Strategic Thinking: A Continuum of Views and Conceptualisation

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ABSTRACT

In the 1990s a debate has evolved as to whether strategy should be practiced as art, science or a combination of both. Leading writers in the descriptive and integrative literature such as Ohmae (1982), Mintzberg (1994) and Stacey (1993) among others have argued that strategy should be practiced mainly as an intuitive, creative and divergent thought process – strategy as art. Writers in the prescriptive literature including Andrews (1965), Ansoff (1965) and Porter (1980, 1985, 1990) have been used to support the view that strategy is a rational, analytical, convergent thought process – strategy as science. Several writers, particularly in the later part of the 1990s, have argued that strategy should combine both approaches to achieve the best outcomes (Wilson, 1994, 1998; Raimond, 1996; Liedtka, 1998a, 1998b; Heracleous, 1998). Careful examination of the contributions of the various leading writers and placing them on a strategy as art/strategy as science continuum provides an interesting insight into the literature and the latest developments in the strategy field. These insights are used to assist preparation of a conceptualisation and model of strategic thinking.
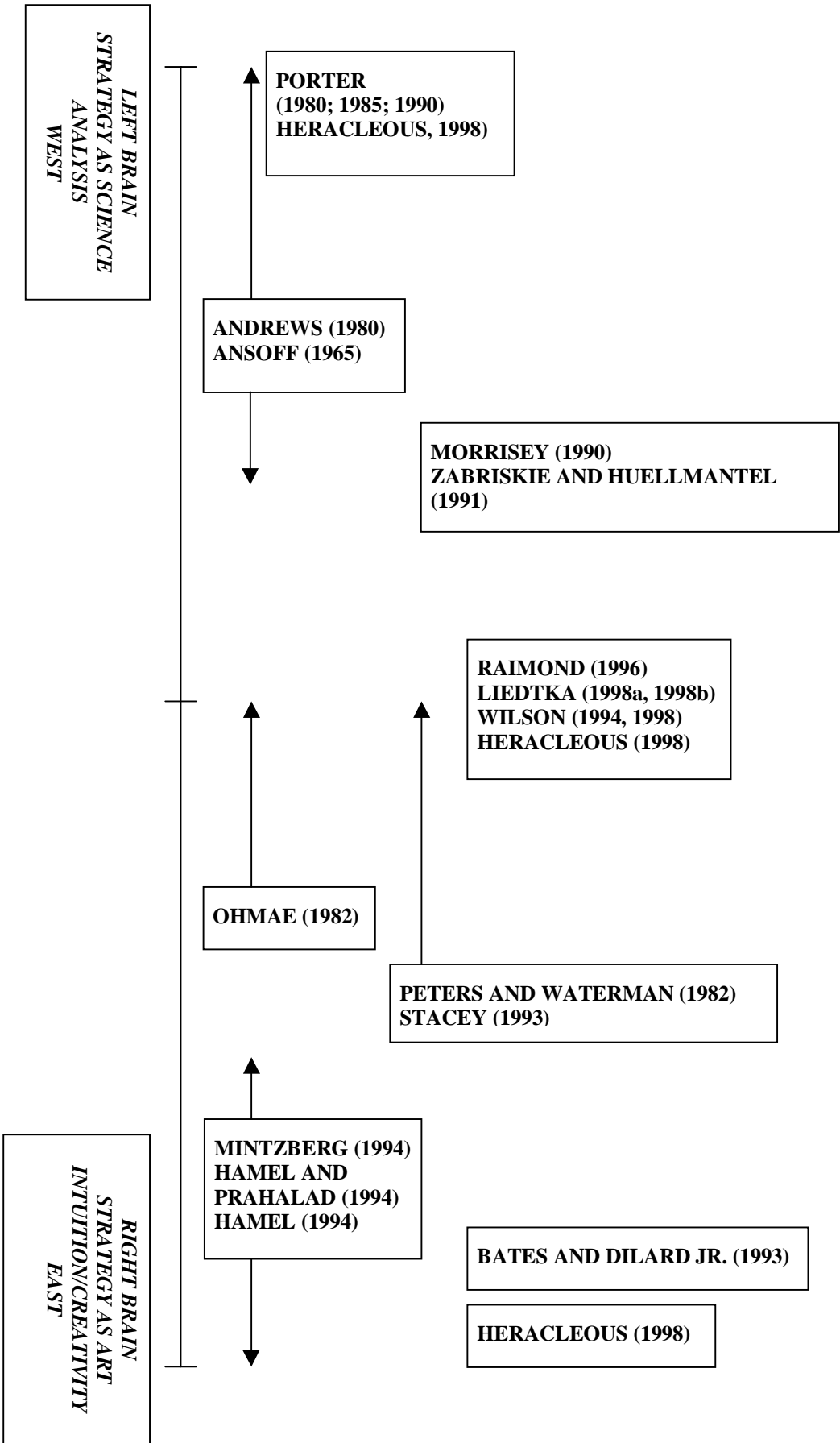
INTRODUCTION

Gluck, Kaufman and Walleck (1980) refer to the evolution of the strategy paradigm observing the strategic planning phase in the 1970s and the strategic management phase in the 1980s. Stacey (1993) and Heracleous (1998) both note there is a view in the literature that the paradigm has now moved on to the strategic thinking phase in the 1990s. Terminology in the strategy field is highly contentious with different writers using the terms strategic planning and strategic management in different ways. The introduction of the term strategic thinking to the strategy literature has served to create further confusion with a strong debate at present on what actually constitutes strategic thinking.

One view in this debate which relies on the descriptive and integrative strategy literature is that in an uncertain business environment successful business strategies flow from a process which is essentially eastern (Raimond, 1996), intuitive, creative, divergent and right brain (Ohmae, 1982; Peters and Waterman, 1982; Mintzberg, 1994). This approach is analysed in this working paper as strategy as art. Another view grounded in the prescriptive strategy literature (Andrews, 1965; Ansoff, 1965; Porter, 1980) is that in a more stable business environment a western (Raimond, 1996), left brain, analytical, convergent approach to strategy is most effective. Finally, there is a view that there is a need for the practice of both strategy as art and strategy as science to engage effectively in strategic thinking (Wilson, 1994,1998; Raimond, 1996; Liedtka, 1998a; Heracleous, 1998). This perspective balances the input of prescriptive, descriptive and integrative contributions to the literature.

Careful examination of the views of the various leading writers in the paradigm and positioning their offerings on a strategy as art/strategy as science or right brain/left brain continuum (refer Diagram 1-Leading Writers and the Strategic Thinking Continuum) gives a revealing insight into the literature in this field. It is also particularly helpful in conceptualising strategic thinking and formulating a model for further research.

DIAGRAM 1-LEADING WRITERS AND THE STRATEGIC THINKING CONTINUUM

LEFT BRAIN
STRATEGY AS SCIENCE
ANALYSIS
WEST

PORTER
(1980; 1985; 1990)
HERACLEOUS, 1998)

ANDREWS (1980)
ANSOFF (1965)

MORRISEY (1990)
ZABRISKIE AND HUELLMANTEL
(1991)

RAIMOND (1996)
LIEDTKA (1998a, 1998b)
WILSON (1994, 1998)
HERACLEOUS (1998)

OHMAE (1982)

PETERS AND WATERMAN (1982)
STACEY (1993)

MINTZBERG (1994)
HAMEL AND
PRAHALAD (1994)
HAMEL (1994)

BATES AND DILARD JR. (1993)

HERACLEOUS (1998)

RIGHT BRAIN
STRATEGY AS ART
INTUITION/CREATIVITY
EAST

STRATEGY AS ART

There is a view in the field that strategic planning and strategic thinking are two quite different modes of thought and that strategic thinking should precede strategic planning (Heracleous, 1998). Proponents of this view of strategic thinking assert that strategic planning cannot effectively develop strategy as it is programmed, formalised and analytical. Rather successful business strategies flow from a particular mental approach which is essentially intuitive and creative rather than rational (Ohmae, 1982) as logic can be more of a hindrance than an aid to effective strategy formulation (Mintzberg, 1994). This is not to say that there is no place for logic (Ohmae, 1982), rather it is the relative level of input of logic compared with creativity (Ohmae, 1982; Mintzberg, 1994) and the timing of this input (Mintzberg, 1994). In this context Mintzberg argues (1994, p. 107): "Strategic planning, as it has been practiced, has really been *strategic programming*, the articulation and elaboration of strategies, or

visions that already exist." In the wider management literature both Albrecht (1994) and Kinni (1994) have been similarly critical of strategic planning.

Ohmae opens the debate with his descriptive 1982 text *The Mind of the Strategist* adopting a position on the right brain/left brain continuum favouring the benefits of intuition and creativity over hard analysis. With regard to the relative use of intuition and analysis Ohmae (1982, p. 13-14) provides some flexibility for the strategic thinker:

> "…the most reliable means of dissecting a situation into its constituent parts and reassembling them in the desired pattern is not a step-by-step methodology such as systems analysis. Rather it is that ultimate nonlinear thinking tool, the human brain. True strategic thinking contrasts sharply with the conventional mechanic systems approach based on linear thinking. But it also contrasts with the approach that stakes everything on intuition, reaching conclusions without any real breakdown or analysis…the best possible solutions come from a combination of rational analysis, based on the real nature of things, and imaginative reintegration of all the different items into a new pattern, using nonlinear brainpower."

In this way the strategist is best equipped to deal with the need to frame objectives, and address opportunities and threats presented by the contextual environment, customers and markets. On the continuum of views it appears most appropriate to position Ohmae (1982) to the right of centre, favouring intuition over analysis, with some flexibility for the practicing manager allowing the use of logic where necessary. A significant observation here is that Ohmae's (1982) view of systems analysis appears at odds with the offerings of other writers (Stacey, 1993; Liedtka, 1998a, 1998b) discussed later in this working paper.

Writing in the same year Peters and Waterman (1982, pp. 32-33) make the pertinent observation that: "Before the rise of the analytic model, the seat-of-the-pants technique was all there was. And it was wholly inadequate for dealing with a complex world." This perspective is reinforced in the decision making literature (Langley, 1995) and is a key observation in attempting to conceptualise strategic thinking. In this context Peters and Waterman (1982) acknowledge a role for analysis in business management, however, they argue that analysis has been overdone. Peters and Waterman (1982) see the need for the firm to search for the best available path for the organisation to follow in the future and seek an effective resolution of implementation issues. In this context Peters and Waterman (1982, p. 53) note:

> "Pathfinding is essentially an aesthetic, intuitive process, a design process. There is an infinity of alternatives that can be posed for design problems…From that infinity there are plenty of bad ideas, and here the rational approach is helpful in sorting out the chaff. One is usually left with a large remaining set of good design ideas, however, and no amount of analysis will choose among them, for the final decision is essentially one of taste."

Clearly, like Ohmae (1982) Peters and Waterman (1982) are prepared to give some flexibility to management in the way they assess strategic alternatives. Carefully appraising Peters and Waterman's (1982) contribution in this area, their appreciation of intuition is stronger than that of Ohmae (1982) whilst also giving flexibility in the use of rational analysis to managers. Peters (Reimann and Ramanujam, 1992) has also expressed admiration for the bias to action and autonomous decision-making processes of firms like 3M. Providing autonomy to line managers is an important element in facilitating thought and action concurrently, increasing the probability of

superior implementation in an uncertain environment. However, Peters and Waterman's (1982) failure to see the future with any real precision leaves one to ponder the financial and operational cost of the bias to action and "messy" learning activities associated with this approach to strategy.

Stacey (1993) argues the strategic situation confronted by the firm is unique, ambiguous, paradoxical and presents varying levels of uncertainty dependent on the contextual environment (Boisot, 1995). This issue of uncertainty provides a challenge for managers as we have seen in that during their day-to-day activities they must decide when to embrace and when to step away from the firm's accepted frameworks, customs, rules and procedures to address strategic situations (Stacey, 1993). Strategic situations by definition contain a given level of uncertainty and ambiguity for managers and organisation's as these issues have not been encountered before. As a result managers need to develop new ways of dealing with particular situations. Stacey (1993, p. 19) elaborates on this:

> "Step-by-step thinking completed before action is taken is in fact impossible in unique situations. Instead, managers must think while they act and they have to think, not in a step-by-step way towards a known goal, but in irregular ways proceeding from one analogy to another, in order to frame and find both goals and ways of achieving them."

He goes on to observe that strategic situations inevitably create conflict within the organisation and as a result strategic thinking needs to consider cultural and political issues within the firm. He sees strategic thinking as drawing on a wide area in terms of subject matter including strategic management, cognitive psychology, group dynamics and systems theory. Stacey's (1993) position appears stronger than the Peters and Waterman (1982) contribution in that Stacey (1993) exhibits a broader appreciation of the issues associated with effective strategic thinking and effectively integrating the "hard" and "soft" organisational factors identified in the McKinsey "7-S Model" (Peters and Waterman, 1982, p. 10) to enhance firm performance. His offering is positioned also to the right of the continuum's centre whilst also providing flexibility for managers in resolving strategic problems.

Bates and Dillard Jnr. (1993. p. 103) discussing the benefits of strategic thinking through multi-level teams relate effective strategic thinking to "intuitive ability,

mental elasticity, abstract thinking, tolerance of risk, and tolerance for ambiguity". They stress the need for staff involved in strategy to have both ability and motivation, and these attributes are reflected in the team members exhibiting both ambition and social skills. Without these attributes a staff member is unlikely to make an effective contribution to the strategy process. However, this is also a limited perspective as a consistent theme in the strategy literature (Liedtka, 1998a, 1998b; Wilson, 1994, 1998) is that all staff can be trained to think strategically, not certain staff only as Bates and Dillard Jr (1993) assert. Bates and Dillard Jr's (1993) input is one of the more extreme views favouring intuition on the continuum.

Henry Mintzberg has made a strong contribution to the literature in the strategy field. In his classic *Harvard Business Review* article "The rise and fall of strategic planning" (1994, p. 108) Mintzberg clearly asserts his perception of strategic thinking as favouring the right brain side of the right brain/left brain continuum. Strategic thinking:

> "…is about synthesis. It involves intuition and creativity. The outcome of strategic thinking is an integrated perspective of the enterprise, a not-too-precisely articulated vision of direction…strategies…must be free to appear at any time and at any place in the organisation, typically through messy processes of informal learning that must necessarily be carried out by people at various levels who are deeply involved with the specific issues at hand."

Mintzberg (1994) argues that it is feasible for strategies to originate with line managers, in particular with the assistance of planners or internal consultants. Mintzberg (1994) believes top management and the CEO should distance themselves from business units during the strategy process to assist reflection and creativity at that level. The CEO and top management can then later play a role in recognising the value of these strategies and facilitate "strategic programming" by internal consultants so that the strategy can be disseminated throughout the firm. Interestingly, this article does not recognise or address the role of input from external consultants. Mintzberg (1994) does observe the benefits of learning from hard data, yet he indicates that the value of the hard data utilised in the strategy process is often undermined by the time needed to ensure insight, quality and accuracy. The data is often overly aggregated and does not address important subtleties. With developments in information

technology and decision support systems in recent years (Rouse, 1997; Sauter, 1999) this aspect of the Mintzberg thesis and his negative view of the contribution of rational analysis to strategy may be dated. Mintzberg (1994) does not appear to grant managers the same flexibility in the use of rational analysis as Ohmae (1982) and Peters and Waterman (1982).

Hamel and Prahalad (1994, p 281) like Mintzberg (1994) see the need for a strategy function which goes further than simply "form filling" or strategic programming. There is a role for analysis in the formulation of strategy, however, it needs to be balanced by managers at all levels of the firm looking at the future with an open mind not simply conducting an incremental analytical exercise. Observing the failings of strategy in the 1970s and 1980s they assert that organisations:

> "…need a new process for strategy-making, one that is more exploratory and less ritualistic. They need to apply new and different resources to the task of strategy-making, relying…not just on the wisdom of a few planners".

Further, Hamel and Prahalad (1994) concur with Stacey (1993) and Mintzberg (1994) especially on the importance of building within the organisation the cultural, political and group context within which creative thought can take place. By "crafting the strategic architecture" (Hamel and Prahalad, 1994, p. 283) within the firm, companies develop the capacity to change by being able to "think" differently, harnessing the input of staff at all levels of the firm. In this context strategic thinking needs to resemble the "frame-breaking" behaviour commonly seen in the arts (de Wit and Mayer, 1998, p. 74). Schon (1983) refers to this as "reflection-in-action" and Hamel (1996) to "strategy as revolution." Hamel and Prahalad (1994) and Hamel (1994) assume a strong position favouring intuition on the continuum.

These views of strategic thinking are essentially representative of an early, narrow usage of the term emphasising a particular way of thinking with specific characteristics which enjoyed improved respectability in the corporate world in the early 1990s especially. This position is also supported by Prahalad and Hamel (1994) who see effective strategic thinking as comprising creativity, exploration and understanding discontinuities in the organisation and its environment. Interestingly recent contributions from Mintzberg indicate a move away from this narrow view of strategic thinking in the 1990s literature with a trend to a new "eclecticism" in the

paradigm apparent as writers recognise the efforts of managers to strive to come to terms with an uncertain environmental context (Mintzberg, Ahlstrand, and Lampel, 1998; Mintzberg and Lampel, 1999)**.**

STRATEGY AS SCIENCE

The strategy as science perspective is grounded in the prescriptive literature as classified by Mintzberg (1990). Michael Porter (1980, 1985, 1990) is the major proponent of the view that strategic thinking is an analytical process. The frameworks put forward by Porter for strategic analysis including five forces analysis, the value chain, the diamond model of national competitive advantage and strategy as activity system are valuable tools in the strategic management process, and provide an important foundation to the positioning school. Andrews (1965) whose work has been associated with the design school and Ansoff (1965) from the planning school are other writers who support a logical, analytical approach to strategy. Andrews (1965) sees the key activities in business policy as identification of opportunities and threats in the firm's environment and internal strengths and weaknesses. Clear, simple and unique strategies come forward in a deliberate, conscious thought process. Interestingly, the process is neither formally analytical nor formally intuitive but it is essentially analytical. Ansoff (1965) recommends a rational almost mechanical approach to strategy. The summary diagram of Ansoff's (1965, pp. 202-203) model has some fifty-seven boxes. Four basic types of decision are observed namely strategy, policy, program and standard operating procedure with all but strategy dealing with ongoing contingencies. As policy, program and standard operating procedure decisions address issues which are recurring it is possible to identify each of the alternatives and assign probabilities to each. Ansoff's appreciation of the importance of cultural and political issues has evolved with time.

Numerous writers have put forward clearly defined analytical approaches to strategic thinking. For example Zabriskie and Huellmantel (1991, p. 27) propose a six step sequential process for strategic thinking by senior executives when they:

"° visualise what they want their organization to become

° are able to reposition their resources to compete in tomorrow's markets

° assess the risk, revenues, and costs of the strategy alternatives open to them

° think about and identify the questions they want the strategic plan to answer

° think logically and systematically about the planning steps and model they will use

° to activate their strategic thinking in the company's operations".

Eden (1990) also describes an analytical strategic thinking process using cognitive mapping. Similar analytical approaches have been proposed in the popular literature (Morissey, 1990) and these writers are positioned on the continuum accordingly.

STRATEGY AS ART AND SCIENCE COMBINED

The third perspective in this debate which will provide the focus for my future work in this area is that strategic thinking cannot be performed effectively without calling on all or some of the characteristics of both the polar positions (Ohmae, 1982; Peters and Waterman, 1982; Wilson, 1994, 1998) combining elements of the prescriptive, descriptive and integrative literature (Mintzberg 1990; Mintzberg et al, 1998; Mintzberg and Lampel, 1999), depending on the internal and external situation of the firm, and the state of the industry (Liedtka, 1998a; Wilson, 1994; Heracleous; 1998). Clearly, strategic thinking must combine right brain intuitive, creative, imaginative thought with left brain analytical, quantitative activity (Ohmae, 1982) in as much or as little depth as necessary to facilitate the desired end result (Raimond, 1996). In this sense the proponents of this view are in the centre of the right brain/left brain continuum (we have seen Ohmae, 1982 and Peters and Waterman, 1982 place a comparatively greater emphasis on intuition yet offer some support for the need to balance strategy as art and science) and there is considerable support in the literature for this point of view (Liedtka, 1998a, 1998b; Wilson, 1994, 1998; Raimond, 1996; Heracleous; 1998). To restrict an internal or external stakeholder to the firm access to any thought process to solve a particular strategic problem is similar to asking a soccer player to play only with one foot or a piano player to play with one hand. The soccer player or piano player, like the stakeholder, will have limited options and be half as effective. Accepting this analogy and these propositions sheds significant light on the activities that comprise strategic thinking and provides an important part of the intellectual foundation for future research. Indeed it is has been observed earlier in this working paper that the recent work of Mintzberg and Lampel (1999, p. 2)

confirms "a new found eclecticism" in the paradigm and this is a significant observation in the context of this discussion. Interestingly, Heracleous's (1998) contribution makes an important effort to resolve the dialectic debate in this field, make effective use of contributions from Mintzberg (1994) and Porter (1991) especially, and argue how firm's might combine strategy as art and science in reality.

Wilson (1994) with a sample of 47 firms surveyed a variety of companies in terms of size, industry and global region. Wilson (1994, p. 12) observed the evolution of the paradigm from strategic planning in the 1970s with its original design flaws into "a viable system of *strategic management* (or *strategic thinking*)". By not distinguishing strategic management from strategic thinking a broad definition of strategic thinking has been taken in his study. Interestingly, changes in the way firms undertake strategic thinking consistent with the observations of other writers in the field are described. The most important finding of this study was the increasing emphasis on both organisation and culture as key factors in effective strategy. There has been a major shift in responsibility from staff to line managers, and from the corporate level of responsibility to the business level of the firm. Firms globally are increasingly striving to stay in touch with customers and markets, competition and developments in technology. Wilson (1998, p. 511) later insists that:

> "…if one thing is clear from the experience of the past twenty years, it is that innovative strategies do not emerge from sterile analysis and number-crunching: they come from new insights and intuitive hunches. Equally clear, however, is the fact that intuition, if it is to be strategically helpful, must be grounded in facts…in dealing with current complexities today's strategist must supplement instinct with more explicit analysis."

Wilson's work (1994, 1998) is positioned on the centre of the continuum.

Raimond (1996, p. 208) defines strategy as "the process and the range of techniques by which we decide what goals and objectives to pursue and the means by which we pursue them." He identifies two approaches to thinking strategically. Firstly, predicting the future applying analytical tools and techniques to identify the key forces impacting outcomes. This left brain, rigorous, analytical, convergent approach to strategy has been associated with North American and British firms. Secondly, Raimond (1996) refers to inventing the future by thinking intuitively and creatively

about key industries in which we would like to be and how the firm might dominate them. This right brain, intuitive, creative, divergent approach to strategy has been identified as a core competence giving advantage to Asian firms (Nonaku and Takeuchi, 1995). However, in more recent times it *may* have been this lack of emphasis on "hard" factors and rigorous analysis which brought forth the Asian economic crisis as Western financial institutions placed greater scrutiny on the region. Raimond (1996) argues the need for both approaches to strategic thinking as a means of harnessing the ideas, energy and commitment of staff at all levels of the firm and is also positioned on the centre of the continuum.

Heracleous (1998) offers an interesting, wide-ranging contribution to the paradigm with this offering. He rightly observes there is no agreement in the literature on what constitutes strategic thinking or strategic planning, and the nature of the relationship between the two. Heracleous (1998) sets out a dialectic view of strategic thinking and strategic planning seeing them as distinct, yet importantly interrelated and complementary processes for the firm. Putting forward this dialectic argument he associates strategic thinking with left brain, synthetic, creative, divergent thought processes and strategic planning as a right brain, analytical, convergent, conventional thought process. Heracleous's (1998, p. 486) position on the relationship between strategic thinking and strategic planning resolves both an academic issue in the literature and offers insight into how a practising manager can effectively engage in strategic management from day to day:

> "The tools one uses at each stage of the strategic management process, are not important in themselves but as the means of encouraging the creative and analytical mindset. There ideally needs to be a dialectical thought process of being able to diverge and then converge, being creative and then seeing the real world implications, and being synthetic but also analytical…strategic thinking and strategic planning occur iteratively over time, where there is a continual quest for novel and creative strategies which can be born in the minds of strategists or can emerge from the grass roots, as well as employment of analytical processes to determine such issues as the strategies desirability and feasibility and to plan for their realisation."

In this way a strategist or manager is able to think strategically and support this by perhaps performing a discounted cash flow analysis of an issue he or she is testing and probing whilst undertaking strategic thinking. Resolution of strategic problems requires intellectual flexibility for both the academic and the practicing manager in the field. It is unlikely that strategic thinking in the real world is as clear and simple to delineate as Heracleous's dialectic view of the paradigm indicates, however, it does facilitate this particular writers argument well in the context of the literature.

At the end of the day the activities that constitute strategic management in the world of Heracleous (1998) are similar to the ideas put forward by Wilson (1994, 1998) and Raimond (1996) on strategic thinking. Both sets of ideas give considerable flexibility and adaptability to the strategist or manager in the field. Importantly, our ideas on strategic thinking and the evolution of the paradigm must flow on to better firm performance. There is a link present in the contribution of Heracleous (1998) to the work of Ohmae (1982) and Peters and Waterman (1982), and a pathway is drawn to reconciling the views of Mintzberg (1994) with his emphasis on strategic as art and Porter (1991) with his emphasis on strategy as science. Heracleous (1998) also provides another useful perspective on the strategic management process to complement the very practical and "real world" contributions of Wilson (1994, 1998).

Liedtka (1998a, p. 122) following on from the views of Mintzberg (1994) sees strategic thinking as a "particular way of thinking, with specific attributes" and puts forward a model (Diagram 2 below) containing five elements. Firstly, strategic thinking is based on a systems perspective-a holistic view of the organisation. The strategic thinker has a mental picture of a complete system of value creation in the firm and his own small role within the larger system (Liedtka, 1998a, 1998b). Secondly, strategic thinking is driven by strategic intent of the firm providing focus and energy to the staff and the organisation to achieve goals (Liedtka, 1998a, 1998b). Thirdly, strategists need to "think in time" (Liedtka, 1998a, p. 123) linking the firm's past, present and future in their thought processes. There are three components:

- the predictive value of the past for the future;

- departures from the past which divert the firm from familiar patterns;

- the need for continuous comparison "an almost constant oscillation from the present to the future to past and back" (Neustadt and May, 186, p. 251).

Fourthly, strategic thinking is "hypothesis-driven" (Liedtka, 1998b, p. 2). and the "scientific method accommodates both creative and analytical thinking sequentially in its use of iterative cycles of hypothesis generating and testing". Finally, strategic thinking is intelligently opportunistic. The firm whilst following a particular strategy should not lose sight of alternative strategies that may be more appropriate for a changing environment (Liedtka, 1998a, 1998b). Liedtka's (1998a, 1998b) contribution also fits the centre of the continuum.

Diagram 2   The elements of strategic thinking (Liedtka, 1998a)
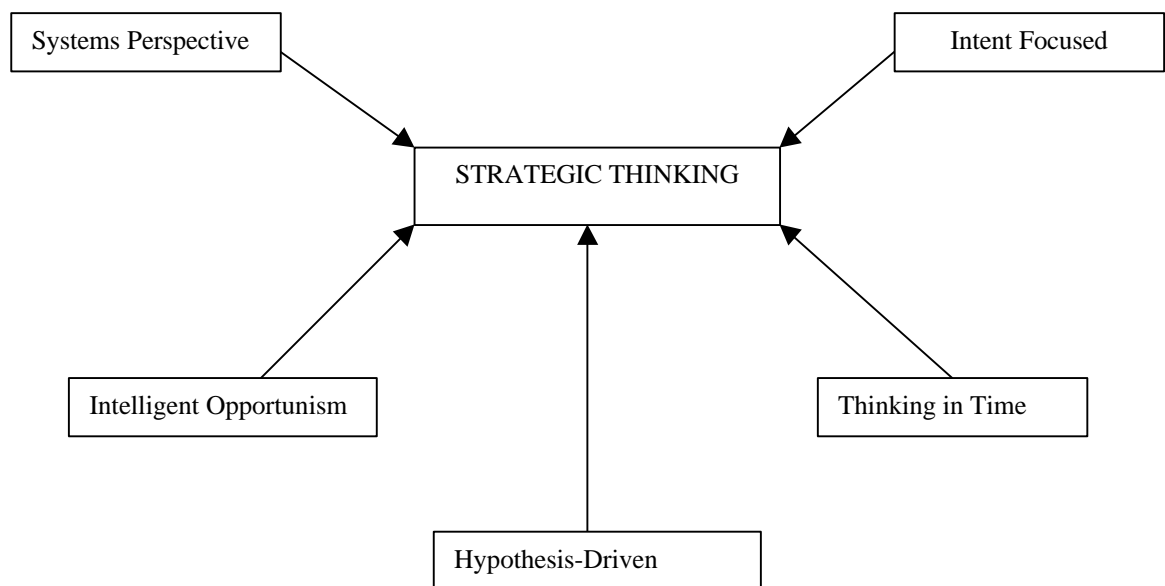
Clearly this branch of the strategy literature embraces the broader view of strategic thinking, however, more recent contributions have spent some time endeavouring to carefully explain the difference between strategic thinking and strategic management.

At the end of the day the use of terminology in this field is highly contentious and it is quite possible that the practising manager has neither the time or motivation to reflect on whether he is engaging in strategy as art or strategy as science at a given point in time given the pressures of modern day management. More to the point the practising manager will be focusing on solving strategic problems, conceptualising the future of the organisation and achieving the desired end result utilising intuition and analysis as the situation demands and according to his or her preferences. It is impossible for internal and external stakeholders to know in advance of confronting a situation what will be required and what will not. What we can say with confidence is that the strategy process is more fluid, draws on a wider range of subject matter, and communication between internal and external stakeholders is increasingly important. We can skill managers better to have a more effective range of choices.

A CONCEPTUALISATION OF STRATEGIC THINKING AND THE LINK TO STRATEGIC PLANNING

Definition and Model

In the light of the preceding discussion, balancing the lessons from the broad range of literature applicable to a conceptualisation of strategic thinking and the practicalities of managing effectively in a changeable and uncertain business environment, the following definition of strategic thinking is proposed. *Strategic thinking* is a flexible means of solving strategic problems and conceptualising the future of the firm within the strategic management framework combining a range of individual and group mental activities.

Several writers have suggested definitions for strategic management. Gluck, Kaufmann and Walleck (1980) discuss:

> "(1) A planning framework that cuts across organizational boundaries and facilitates strategic decision making about customer groups and resources. (2) A planning process that stimulates entrepreneurial thinking. (3) A corporate values system that reinforces managers' commitment to the company strategy" (Gluck et al, 1980, p. 158).

Hitt, Ireland and Hoskisson (1999) refer to the strategic management process as "the full set of commitments, decisions, and actions required for a firm to achieve strategic competitiveness and earn above-average returns." Whilst Hitt et al's (1999) use of the term has a strong bottom line focus Mintzberg et al (1998) in an academic sense refer to strategic management as "revolving around the discrete phases of formulation, implementation, and control, carried out in cascading steps." Interestingly in the context of this working paper Mintzberg et al's (1998) use of the term has a strong rational, prescriptive emphasis. An appreciation of the concepts supporting these definitions does indicate a strategic management framework which provides sufficient flexibility to accommodate strategic thinking.

Model 2A (Microview-A Conceptualisation of Strategic Thinking) contains a proposed model of the elements that comprise strategic thinking. The model adopts an end-to-end systems approach including a specification of flexible inputs to the firm, strategic thinking output, and four elements-each of which will be explained.

Flexible Inputs

Ahmed, Hardaker and Carpenter (1996, p. 562) observe that:

> "Faced with change and turbulence successful firms (or those likely to be successful) will have to abandon traditional routines of business practice apt for stable and slow changing environments in favour of systems of operation more attuned to highly dynamic competitive and environmental contingencies."

In order for the firm to be able to respond flexibly and responsively to customers and markets, firms require access to flexible inputs. The inputs required will vary from firm to firm and industry to industry, however, there will generally be four categories. These categories are flexible technology/machines, flexible people, flexible structures, and flexible systems and processes (Ahmed et al, 1996). This view is consistent with Tushman and O'Reilly III (1997) who argue firm's need to build the ability to adapt and respond to customers and markets into their organisations. With these flexible, adaptive inputs in place, the firm is better positioned to deal with environmental uncertainty and engage in strategic thinking throughout the organisation.

"Helicopter View"

This working paper advocates that strategists at all levels of the organisation take a "helicopter view" of the firm and its business environment (Garrat, 1995). There is sufficient flexibility within the strategic management framework to address all the issues and demands of strategic thinking including cognition and reasoning, the related area of decision-making, organisational learning, organisational politics, organisational culture and group dynamics. In this way strategists can enjoy a broad perspective of the business from "above" and "dive down" for a closer look at specific problems or hypotheses that need closer intuitive or analytical investigation. In this way individual staff members can utilise all their mental faculties in whatever situation they are confronted with, rather than ignoring certain faculties (Garrat, 1995; Raimond, 1996) and apply a narrow perception of strategic thinking as has been put forward by certain writers in the field (eg. Bates and Dillard Jnr, 1993; Mintzberg, 1994). The analogy of the soccer or piano player is highly relevant here and certainly appears to have been lost on particular writers in the early 1990s.

This idea of the "helicopter view", of rising above the immediate problems confronted by internal and external stakeholders in their day to day tasks flows from the writing of Watzlawick, Weakland and Fisch (1974) on "second order change" and Chris Argyris's double-loop learning thesis. Garrat (1995, p. 303) argues that the "helicopter view" facilitates critical debate by allowing strategic problems to be viewed from a range of perspectives. Interestingly, Garrat (1995) focuses on the activities of the top management team in strategic thinking in his writing. This thesis argues for the active involvement of a range of internal and external stakeholders, the content and process of the strategic thinking activities to be determined by the context confronting the firm and the individual manager to optimise flexibility and responsiveness.

Strategic Intent

The concept of strategic intent (Hamel and Prahalad, 1989) occurs where there is a direct intuitive understanding of the future direction of the firm flowing from the top down through the organisation. This gives focus to all the firm's employees and

prevents them from becoming distracted by environmental uncertainty (Boisot, 1995). Hamel and Prahalad (1994, p. 129-130) elaborate:

> "Strategic intent…implies a particular point of view about the long-term market or competitive position that a firm hopes to build over the coming decade or so. Hence it conveys a *sense of direction*. A strategic intent is differentiated; it implies a competitively unique point of view about the future. It holds out to employees the promise of exploring new competitive territory. Hence, it conveys a *sense of discovery*. Strategic intent has an emotional edge to it; it is a goal that employees perceive as inherently worthwhile. Hence it implies a sense of *destiny*. Direction, discovery and destiny. These are the attributes of strategic intent."

Thus strategic intent gives the focus that allows employees to direct their efforts and resist distraction in the pursuit of the organisation's goals (Liedtka, 1998a) as they engage daily with the distractions of a more changeable and complex business environment. The common vision serves to keep staff aligned to the firm's purpose when it decentralises decision-making and provides more autonomy to business units in response to this environmental uncertainty (Boisot, 1995). In this way strategic thinking is shaped in a significant way by strategic intent (Liedtka, 1998a).

Participation of Internal and External Stakeholders

Strategic thinking seeks to conceptualise the future of the firm. In particular strategic thinking seeks to address any misalignment in the context of the McKinsey "7-S Model" for the firm or generate and resolve a misalignment to resolve a strategic problem (Liedtka, 1998b). Misalignment can be attributable to internal and/or external, "hard" and/or "soft" factors. It is the contention of this working paper that staff at all levels of the firm from the board of directors down can think strategically and have an input to strategy. Employees are given greater autonomy in their roles in strategic thinking as the firm devolves responsibility from the centre in response to uncertainty (Wilson, 1994) to facilitate resolution of strategic issues. External consultants in particular and at times other external stakeholders (eg. creditors, suppliers in respect of the total quality management literature, lenders, equity investors) may also have an input to firm strategy from time to time. Similar to branches of the theory on reasoning (Isenberg, 1984; Donaldson and Lorsch, 1984)

and decision making (Langley, 1995; Klein, 1998), strategy formulation and implementation are seen as taking place either concurrently or sequentially, allowing flexibility in the use of intuition and analysis to the manager at the "coal face". The hypothesis-driven element of the Liedtka (1998a, 1998b) thesis appears to accommodate the position preferred in this working paper. In this context it is vital that staff at all levels from the Chairman down understand the internal, external and industry context of the firm if they are to perform effectively, as Liedtka (1998b, p. 32) observes:

> "It is the diffusion of strategy thinking capabilities throughout the organization that presents the challenge to business…Instead of being strategic thinkers themselves, this new view of strategy charges leaders with developing the strategic skills of others."

This observation has important implications for staff at all levels of the organisation with respect to their role in strategic thinking. All staff will require this awareness and knowledge of the strategic management framework, cognitive ability, decision making, organisational learning, organisational politics, organisational culture and group dynamics. It should also be observed that the organisation level approach to strategic thinking and the devolution of responsibility needs to be tailored for the firm according to the preferences and capabilities of firm staff and the organisation, and the level of uncertainty confronting the organisation. The organisational political context plays an important role in determining the relative use of intuition and analysis in the strategy process (Langley, 1995). Decision support systems can be used to enhance the use of intuition and analysis by employees, and provide virtual experience to overcome any lack of actual experience for employees or teams (Sauter, 1999).

'Thinking in Time"

This conceptualisation of strategic thinking supports Liedtka's (1998a, 1998b) contention that strategic thinking requires consideration of the past, the present and the future of the firm. Liedtka (1998a) in her incisive conceptualisation of strategic thinking terms this "thinking in time". Liedtka (1998a) draws on Hamel and Prahalad (1994, p. 67) to explain the importance of the gap between the reality of today and the strategic intent of the firm for the future:

"Strategic intent implies a sizeable stretch for an organization. Current capabilities and resources will not suffice. This forces the organization to be more inventive, to make the most of limited resources. Whereas the traditional view of strategy focuses on the degree of fit between existing resources and current opportunities, strategic intent creates an extreme misfit between resources and ambitions."

In this way strategic thinking plays an important role in providing a link between the past, the present and the future.

Scenario planning also plays a meaningful role in thinking in time. It provides a disciplined means to imagine potential futures that firms have applied to a variety of issues. Schoemaker (1995, p. 27) asserts that scenario planning facilitates a more accurate prediction of change preventing both "underprediction and overprediction" of the future. Scenario planning also plays a useful role in simplifying data into a small range of possible states. Each scenario explains how different elements may interact given certain conditions. Scenarios also support creative thinking in the context of time, as Schoemaker observes (1995, pp. 40):

"Good scenarios challenge tunnel vision by instilling a deeper appreciation for the myriad factors that shape the future. Scenario planning requires intellectual courage to reveal evidence that does not fit our current conceptual maps, especially when it threatens our very existence. Nonetheless, what may initially seem to be bleak scenarios could, in fact, hold the seeds of new business and unrecognized opportunity. But those opportunities can be perceived only if you actively look for them…In addition to perceiving richer options, however, we must also have the courage and vision to act on them."
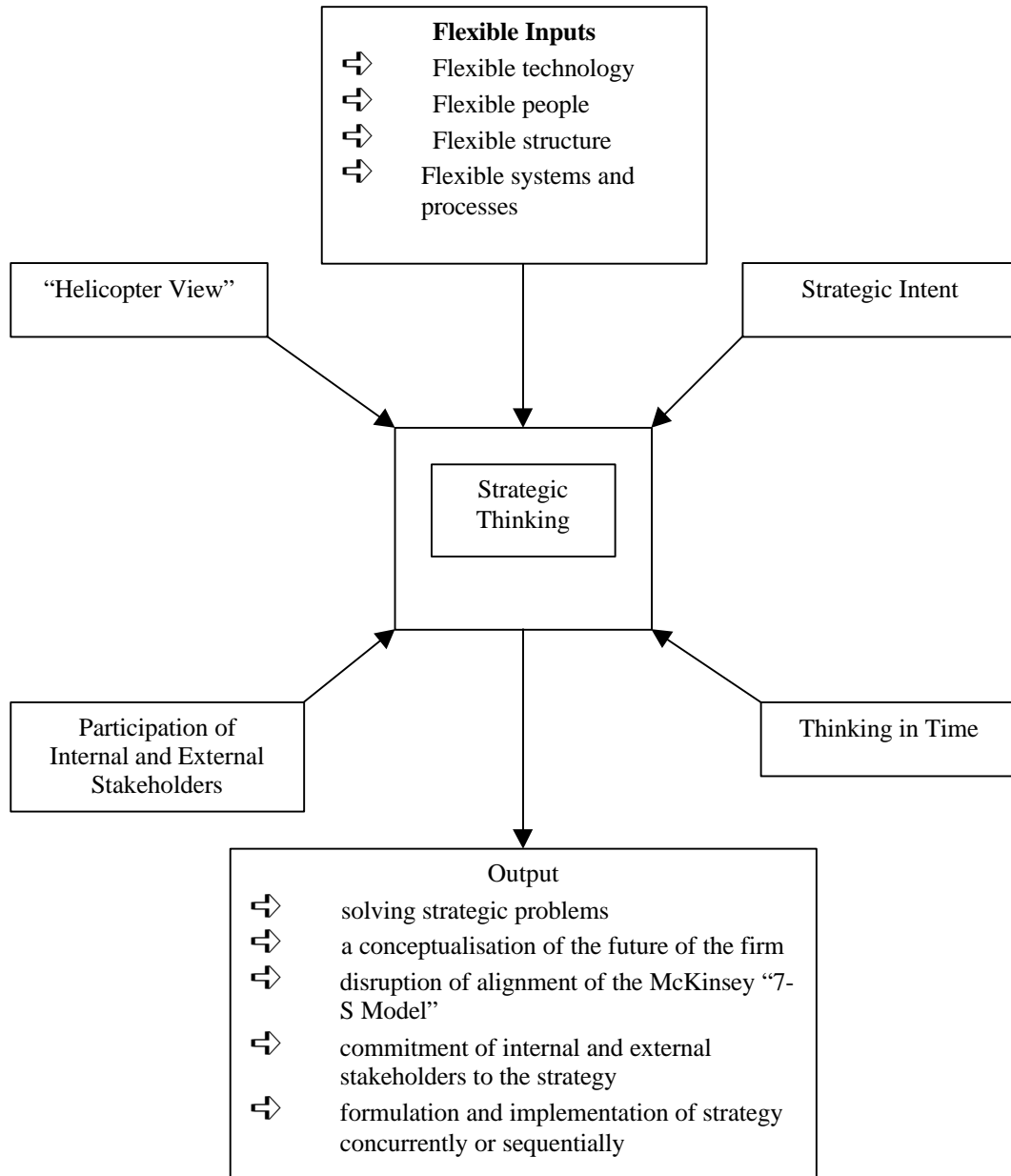
Thus to effectively engage in strategic thinking, we need not only the analytical and intuitive benefits of scenarios, we need the courage to implement ideas and decisions that flow from scenario analysis.

Output of Strategic Thinking

This working paper concurs with Liedtka (1998a) who perceives a significant competitive advantage for firms who build an effective strategic thinking capability. In terms of the output of strategic thinking we have seen that the firm's capacity to

solve strategic problems or hypotheses, and conceptualise the future will have a new, flexible, adaptable dimension. Flexible inputs to the strategy process are key to this outcome. Skilling internal and external stakeholders effectively will facilitate a range of individuals and groups engaging in the "helicopter view" of the firm, their participation in strategic conversations, and encourage the resolution of strategic problems confronting the organisation at the corporate, business and functional level. Here individuals and groups will address any misalignment of the "hard" and/or "soft" factors in the McKinsey "7-S Model" or test and probe the existing alignment to ascertain if a better outcome is possible. The participation of all staff in the strategy process we have seen encourages the commitment of internal and external stakeholders to the firm's strategy. Strategic intent will provide the necessary focus to employees and key stakeholders when confronted by environmental uncertainty and the distractions of day to day management. Thinking in time will assist decision making and scenario analysis with a flow on effect to better strategy implementation. It has been argued that all internal and external stakeholders involved in the strategy process will have the flexibility to use intuition and analysis, thought and action may occur concurrently or sequentially.

Model 1-Elements of Strategic Thinking

Flexible Inputs
⇨ Flexible technology
⇨ Flexible people
⇨ Flexible structure
⇨ Flexible systems and processes

"Helicopter View"

Strategic Intent

Strategic Thinking

Participation of Internal and External Stakeholders

Thinking in Time

Output
⇨ solving strategic problems
⇨ a conceptualisation of the future of the firm
⇨ disruption of alignment of the McKinsey "7-S Model"
⇨ commitment of internal and external stakeholders to the strategy
⇨ formulation and implementation of strategy concurrently or sequentially

CONCLUSION

Examination of the contributions of leading writers in the strategy field has been used to facilitate preparation of the continuum of views and proposed conceptualisation and model of strategic thinking which will provide the basis for further research. This model draws on and adds further to the contributions of Stacey, (1993), Liedtka (1998a, 1998b), Wilson (1994, 1998), Raimond (1996) and Heracleous (1998) in this area of strategic thinking. The proposed model brings together the inputs of a range of experts in their respective fields in a unique way. These unique aspects of the model include greater appreciation of the need for flexible inputs (Ahmed et al, 1996) in the context of strategic thinking, the importance of *all* staff utilising a "helicopter view" of the firm, and the importance afforded to a wider variety of internal and external stakeholders in a strategy process with more emphasis on the social interactive elements of decision making. Interestingly the decision making literature indicates such an approach encourages the use of analysis (Langley, 1995). This working paper also recognises an alternative view in the literature that greater use of intuition reduces the need to engage in analysis (Sauter, 1999). In this model the firm's capacity to solve strategic problems or hypotheses, and conceptualise the future will have a new, flexible, adaptable dimension with staff equipped with a complete knowledge of the firm as a value creation system (Liedtka, 1998a) and the freedom to use intuition and analysis as the situation demands. This will provide a competitive advantage over rivals as the firm strives to adapt to customers and markets. There is clearly a trend to a new "eclecticism" (Mintzberg et al, 1998; Mintzberg and Lampel, 1999) in the field of strategy and the model accommodates key trends evident in the literature and the wider range of subject matter relevant.

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