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STRATEGIC DECISION MAKING: PROCESS PERSPECTIVES¹

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ABSTRACT

This article reviews the strategic decision-making process literature with respect to the

synoptic formalism/political incrementalism debate. Procedural rationality is chosen as

a representative of the synoptic formalism perspective; and both intuitive synthesis and

political behaviour are employed as representatives of the political-incrementalism

perspective. In this article, the author discusses the theoretical underpinnings of these

three process dimensions, as well as the key research efforts gathered together under each

perspective. In conducting this review, a number of areas have been identified which

could profitably be examined further, together with a number of implications for

managers will be highlighted and discussed.

Key words:

Incrementalism; intuition; political behaviour; rationality; strategic decision-making;

synoptic formalism.

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INTRODUCTION

Dean & Sharfman (1996, pp. 379-380) describe strategic decisions as: 'committing substantial resources, setting precedents, and creating waves of lesser decisions (Mintzberg et al., 1976); as ill-structured, nonroutine, and complex (Schwenk, 1988); and as substantial, unusual, and all pervading (Hickson et al., 1986)'. Some of the characteristics of strategic decisions are as follows. Strategic decisions are the responsibility of top management. They reflect the interaction between an organisation and its environment and show how an organisation manages this relationship (Ginsberg, 1988). They may be formal or informal and can be both intended and emergent (Pennings, 1985). They are embedded in both the inner context (e.g. psychological, structural, cultural, and political factors) and the outer context of the organisation (e.g. competitive factors) (Pettigrew, 1992). They deal with concerns which are essential to the livelihood and survival of the organisation and usually involve a large proportion of the organisation's resources; and they typically address issues which are unusual for the organisation rather than issues which lend themselves to routine decision-making (Stahl & Grigsby, 1992). They are difficult to define or to assess in terms of performance; they are associated with different trade-offs and risk; they are interrelated to other decisions in the organisation and set precedents for subsequent ones; they are political and carry high levels of uncertainty; they rarely have one best solution and once this is made, they are difficult to reverse (Wilson, 2003).

It should be noted that a decision which is considered strategic in one industry may be less or not strategic at all in another (Hickson et al., 1986). For example, a decision to introduce a new product (e.g. a car) in the automotive industry can be a strategic one;

while the decision to introduce a new product (e.g. a children's toy) in a factory which produces hundreds of new toys every year may not be a strategic one.

The study of strategic decision-making has long been of interest to both scholars and executives (Ireland & Miller, 2004). Research into strategic decision making has often been divided into two categories 'content research' and 'process research'. Content research deals with issues of strategy content such as portfolio management, diversification, mergers; and the alignment of firm strategies with environmental characteristics. Process research, however, deals with the process by which a strategic decision is made and implemented and the factors which affect it. For example, it concentrates on the way in which managers influence the firm's strategic position through the strategic decision making process (SDMP) which they use.

Although the body of research over the last two decades indicates the domination of the research agenda by content issues, while process issues have received less attention, there is at present renewed interest in process research (Rajagopalan et al., 1997). This interest is still maintained. It should be borne in mind that these two categories are complementary, not alternatives, and that content research can significantly influence the direction of process research and vice versa (Mintzberg & Waters, 1985). For the purposes of this article, we focus on the second approach, namely, process research.

While strategy process research covers a broad range of issues, this review focuses on the SDMP, an area of process research which deals with the question of how strategic decisions are made. Therefore, SD implementation is beyond the scope of the present review.

This article is organised as follows. First, we discuss research on two specific perspectives which differentiate the SDMP. These are the synoptic formalism and the political incrementalism perspectives. Based on a careful examination of the theoretical and empirical literature on these two perspectives, procedural rationality is chosen as a representative of the synoptic formalism perspective; and both intuitive synthesis and political behaviour are employed as representatives of the political-incrementalism perspective. Second, the author discusses the theoretical underpinnings of these three process dimensions as well as the key research efforts gathered together under each perspective. Third, this article suggests a number of areas which could profitably be examined further. These areas address implications for theory building, methodology and managers.

SYNOPTIC AND INCREMENTAL PERSPECTIVES

Two basic types of models pervade the literature on the SDMP, i.e., the synoptic formalism model and the political incrementalism model (Goll & Rasheed, 1997; Johnson, 1988). Synoptic formalism is considered an extension of the traditional rational model; and analysis is its basic feature. In contrast to the synoptic formalism are incrementalism (Lindblom, 1959), logical incrementalism (Quinn, 1980) or political incrementalism as Mueller (1998) call it; this, clarifies the way in which organisations actually make strategic decisions.

These three terms, i.e. incrementalism, logical incrementalism and political incrementalism, are not identical. For example, Fredrickson & Mitchell's (1984) discussion of incremental processes does not address the political aspects of decision-making processes; while Eisenhardt & Zbaracki (1992) conclude that the political perspective provides a compelling description of the way in which managers actually

make decisions. Quinn's 'logical incrementalism' differs from Lindblom's incrementalism or 'muddling through' in that it combines elements of rational planning with elements of incrementalism (Papadakis & Barwise, 1997). Although there are some differences between these three terms, they are often offered as the antithesis to synoptic formalism or as simply a more accurate characterisation of the way that organisations in reality make strategic decisions.

Researchers have discussed many dimensions of the SDMP in the bulky intellectual literature of strategic decision-making. The rationality of decision-making processes has received a central place in the strategic decision-making theory and practice (Papadakis & Barwise, 1997). Political behaviour among decision-makers has long been recognised as an aspect of decision-making (e.g. Child & Tsai, 2005; Wilson, 2003) and has received a great deal of attention from researchers (Schwenk, 1995). Although there is little empirical research on intuition in strategic decision literature, making decisions by intuition is increasingly viewed as a viable approach in the SDMP (Miller & Ireland, 2005; Sadler-Smith & Shefy, 2004). Eisenhardt & Zbaracki (1992) point out that studying intuition is one way to create a more realistic view of the SDMP. Butler (2002) concludes that more recent research has emphasised how executives make decisions using intuitive and political processes in addition to rational procedures.

Given the above, in addition to the fact that reconciling synoptic and incremental perspectives is a desirable if not imperative matter for increasing the effectiveness of the SDMP (Camillus, 1982), both these perspectives were addressed together in the present review.

RATIONALITY

The next two sections will address the concept and role of rationality in strategic decisionmaking in turn.

THE CONCEPT OF RATIONALITY IN DECISION-MAKING

'Rationality is the reason for doing something and to judge a behaviour as reasonable is to be able to say that the behaviour is understandable within a given frame of reference' (Butler, 2002: 226). Put another way, rationality characterises that behaviour which is logical in pursuing goals (Dean & Sharfman, 1993b). This broad conception underlies many social science models of rationality.

Given the historical evolution of rationality, scholars developed some constructs of rationality to be distinguished from more global conceptions of rationality, which have overtones of decision-maker omniscience (Simon, 1978). These constructs represent measures of the extent to which the SDMP approximates to the rational model of decision-making (see Table 1). In this case, decision-makers are rational to the limits of their own capabilities (i.e. bounded rationality); as Snyman & Drew (2003) stress, bounded rationality emphasize decision-making process which is limited by cognitive and political realities. Given these limitations, decision-makers aim to achieve objectives which are 'good enough rather than the best' (Eisenhardt, 1997, p. 1).

Although these constructs all derive from the rational model of decision-making, there are many differences between them. Authors have used different labels in measuring rationality. Moreover, studies which use the same label may use different indicators to operationalise it. For example, Khatri (1994) uses comprehensiveness as one indicator of what he calls strategic rationality. He measures this indicator as a whole using one item of a Likert-type scale, while both Fredrickson & Mitchell (1984) and Jones et al. (1992)

divide comprehensiveness into two components: analytical and integrative. Although both Fredrickson & Mitchell and Jones et al. divide comprehensiveness into the same two components and define them in a similar way, they operationalise them differently.

INSERT TABLE 1 ABOUT HERE

RATIONALITY AND STRATEGIC DECISION-MAKING

Eisenhardt & Zbaracki (1992) argue that the debate over whether decision-makers are rational or boundedly rational is no longer very controversial, where empirical research clearly supports the following. First, the existence of cognitive limits to the rational model of decision-making; Janis (1989), for example, points out that executives are likely to take any of the following decision shortcuts to overcome cognitive limitations, namely, satisficing, simple decisions rules, incrementalism, and nutshell briefing rule. Second, the pursuit by many strategic decisions of the basic phases of problem identification, development and selection, but they cycle and recycle through the various stages of decision-making, frequently repeating, often going deeper, and always following different paths by fits and starts. Third, the complexity of the problem and the conflict among the decision-makers often influence the shape of the decision process.

Jones et al. (1992) identify three main obstacles to adopting rational decision processes. First, the organisation may lack the required resources to search for and analyse the relevant information. For example, it has been argued that the rational model assumes that information will be available when needed but neglects the cost of providing this information (Braybrooke & Lindblom, 1970). However, even if the organisation has the required resources, the comprehensive processes may lead to 'achieving tomorrow's

solution to yesterday's problem' (Braybrooke & Lindblom, 1970, p. 121). Second, as noted above, the decision-makers may have limited cognitive capabilities. Third, executives may be apprehensive about upsetting the organisation's existing political structure and dealing with its consequences.

The relationship between rational decision processes and organisational outcomes seems to be problematic because it has been a subject of continuing controversy among researchers, and no consensus has yet emerged (Goll & Rasheed, 1997). Empirical evidence exists for all possible relationships between rationality and organisational outcomes: positive relationships, negative relationships and no relationship (see Table 2).

Fredrickson and his colleagues conducted a series of studies on this relation. They find a negative relationship between rationality and performance in an unstable environment (Fredrickson & Mitchell, 1984). A positive relationship was found in a stable environment (Fredrickson, 1984). Through a longitudinal extension of these studies, Fredrickson & Iaquinto (1989) found that levels of rationality exhibit considerable inertia. Contrary to Fredrickson and his colleagues, Dean & Sharfman (1996) hypothesise that the relationship between procedural rationality and decision effectiveness will be stronger in unstable environments than in stable ones. Bourgeois & Eisenhardt (1988) find a positive relationship between rationality and performance for firms in a high velocity environment. Further empirical support for this position is provided by Goll & Rasheed (1997); Judge & Miller (1991); Miller & Friesen (1983); and Priem et al. (1995).

INSERT TABLE 2 ABOUT HERE

On the basis of a review of relevant previous theory and research, we suggest seven possible reasons for the contradictory results of previous studies, listed below.

First, a lack of clear and systematic treatment of environmental variables: in the sense of focusing on some environmental variables (e.g. uncertainty) and failing to consider the effect of others (e.g. hostility-munificence and complexity) (Dess & Beard, 1984). For example, environmental complexity may need to be rationally treated in decision-making so as to understand the different environmental variables which affect the decision.

Second, conducting research in different cultures: for example, consensual decision-making is more common among Japanese managers than among U.S. ones because of the high emphasis which Japanese culture places on consensus (Rajagopalan et al., 1993). Some authors have provided empirical support for the need to take the effect of culture into account when conducting research on strategic decisions in different cultures (e.g. Brouthers et al., 2000).

Third, failure to include other strategic process variables: although the SDMP is multidimensional, most of the existing studies have focused only on rationality, whereas these studies have paid less attention to other process characteristics (e.g. participation and politics) (Papadakis et al., 1998). As a result, these studies do not totally capture the complexity and variety of the phenomenon of decision-making (Hart & Banbury, 1994).

Fourth, methodological differences: there are many methodological differences between previous studies such as data collection methods; variation in sample size; statistical techniques; type of industry; and number of industries.

Fifth, variations in the operationalisation of the SDMP dimensions: scholars use different constructs of rationality. Although these constructs are derived from the rational model of decision-making, there are many differences among them (see Table 1). For

example, Kukalls (1991) declares that one of the reasons for the contradictions between his results and those of Fredrickson & Mitchell (1984) is the use of a different conceptualisation of the planning comprehensiveness construct. In their comparison of six prior studies concerning the relationship between rationality and firm performance, Priem et al. (1995) find wide differences between these studies in the operationalisation of both rationality and performance.

Sixth, variations in the level of analysis: some authors focus on organisational level and investigate organisational performance (e.g. Fredrickson & Mitchell, 1984); while some choose decision-level as a focus instead of organisational level and examine decision outcomes (e.g. Butler et al., 1993).

Seventh, failure to investigate more complex relationships: for example, Rodrigues & Hickson (1995) report that successful decisions were more likely to result from decision processes for which resources were available. According to Rodrigues & Hickson, resources refer to quantity and timeliness of resources (e.g. money, materials and technology), and the quantity, timeliness and accuracy of information. On the basis of this, one may argue that the success of a decision is a function of the availability of both resources such as money, material and technology (a product of good performance) and information (a dimension of rationality). These findings may suggest a positive interaction between rationality and performance, which in turn influences strategic decision success.

In summary, the above arguments on the possible reasons for the contradictory results of previous studies should be considered by researchers when interpreting and comparing their results with earlier ones.

POLITICAL BEHAVIOUR

'Since, strategic decisions are made among people by people for people they are a welter of action, interaction, and counteraction' (Hickson et al., 1986, p. 54). The interaction of interests, conflict and power means that the SDMP can be characterised as political in nature (Wilson, 2003). The origin of the political perspective on strategic decision-making is the political science literature of 1950s, when various authors developed a view that the conflicting goals and interests of people affect decision-making in government (Eisenhardt & Zbaracki, 1992). This view assumes that decisions are the result of a process in which decision-makers have different goals, form alliances to achieve their goals, and the preferences of the most powerful prevail.

The political model attacks the model of the group as rational (Eisenhardt, 1997). As a group, people may share some objectives, such as the welfare of the organisation, but they have conflicting preferences and interests which arise from different expectations of the future, different positions inside the organisation and clashes. For example, some may be interested in growth while the other may favour profitability (Allison, 1971).

THE CONCEPT OF POLITICAL BEHAVIOUR IN DECISION-MAKING

There is a lack of uniformity in defining politics. Gandz & Murray (1980, p. 237) divide definitions of politics into two categories. In the first category, politics are defined in 'a "neutral" fashion as the occurrence of certain forms of behaviour associated with the use of power or influence'. Within this category, there are three subdivisions. The first one considers any conflict over scarce resources as political behaviour. The second subdivision expands the definition of politics to include conflict over any policy decision. Lastly, some broaden the definition to include any use of power or influence. The second

category defines politics in terms of consciously self-serving behaviours against others in the organisation.

The political behaviour may reflect power which is technically considered illegal. Consequently, it is divisive and conflictive, often pitting people against the other system of influence, i.e. formal authority, accepted ideology, and/or authorized expertise, or else against each other (Mintzberg & Waters, 1985). Political behaviour as a part of human behaviour in decision-making seeks to 'get others to do what we want, when they might not elect to do so' (MacMillan & Jones, 1986, p. 1).

In strategic decision-making, researchers see political behaviour from two points of view. On the one hand, there are the authors who are interested in examining politics inside organisations. From this perspective, there are two categories. The first category inspects politics among organisational members. It investigates political tactics among the actors; and their attempts to affect the outcomes of decision processes to serve their self-interests. In addition, it examines the relationship between political dynamics and organisational outcomes (e.g. Dean & Sharfman, 1996). The second one investigates politics among organisational units; and the acquisition by these units of the power to influence the decision process (e.g. Pfeffer & Moore, 1980).

On the other hand, there are the authors who use a broad approach to include all kinds of influence on decision processes from both internal actors (organisational members and/or organisational units) and external parties (e.g. government agencies and customers) (e.g. Mintzberg et al., 1976). What ties together the above two points of view is the belief of the individuals, whether they are working inside or outside the organisation, that they will be affected by the decision outcomes. For this reason, they attempt to satisfy their personal or institutional needs by influencing the decision process.

POLITICAL BEHAVIOUR AND STRATEGIC DECISION-MAKING

Many researchers have been interested in investigating the role of political behaviour in the SDMP and its effect on organisational outcomes (see Table 3). Hickson et al. (1986) argue that not every executive or unit within the organisation essentially affects the decision-making processes where they are influenced only by a specified set of interest units or executives, i.e. 'decision-set'. The decision-set of interests brings political tactics into decision-making to exert influence upon the decision processes in order to ensure that their objectives are embedded in the decision. Some of these tactics which have been addressed by previous authors are: coalition formation (e.g. Child & Tsai, 2005); agenda control (e.g. Eisenhardt & Zbaracki, 1992); tactics of timing (e.g. Hickson et al., 1986); the use of outside expert consultants (e.g. Pfeffer, 1992); negotiation or bargaining (e.g. Papadakis, 1998); the use of power (e.g. Krishnan & Park, 2003); and tactics of information such as manipulation and control of crucial information (e.g. Pettigrew, 1973).

Most previous researchers have supported a negative relationship between political behaviour and organisational outcomes (e.g. Dean & Sharfman, 1996; Gandz & Murray, 1980). The following reasons may help to account for this negative relationship.

First, political tactics contrast with the straightforward influencing tactics of open discussions and sharing information among decision-makers (Eisenhardt & Bourgeois, 1988). For example, politics may lead to a distortion of information (Pfeffer, 1992). Moreover, political behaviour often involves restricting the information flow (Pettigrew, 1973). Therefore, managers may make decisions depending on incomplete information which could lead to disappointing outcomes (Dean & Sharfman, 1996).

Second, political decision processes are divisive and therefore time-consuming. Therefore, they may lead to delay for the decision, with a possible loss of opportunities and profits (Pfeffer, 1992). This problem will be more obvious in competitive and rapidly changing environments in which decisions should be made fast (Eisenhardt, 1989).

Third, as argued by Dean & Sharfman (1996), political behaviour may lead to incomplete understanding of the environmental constraints, resulting in the undermining of strategic decision effectiveness in two ways. (A) Political tactics are directed toward the interests, power bases and positions inside the organisation rather than on what is feasible, given the present environmental forces. Hence, decisions which result from such processes are less likely to consider environmental constraints. Second, political processes may exclude some feasible alternatives because they are in conflict with powerful individuals' interests, undermining the likely success of strategic decisions.

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INTUITION

In contrast to rationality, there is little in the way of applied research on intuitive processes in strategic decision literature. The majority of serious scholarly works on this subject are theoretical in nature and produced almost exclusively by psychologists; empirical research in applied management settings is quite limited (Agor, 1989c) and this scarcity has persisted until recently. Therefore, the extent to which executives use intuition in strategic decision-making remains a topic for future research. This review addresses this neglected but important process (intuitive synthesis) in the SDMP to the hope of

providing a more realistic view of the way in which strategic decisions-makers actually act.

THE CONCEPT OF INTUITION IN DECISION-MAKING

It is difficult to describe intuition but it is easy to recognize (Sadler-Smith & Shefy, 2004). Eisenhardt & Zbaracki (1992) state that intuition refers to more incremental adaptations based on deep and intimate knowledge of the situation faced by decision-makers. Intuition is a synthetic psychological function in that it apprehends the totality of a given situation. It is often associated with having a hunch or a strong feeling of knowing what is going to occur (Vaughan, 1989) without explaining the rationale behind it (Nutt, 1998).

Butler (2002) argues, most models of intuition can be seen as ways of trying to push the decision process as far as possible towards the computational strategy. Parikh (1994) observes that intuition could be a form of intelligence which decision-makers can use when they cannot access rational processes. Sadler-Smith & Shefy (2004: 76) argue that intuition can now be understood as 'a composite phenomenon involving interplay between knowing (intuition-as-expertise) and sensing (intuition-as-feeling)'. Similarly, In their review of intuition in strategic decision making, Miller & Ireland (2005) mention that intuition can be conceptualised as automated expertise and as holistic hunch.

Khatri & Ng (2000) suggest that intuition is subconscious; complex; quick; a component of all decisions; not emotional; and not essentially biased. Moreover, they propose three indicators of intuition, namely, reliance on judgement, reliance on experience and the use of gut feeling. These indicators have been widely addressed by previous studies and will be discussed in turn.

1. Reliance on judgement: Decision-makers use intuitive synthesis when decisions should be made fast, information is not adequate and there is no precedent. Such

situations call for judgement. Butler (2002) argue that judgement is central to the process of solution building. Daft & Lengel (1986) propose that if work is not analysable, managers have to employ judgement and experience rather than computational routines. Bunge (1975) suggests that judgement is a part of intuition, while Simon (1987) treats intuition and judgement as synonymous concepts.

- 2. Reliance on experience: intuitive synthesis represents a form of experience which is based on a deep knowledge of problems related to a specific job or environment (Prietula & Simon, 1989). Agor (1989a) finds a relationship between good intuitive decisions and the numbers of years of experience. Wally & Baum (1994) point out that intuition is an ability to learn from experience. Depending on semi-structured telephone interviews with 60 managers across different industries and geographic locations in the United States, 56% of interviewees thought that intuitive decisions are based on experience (Burke & Miller, 1999). In his study of the tactics used by decision makers to evaluate alternatives during strategic decision making in 317 organisations, Nutt (1998) identified four types of evaluation tactics, analytical, barraging, judgmental and subjective. In the judgmental tactics, 'choices were made intuitively by the decision makers, drawing on their prior experience or knowledge of the situation' (Nutt, 1998, p. 349). Floyd & Lane (2000) argue that decisions to acquire needed assets are initiated at operating levels by managers experimenting with novel solutions to emerging problems. Based on their knowledge of the organization's context, middle managers assess the long term implications of such experiments, and they advocate the most promising ones as initiatives to top management.
- 3. Use of 'gut-feeling': Parikh (1994) describes intuition as a process of feeling out the problem or trusting one's gut feeling. Therefore, if the decision which is founded on intuition turns out to be wrong, decision-makers will have no defence because they cannot

articulate the reasons on which the decision was based (Schoemaker & Russo, 1993). Decision-makers simply know that they are right, or they have a strong feeling about the decision. In Burke & Miller's (1999) study, 40% of the subjects mention that intuition is based on a person's feelings or emotions. They declare that this characterisation is consistent with the interpretation of intuition as a gut feeling.

In conclusion, in contrast to rationality and political behaviour, there is little in the way of the operationalisation of the intuitive processes in the strategic decision-making literature. As a result, the concept of intuition is still 'unrefined and poorly understood' (Clarke & Mackaness, 2001); and scholars, who have explored it, have widely different perspectives about what it actually is and how it works. As Miller & Ireland (2005, p. 29) suggest 'intuition presents itself as a troubling tool'. Therefore, any exploration you conduct of the existing literature on intuitive synthesis will leave you more than frustrated (Agor, 1989b).

INTUITIVE SYNTHESIS AND STRATEGIC DECISION-MAKING

One of the basic assumptions about management in general and decision-making in particular is that rational processes yield choices which are superior to those coming from intuitive processes. However, this assumption has recently come 'under fire' (Khatri, 1994). For example, Miller & Ireland (2005) claim that many managers embrace intuition as an effective approach to strategic decision making. Grant (2003) argues that rapid change requires approaches to strategy formulation which are 'flexible and creative'.

Making decisions by intuition is increasingly viewed as a viable approach in today's business environment because few strategic decisions have the advantage of complete, accurate and timely information. The decision making literature suggest that the evaluation of alternatives tends to be intuitive, unless managers are forced to involve

others (Nutt, 1998). Burke & Miller (1999) report that executives outline various benefits of the use of intuition in decision-making. These are to expedite decision-making; to improve ultimate decisions; to facilitate personal development; and to promote decisions compatible with the company. They argue that intuition may be beneficial in certain scenarios and at times may be the primary decision approach available. The reason for this is perhaps that intuitive processes can deal with more complex systems than those which can be dealt with by our conscious minds (Parikh, 1994).

Papadakis & Barwise (1997) suggest that decision-makers need to combine both rationality and intuition. Fredrickson (1985) found empirical evidence that managers could be simultaneously rational and intuitive. In her study of strategic decision-making in eight microcomputer firms, Eisenhardt (1989) supported this notion. She found that effective managers in these firms made strategic decisions in a somewhat surprising way. They generated a large number of alternatives, but did not analyse them thoroughly, they gathered information from multiple sources, but then focused on only a few of them. It seems that these managers were using a combination of rationality and intuition.

Several authors have suggested that top executives use intuition in an unstable environment (e.g. Agor, 1989a; Mintzberg, 1994; Quinn, 1980), but none of them explicitly examines whether intuition in fact have any bearing on organisational outcomes. For example, Eisenhardt (1989); Judge & Miller (1991); and Wally & Baum (1994) investigate the impact of intuition on the pace of strategic decision-making, but they do not directly investigate the relationship between intuition synthesis and organisational outcomes. In one of the very few applied studies which have addressed the role of intuition on organisational outcomes, Khatri & Ng (2000) found that the use

of intuitive synthesis in the SDMP is positively associated with organisational performance in an unstable environment, but negatively in a stable one.

Using intuition in decision-making is not without its shortcomings or criticism. Sauter (1999), for example, mentions that managers using intuition may become impatient with routine or details; and they may reach conclusions very quickly, ignore relevant facts, or follow an inspiration when it is clearly bad. Nevertheless, Sauter suggests some methods to manage these negative tendencies. For example, when decision-makers use intuition, they must understand their strengths and weaknesses; they must assess all intuitively obtained information using appropriate analytical tests and consider all factors carefully without bias.

In summary, most of the few empirical studies which have investigated the role of intuition in the SDMP are still initial research efforts and have some shortcomings. Eisenhardt (1989; 1990) and Bourgeois & Eisenhardt (1988), for example, showed that intuition played a significant role in increasing the speed of strategic decisions in a high velocity environment. However, their results may not be sufficiently generalisable because they depended on a small number of case studies and a single industry (see Table 4). Isenberg (1986) finds that intuition supported managers' efficiency through reducing the information required to make a decision. Nevertheless, the generalizability of his findings is limited because of the small sample size and the focus on students and general managers. Moreover, most of these research efforts do not clearly examine the relationship between intuitive synthesis and organisational outcomes.

INSERT TABLE 4 ABOUT HERE

CONCLUSION

The key conclusions of this review are organised in the following way. First, we discuss substantive extensions. Second, methodological implications are highlighted and addressed. Finally, we suggest a number of implications for managers.

SUBSTANTIVE EXTENSIONS

First, the synoptic and incremental debate. While the synoptic and incremental debate has been much contested, it has not been adequately tested in empirical terms and a gap is said to separate the strategic decision researchers using the incremental and the synoptically based perspectives. This gap requires the SDMP to be investigated from both perspectives. This review shows that the strategic decisions which companies take are not entirely based upon one process, but may arise from a number of processes. Therefore, the use of a multi-dimensional empirically grounded representation of the SDMP dimensions to examine the process-outcome relationship (e.g. Dean & Sharfman, 1996) is an advantage over empirical efforts which focus on specific process dimensions (e.g. Jones et al., 1992).

Second, implementing strategic decisions. To complete the model of strategic decision-making and success, one needs to include how well decisions are implemented because of the potentially significant impact of implementation on strategic decision success (Baum & Wally, 2003; Nutt, 1993; Wilson, 2003). For example, Hickson et al. (2003) concludes that the way decision implementation is managed appears to be vital for decision successfulness. Nutt (1999) reports that half the decisions in organisations fail. Nutt suggests that the key reasons of failure take place predominantly during decision implementation rather than during decision-making.

Third, process capability. Enhancing our understanding of strategic decision-making would require greater attention to the role of process capability. Nutt (2004) claims that decision-makers should generate a pool of ideas to avoid failed decisions and in so doing to expand the alternatives search by finding an appropriate arena of action, using broad objectives and searching from several perspectives. Simon (1987) argues that it is doubtful that decision-makers depend only on either intuition or rationality; rather, it is more likely that there is a continuum of decision-making styles involving an intimate combination of the two kinds of process. Decision makers might achieve a more balanced perspective by considering both intuitive and rational processes as complementary or dual processes (Sadler-Smith & Shefy, 2004). For example, intuition can be brought in after rational processes have done the groundwork and provide data and analyses as the basis for intuitive processes (Sauter, 1999).

Fourth, the role of political behaviour. The following are suggestive questions which may need to be answered to provide academics and managers with a more realistic picture of the dynamics of political behaviour in decision-making.

- 1. How can managers overcome the negative effects of political tactics? The answer may be through improved mutual trust (Papadakis & Barwise, 1997) or common goals, clear areas of responsibility and humour (Eisenhardt, 1999).
- 2. Is political behaviour necessarily dangerous? Although most previous studies take a negative view of politics, some authors argue that politics may be harmful in some situations and helpful in others (Stevenson et al., 1985). Eisenhardt et al. (1997), for example, argue that in a rapidly changing environment, politics may be beneficial because they serve as an important mechanism for organisational adaptation. Nutt (1998) suggests that barraging reduce uncertainty and increase acceptance.

Mintzberg (1998) points out that politics should be evaluated according to their effect on the ability of an organisation to pursue the appropriate mission efficiently in the long term. He suggests some functional roles for politics over the SDMP stages. In the preparation stage, politics can ensure that all sides of the decision are fully debated. Then, in the decision making stage, politics can work as a kind of '*invisible underhand*' to promote a necessary change blocked by the legitimate systems of influence. Lastly, in the execution stage, politics can ease the path for the implementation of a strategic decision.

To answer the above questions, new conceptions and research designs need to be developed. For example, more studies such as that of Simmers (1998) expressing and investigating a political perspective in two ways, i.e. competitive and collaborative, can be useful here.

Fifth, the role of the broader context. While this review tells us something about the role of some contextual variables, e.g. environmental uncertainty, in the SDMP, we still know a little about the role of other contextual variables in the SDMP. For example, what is the role of the national context in the SDMP? What is the relationship between top management characteristics, which may affect their perceptual and evaluational processes and the SDMP? Is there a relationship between the time and information available to decision makers and decision process? What is the role of 'information load' in making decisions (Huber & Daft, 1987)? Do time and information required moderate the relationship between decision process and outcomes? Is there a relationship between the type of information, e.g. real time or planning information, and the SDMP? Does the way in which decision-makers categorise and label a strategic decision in the early stages of decision-making influences the subsequent responses of the organisation? Do external

actors lead to more rational or political decisions? What is the role of company size in the context of strategic decision making? Given such questions and the above discussion, a next logical step in this line of critical review would be to review the role of contextual variables in the SDMP.

METHODOLOGICAL IMPLICATIONS

First, longitudinal research designs. One of the limitations of most previous research, especially questionnaire-based research, is that the data are cross-sectional; analysis was post hoc; and data were collected after the decisions were made and their outcomes were clear. Therefore, a more accurate understanding of the causal relationships between process and outcomes requires the adoption of longitudinal research designs (Bowman et al., 2002). This will enable researchers to investigate how relationships between context, process and outcome unfold over time and to achieve a better understanding of the degree and direction of causality among the main variables (e.g. the long debate on the causal relationship between performance and rationality) (Van de Ven, 1992).

Second, the consistency between unit of analysis and outcome measures. Outcome measures should be consistent with the unit of analysis. If the unit of analysis is the overall SDMP of an organisation (e.g. Child & Tsai, 2005; Jones et al., 1992), organisational outcomes such as ROA and organisational effectiveness will be more appropriate. If the study examines isolated strategic decisions (e.g. Hough, 2005; Miller et al., 2004), the overall economic performance of an organisation may bear only a weak relationship to any individual decision; therefore, decision outcomes such as decision quality or effectiveness will be more appropriate. This choice avoids the problem of ambiguity in the causal ordering, which would accompany the choice of organisational performance as a focus and provides a close link between the SDMP and its outcome,

which is essential in the light of the many exogenous effects on organisational performance (Pearce et al., 1987).

Third, better conceptualisation. Montgomery et al. (1989) identify loosely defined variables as a major problem in empirical strategic decision-making field; therefore, a key requirement for the development of this field is to improve measurement approaches (Bowman et al., 2002). Hence, one clear opportunity for future research lies in better conceptualisation of the SDMP dimensions (in particular, intuition concentrating on its content validity).

It is appropriate, also, to reveal that some authors have criticised the existing conceptualisation of decision and strategic decision making. For example, Chia (1994, p. 781) points out that the attempts to replace decision by other terms, e.g. action and change, ignore the ontological status of the decision making process. He argues that 'decision is better understood as a series of interlocking pre-definitive acts of punctuating the flow of human experiences in order to facilitate sense-making and to alleviate Cartesian anxiety'.

Similarly, Hendry (2000) argues that existing conceptualisations of the SDMP (i.e. *rational, action and interpretative perspectives*), while each affording valuable insights to some aspects of the issues raised, offer only partial and disconnected perspectives on the strategy process as a whole that leave important questions unaddressed. To overcome this problem, he develops an empirically grounded conceptualisation of strategic decisions as elements of a strategic discourse that is itself the most prominent feature of strategy as a social practice. The suggested conceptualisation provides a common foundation for the competing rational, action and interpretative perspectives of strategic decision-making. According to Hendry, the conceptualisation of strategic decisions as discourse has some immediate implications for empirical research. For example, it allows

researchers to consider the instrumental and sense making roles of strategic decisions as parallel, interacting features of the strategic decision process rather than as rival interpretations, and so to address a wide range of questions that effectively escape the existing partial and disconnected perspectives. The above discussion opens up a very promising avenue for future research on the conceptualisation and operationalisation of strategic decisions.

Fourth, the perceptual measures. The perceptual measures of decision process may not truly reflect the phenomenon of interest. As argued by Mintzberg et al. (1976), tapping the memories of the executives could introduce distorted information. It is expected that some information, such as unsuccessful steps and political tactics, as well as unsatisfactory results of decisions went unreported (Larimo, 1995). It is recommended that this limitation be remedied by a number of methods. These are to take full advantage of the different aspects of validity and reliability of the constructs; to reverse scale anchors in several places to reduce response bias; to use multiple sources of data, i.e. triangulation of evidence; and to confirm that all the information will be completely anonymous and confidential.

POLICY AND PRACTICAL IMPLICATIONS

This review may, it is hoped, provide a number of managerially relevant guidelines and insights for decision-makers in order to help them improve their decision-making process.

First, managers have the power to influence the success of strategic decisions, and thus the fortunes of their organisations, through the processes which they use to make decisions.

Second, organisational politics are generally seen as having long-lasting detrimental effects, inefficient and unpleasant. The evidence is that managers engaging in political

tactics make less effective decisions than those who do not. This has some implications for top management. (1) They should be aware that political tactics could lead to unsuccessful decisions and consequently poor company performance. (2) They need to defuse political tactics in order to achieve successful decisions. However, this is not to say that effective managers never need to use political behaviour themselves. Of course, they need to be aware of the politics inside their organisations and to know how to get their proposals accepted (Papadakis & Barwise, 1997).

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TABLE 1
CONSTRUCTS AND CONCEPTUALISATIONS OF RATIONALITY

Study	Construct of rationality	Conceptualisation
Langley (1989)	Formal analysis	Written documents reporting the results of some systematic study of a specific issue
Kukalls (1991)	Planning comprehensiveness	The completeness of the strategic planning process and the number of areas in which strategic planning is applied (e.g. capital spending, investment planning and new product development)
Dean & Sharfman (1996)	Procedural rationality	The extent to which the decision process involves the collection of information relevant to the decision and the reliance upon analysis of this information in making the choice
Khatri (1994)	Strategic rationality	An explicit (formal), systematic and analytical approach to decision-making
Schwenk (1995)	Decisional rationality	The extent to which decision—makers follow a systematic process in reaching carefully thought-out goals
Fredrickson (1984); Papadakis et al. (1998)	Comprehensive- ness	The extent to which organisations attempt to be exhaustive or inclusive in making and integrating strategic decisions
Butler (2002)	Rationality	The reason for doing something and to judge a behaviour as reasonable is to be able to say that the behaviour is understandable within a given frame of reference
Hough & Ogilvie (2005) and Hough & White (2003)	Availability and pervasiveness	Availability captures the degree to which the available cues were known by the team when they made their decisions. High availability indicates that the team had a great deal of knowledge about the issue. <i>Pervasiveness</i> assesses to what extent were all team members informed of the available information.

TABLE 2
A SUMMARY OF EMPIRICAL RESEARCH: RATIONALITY

		Methodology			
Study	Sample	Design	Analysis (level of analysis)	Description	Major findings
Fredrickson & Mitchell (1984)	109 executives in an unstable environment	Experiment; cross- sectional; Scenario- based structured	Correlation (decision-level)	The relationship between comprehensiveness and performance	Comprehensive processes are positively related to performance in a stable environment and negatively in
Fredrickson (1984)	152 executives in a stable environment	interviews			an unstable environment.
Fredrickson & Iaquinto (1989)	159 executives in both stable and unstable environments	Experiment; longitudinal	Correlation & multiple regression (decision-level)	The relationship between comprehensiveness and performance	Comprehensiveness exhibits considerable inertia
Fredrickson (1985)	321 MBA students and 116 executives	laboratory study; cross-sectional; Scenario-based structured interviews	MANOVA (decision-level)	The effect of decision motive and performance on SDMP	Variation in decision motives and performance level affects the decision processes recommended by inexperienced executives
Bourgeois & Eisenhardt (1988)	Four computer firms	A multiple case; longitudinal; a multi- method	Content analysis (organisation- level)	How do executives make strategic decisions?	The more rational SDMP, the better performance of the firm
Langley (1989)	Three Canadian organisations	Case studies; longitudinal; a multi- method	Content analysis (organisation-level)	The purposes behind the use of formal analysis	Four purposes of formal analysis: information, communication, symbolic and control

TABLE 2 (Continued)

		Methodology			
Study	Sample	Design	Analysis (level of analysis)	Description	Major findings
Jones et al. (1992)	70 international firms	Field study; cross- sectional; mail survey	Correlation (organisation- level)	The relationship between rationality and organisational effectiveness	A positive relationship
Dean & Sharfman (1993a)	57 strategic decisions	Field study; cross- sectional; structured interviews	Multiple regression (decision-level)	The conditions affecting procedural rationality	Competitive threat, external control and decision uncertainty are related to procedural rationality
Khatri (1994)	241 companies in three industries	Field study; cross- sectional; a multi- method	Correlation; ANOVA (decision-level)	The role of rationality in SDMP	Rationality is positively related to performance in a stable environment
Dean & Sharfman (1996)	52 strategic decisions	Field study; longitudinal; structured interviews	Multiple regression (decision-level)	The relationship between procedural rationality and decision effectiveness	Procedural rationality is positively related to decision effectiveness
Goll and Rasheed (1997)	62 large manufacturing firms	Field study; cross- sectional; mail survey	Correlation; multiple regression (organisation- level)	The influence of environment on the relationship between rationality and performance	Rationality is associated with performance in high munificent and dynamic environments.
Papadakis (1998)	38 manufacturing firms	Field study; cross- sectional; a multi- method	Pearson correlation (decision-level)	The relationship between performance and rationality	A positive relationship

TABLE 2 (Continued)

		Methodology		_	
Study	Sample	Design	Analysis (level of analysis)	Description	Major findings
Papadakis et al. (1998)	As that of Papadakis (1998)	As that of Papadakis (1998)	Multiple regression; factor analysis (decision level)	The relationship between contextual perspectives and rationality	Rationality is affected by both decision-specific characteristics and internal context
Hough & White (2003)	400 decisions	Simulation	One way analysis of variance; correlation; logistics regression (decision level)	The moderating role of dynamism	Dynamism may moderate the relationship between rationality and decision quality.
Hough & Ogilvie (2005)	749 executives	Simulation	A structured equation model (decision level)	How cognitive style affects strategic decision outcomes	Intuiting/Thinking managers used their intuition to make cognitive leaps based on objective information

TABLE 3
A SUMMARY OF EMPIRICAL RESEARCH: POLITICAL BEHAVIOUR

		Methodology			
Study	Sample	Design	Analysis (level of analysis)	Description	Major findings
Pfeffer & Salancik (1974)	The University of Illinois	A case study; longitudinal; a multi- method	Correlation; multiple regression (organisation- level)	The effect of subunit power on resource allocation	Powerful departments get more of scarce resources
Gandz & Murray (1980)	428 graduates and MBA students	Field study; cross- sectional; mail survey	Content analysis; K-W ANOVA; Friedman test; correlation (organisation- level)	Managers' perceptions of politics	Politics are pervasive and detrimental to organisational effectiveness
Pfeffer & Moore (1980)	Two campuses of a university	A case study; longitudinal; a multi- method	Correlation; multiple regression (organisation- level)	A model of budgeting in a university	Budget allocations were a function of student enrolment and department power
Hickson et al. (1986)	150 strategic decisions	Case studies; longitudinal; a multi- method	Content, correlation and discriminant analyses (decision- level)	The influence of interest units on SDMP	SDMP is influenced by a wide variety of interesting units
Eisenhardt & Bourgeois (1988)	Eight computer firms	A multiple case; longitudinal; a multi- method	Content analysis (organisation-level)	Political behaviour of SDMP	Politics arise from power centralisation; they are associated with poor performance.

TABLE 3 (Continued)

		Methodology			
Study	Sample	Design	Analysis (level of analysis)	Description	Major findings
Dean & Sharfman (1993b)	61 strategic decisions	Field study; cross- sectional; structured interviews	Factor analysis (decision-level)	The relationship between political behaviour and rationality	Political behaviour and rationality are independent dimensions of the SDMP
Dean & Sharfman (1996)	52 strategic decisions	Field study; multiple- respondents; longitudinal design	Multiple regression (decision-level)	The relationship between political behaviour and decision effectiveness	A negatively relationship
Eisenhardt et al. (1997)	12 technology- based companies	A multiple case; longitudinal; a multi- method	Content analysis (organisation- level)	The interplay of conflict, politics and speed in SDMP	Successful strategic decisions are most likely to be made by teams which promote active and broad conflict over issues without sacrificing speed
Papadakis (1998)	70 strategic decisions	Field study; cross- sectional; a multi- method	Correlation; (decision-level)	The relationship between political activities and individual performance measures	Some interesting correlations but with no clear pattern
Nutt (1998)	317 strategic decisions	Field study; longitudinal; a multi- method	ANOVA; a Duncan test; content analysis (decision-level)	The tactics used to evaluate alternatives	Political tactics (bargaining) were rarely used but highly successful

TABLE 3 (Continued)

		Methodology		_	
Study	Sample	Design	Analysis (level of analysis)	Description	Major findings
Simmers (1998)	140 senior officers	Field study; cross- sectional; a multi- method	Correlation; factor analysis; multiple regression (organisation- level)	The relationship between politics and outcomes measures	Different relationships between collaborative politics and outcome measures
Papadakis et al. (1998)	As that of Papadakis (1998)	As that of Papadakis (1998)	Multiple regression; factor analysis (decision- level)	The relationship between contextual perspectives and politics	Politics are mainly influenced by decision-specific and firm characteristics
Papadakis et al. (1999)	An important Greek chemical company	Case history; longitudinal; a multi- method	Content analysis (decision-level)	Strategic decision- making from a crisis to an opportunity	Different motives lead to different processes of decision-making
Hickson <i>et al.</i> (2003); Miller et al. (2004)	55 strategic decisions	Case studies; longitudinal; a multi- method	Content, correlation and factor analyses (decision-level)	Strategies for successfully implementing strategic decisions	Executives should communicate effectively with the key stakeholders in the implementation process to avoid political tactics.
Child & Tsai (2005)	Three multinational corporations and four local firms	Case studies; longitudinal; a multi- method	Content analysis (organisation- level)	The dynamic between firms' environmental strategies and institutional constraints	Multinational corporations take political initiatives through public relations, cooptation and collective lobbying.

TABLE 4
A SUMMARY OF EMPIRICAL RESEARCH: INTUITION

		Methodology			
Study	Sample	Design	Analysis (level of analysis)	Description	Major findings
Mintzberg et al. (1976)	25 strategic decisions	Case studies & longitudinal; a multimethod	Content analysis (decision-level)	How organisations make unstructured decisions	Analysis was used infrequently. Judgment was used when managers decide without explaining their rationale.
Quinn (1980)	Nine corporations	Case studies; a multimethod	Content analysis (organisation-level)	How companies arrive at strategic change	Firm is a political system. The strategy process is typically fragmented, evolutionary, and largely intuitive
Eisenhardt (1989)	Eight computer firms	A multiple case; longitudinal; a multi- method	content analysis; (organisation-level)	How executive teams make rapid decisions	Aided by intuition, managers can react quickly and accurately to changing stimuli; fast decision-makers use more information and alternatives,
Wally & Baum (1994)	151 CEOs	Scenario-based questionnaire; cross- sectional; a multi- method	LISREL analysis (decision-level)	Determinants of the pace of SDMP	Use of intuition associated positively with speedy decisions
Sabherwal & King (1995)	81 companies	Field study; cross- sectional; mail survey	Cluster analysis (decision-level)	An empirical taxonomy of decision-making	Five ways of making decisions- planned, provincial, incremental, fluid and political
Brouthers et al. (1998)	80 firms	Field study; cross- sectional; mail survey	Descriptive statistics (organisation-level)	Examination of the SDMP	Small firms tend to rely on intuition and at best make moderately rational decisions

TABLE 4 (Continued)

_		Methodology		Description	
Study	Sample	Design	Analysis (level of analysis)		Major findings
Krabuanrat & Phelps (1998)	Five Thai-based companies	Case studies; longitudinal design; in-depth interview	Semi invasive approach (decision- level)	The use of heuristics (e.g. past experience) in decision making	Heuristics are commonly used both individually and in combination with rationality.
Nutt (1998)	317 strategic decisions	Field study; longitudinal; a multi- method	ANOVA; a Duncan test; content analysis (decision- level)	The tactics used to evaluate alternatives	Analytical tactics are widely used and most types are quiet successful. Intuitive tactics are rarely used and successful.
Khatri & Ng (2000)	221 companies	Field study; cross- sectional; mail survey	ANOVA and regression analyses (decision-level)	Relationship between intuition and performance	A positive relationship in an unstable environment; a negative relationship in a stable environment.
Hickson <i>et al.</i> (2003); Miller et al. (2004)	55 strategic decisions	Case studies; longitudinal; a multi- method	Content, correlation and factor analyses (decision-level)	Strategies for successfully implementing strategic decisions	Managers can plan the implementation of strategic decision better when they have previous similar experience (a dimension of intuition)