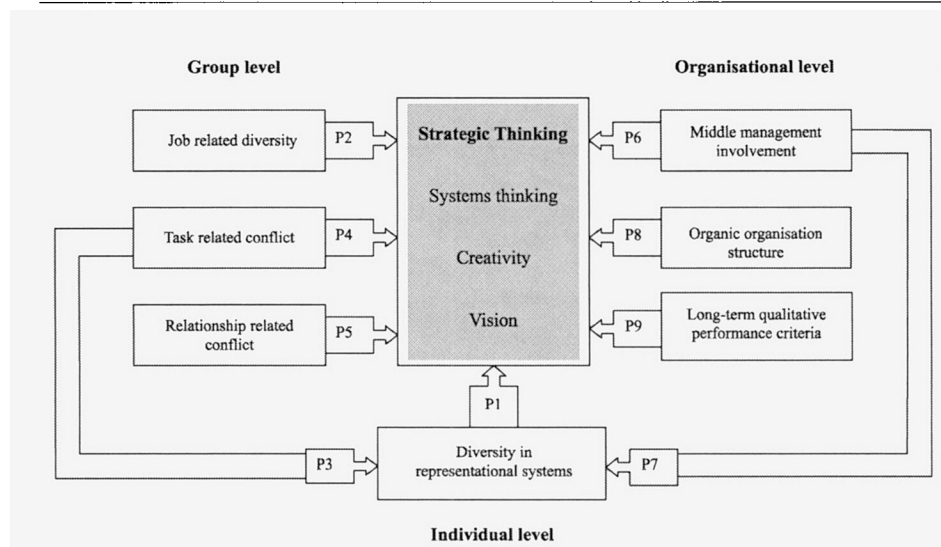


Figure 2.
Strategic thinking framework

On the practitioner side, a better understanding of strategic thinking will help organisations to select individuals who possess key characteristics that contribute to strategic thinking. While the design of appropriate selection, recruitment and development strategies will help organisations to ensure that their members possess the required characteristics for strategic thinking, this in itself is insufficient. As the paper has shown, organisations need to consider a number of group and organisational level factors that create the enabling conditions for the individual characteristics associated with strategic thinking to be utilised. In particular, organisations need to pay attention to the importance of senior management group composition to ensure maximum use of the diverse representational systems and skills needed for strategic thinking. In addition, it is important for organisations to acknowledge the disadvantages of group diversity, namely the greater likelihood for conflict and the need to find ways for managing conflict constructively. In terms of organisational level factors, the paper has outlined some of the structures and systems that organisations can implement to facilitate strategic thinking.

Recognising that strategic thinking should be addressed at the individual, the group and the organisational levels will enable organisations to draw on a wider range of possible strategies for improving strategic thinking in their organisation than if they regard strategic thinking solely as a matter of individual thinking styles. Organisations that succeed in addressing strategic thinking at all three levels should be able to improve their decision-making processes, resulting in higher quality strategies and greater competitive advantage.

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