THE STRATEGIC ROLES OF MIDDLE MANAGERS, COLLABORATIVE RELATIONSHIPS BETWEEN TOP MANAGEMENT AND THE MIDDLE, AND THE IMPACT OF THESE ROLES AND RELATIONSHIPS ON ORGANIZATION PERFORMANCE.

A Thesis submitted in partial fulfilment for the Degree of Doctor of Business Administration.

By

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ABSTRACT

THE STRATEGIC ROLES OF MIDDLE MANAGERS, COLLABORATIVE RELATIONSHIPS BETWEEN TOP MANAGEMENT AND THE MIDDLE, AND THE IMPACT OF THESE ROLES AND RELATIONSHIPS ON ORGANIZATION PERFORMANCE.

By Les Bowd

Since 1980, two areas have dominated research into the Strategic Management Process. First, is the large body of work focusing on the role of the Top Management Team (TMT) in the strategic process. Much of this research has its roots in Hambrick and Mason's, 1984, Upper Echelons Theory. Strategic Decision-Making (SDM) is the second element of the strategic process where researchers have concentrated their efforts, pursuing issues of content, context and process. While researchers generally sought out those factors that contributed to SDM effectiveness, there has been a tendency to focus attention on how the TMT makes strategic decisions. Although improved organization performance has been attributed to characteristics of the TMT and SDM process, relatively little research existed prior to 1990 on how strategy was implemented effectively. More significantly, minimal attention was paid to those being asked to lead the implementation, the middle manager.

Ironically, it was in the wake of dramatic downsizing and re-engineering, in the early 1990's, that both practitioners and academic researchers began to recognize the significance and strategic impact of "the middle" on many phases of the strategic management process.

This research investigates the roles and relationships of middle managers in the strategic process and the impact they have on organization performance. A comprehensive review of relevant literature, including that which addresses strategic decision making, strategy implementation, top management team and middle management strategic behaviour, was used to establish the strategic significance of middle managers and act as a foundation for the research. Replication of the work of Floyd and Wooldridge (1990, 1992A, 1997) was undertaken to confirm the strategic roles fulfilled by middle managers in the formulation and implementation of organization strategy. If, and how, these strategic roles, and the influence that accompanies them, impacted organization performance was another focus of this research. How the strategic roles of the TMT and middle managers interact, to shape and implement strategy, was investigated by attempting to replicate the work of Hart and Banbury (1991,1992,1994). The replicated model formed the basis of an investigation of the impact of strategy making modes on organization performance. Utilizing constructs developed by Miller (1997), implementation effectiveness was assessed and its relationship with organization

performance evaluated. Lastly, efforts were made to identify possible inter-relationships between middle management strategic roles, organization strategy making modes and organization performance.

Data representing the responses of 132 managers, predominantly at middle levels, in 40 organizations, replicated the strategic roles model outlined by Floyd and Wooldridge. This gave strong support to the validity and generalizability of the concept that postulated four key strategic roles. Championing Alternatives and Synthesizing Information that provide upward influence, and Facilitating Adaptability and Implementing Deliberate Strategy, which provide downward influence. Correlations and regression analysis demonstrated a limited relationship between the strategic roles and organization performance. This was consistent with the original research and suggests a complex relationship between strategic roles, influence and performance. Perceived upward influence was greater than downward, and more directly affects performance. However, this was only a moderate relationship.

The same sample casts some doubt on the generalizability of the Hart and Banbury strategy modes model. However, although it was not possible to fully replicate the model produced from their research, the findings of this work do support the conceptual orientation of their model and proposes a model that has three of five modes in common, with two others sharing similar characteristics. It appears that situational factors, including structure of the questionnaire, the managerial group sampled, and the industry and business environment of the respondents may impact responses. However, in the conceptual model tested by this researcher, all strategy modes featuring collaboration between top management and others, including the middle, had a very strong relationship with performance variables, and the cumulative model shows three of the modes combining for a strong impact on performance.

Confirmatory factor analysis, using structured equation modeling, supported the overall structures and relationships between variables and constructs. Similarly, SEM supported the conclusion that most strategic roles made a weak direct contribution to overall organization performance, while strategy making modes were strong contributors. Further modeling was able to show that while virtually no relationships existed to demonstrate the impact of strategic roles directly into strategy making modes, when particular strategy modes are active it can be expected that some or all strategic roles will be present.

Lastly, the research found that the strategic influence measures were good predictors of implementation effectiveness, and in turn implementation effectiveness indicators and measures were strongly related and predictive of overall organization performance.

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Acknowledgement

" Without your help it would not have been possible." Never have these words been more relevant than to mark the conclusion of this research journey.

At times the academic researcher is viewed as an introspective, lonely figure painfully searching for inner wisdom. In reality, I have found that the exploration for knowledge is one that must be shared, supported and nourished by others. I have been very fortunate to have excellent teachers, peers and supporters who have helped point me in the right direction and smooth the rocky path towards new knowledge.

Professors at Henley Management College, opened my world to the disciplines of management research, strategic process research and academic inquiry. I am indebted to the help of Professor Stephen Drew (East Anglia), my second supervisor, whose direction and advice gave me such a positive start to my research.

My peer Research Associates, from across the world, have been a constant source of information and motivation. As with the excellent support of Henley staff, they helped shrink the distance between this researcher and his academic home.

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I am also extremely grateful for the help of the academic community in both North America and the U.K. Their openness and willingness to share added a great deal of richness to their written word.

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However, it is to two individuals that I must reserve my deepest thanks and appreciation. They have advised, supported, cajoled and motivated me to maintain my focus and continue to pursue this goal. One is Professor Pat Joynt, my supervisor, whose determination and research wisdom helped me first focus my work and then pursue it with vigour. The other, my wife Lynda, whose patience and gentle prodding acted as a reinforcing lever to my academic support. I shall remain indebted to both of them for helping me complete this journey.

1.Introduction to the Thesis

The practical challenges posed by the strategic management process to this researcher, in his role as a senior manager, and the motivation it provided for the academic journey that is brought to fruition in this document, are included in the beginning of this chapter. Following this brief practitioner perspective, an overview of academic viewpoints on the strategic process and its key actors is presented. Strategy implementation dilemmas are the jumping off point for a discussion of the value of middle management involvement in the strategic process and postulation of distinctive roles for both top management and middle managers.

The chapter concludes with an outline of the purpose, focus and expected contribution of the proposed research, as well as a graphical representation of the contents of the thesis.

1.1 Practitioners, Academics, Top Management and Middle Management. An overview of the processes and actors involved in the strategic management process.

The strategic roles of middle managers, the collaborative relationships that exist between top management and other organization levels, particularly middle managers, and the impact of these roles and relationships on organization performance, are the prime foci of the research that is presented in this thesis.

It was, however, a different line of inquiry that brought this researcher to focus on the strategic roles of middle managers. As a senior level manager, I was responsible for facilitating strategic processes, formulating and implementing corporate strategy. From a practitioner's perspective, it was evident that despite extremely complex strategic planning processes (See Mintzberg, 1990,1994,1998 descriptions of "Design School"), the endorsement by the organization's top management team (TMT) of masterful documents outlining a route to the future, and corporate communication extravaganzas designed to share top management's wisdom with employees, very few corporate strategies ever came to fruition.

Frustrated CEOs and TMTs were left asking, "If we had such a wonderful strategy, why did nothing happen?

The easiest response was to blame the plan. Mintzberg noted (1994:61) that "decomposition was the order of the day" in reference to the tendency to break strategies down into ever more finite layers of sub-strategies and tactics. Complex documents detailing visions, missions, values, competitive and environmental analysis, and outlining corporate, SBU and department strategies were intimidating.

However, the industry view is characterized by an observation from Chuck Knight (1989), then CEO of Emerson Electric who said, "People don't fail in planning, they fail in implementation. Why? Well my fundamental belief is that they fail because of a lack of ability to get people involved and committed." Hamel and Prahalad (1994:75) would agree that "All the foresight in the world, if not matched by the capacity to execute, counts for little." However, they also proposed a challenging counterpoint when they observed, "Many times what are described as today's implementation failures are really yesterday's foresight failures in disguise."

The foregoing views suggest that strategy implementation is affected by the clarity and communication of the strategy, the degree to which implementers are involved in the strategic process, and the nature of the strategic process through which strategy is developed. Hrebiniak (1990) identified three factors that make implementation difficult. The process of implementation is complex because of the number of variables and decisions involved. Also, there are problems in managing the interdependence and shared decision making involved. Finally, organizations are human and social entities with associated inter-relationships, biases and cognitive maps built in.

Leadership, and where it is exercised, is a key component of the strategic process. Through the 1960s and 1970's the work of the Design School placed the CEO or Managing Director at the strategy apex. Mintzberg (1994) asserts that this was an underlying premise of the rational-analytical approach developed by these researchers. However, in 1984 Hambrick and Mason proposed in their "Upper Echelons" theory that a team of top managers drove the organization's strategic process. (TMT). In particular, they suggested that it was this group's characteristics and behaviours that were the prime determinant of organization performance. The "Upper Echelons" theory was premised on the fundamental belief that top managers do matter. Rather than being swept along by events in the

environment, internal organization dynamics or the whims of an autocratic CEO, it was within the capabilities of the top management team to directly influence strategy formulation, strategy implementation and organization outcomes. As will be noted in the literature review which follows, the "Upper Echelons" theory has guided and confounded strategic researchers from its inception to the present day.

That the Top Management Team members are key actors in shaping and leading implementation of strategy is not at issue. The degree to which the TMT "can go it alone" and directly affect organization performance is at question. Pettigrew (1992), in his classical review of the state of research into management elites, suggests that "ample empirical evidence" (pp.163) exists to indicate that the power and influence of those in senior positions is constrained by other actors inside and outside the organization, as well as by institutional characteristics. Smith and Kofron (1996) identify that there appears to be a missing link between strategy and implementation. They suggest that because, in research which flows from the "Upper Echelons Theory", there is typically an assumed causal relationship between TMT characteristics, that affect strategic choice, and outcomes, the processes by which strategy gets implemented have received little attention. This assumed relationship, they suggest, rests on a second assumption, that strategies are deliberately implemented.

To address these concerns, the authors identify four areas for future empirical research on the TMT 's role in strategy implementation. "What specific TMT roles pertain to implementation versus formulation?" "What characteristics of TMT structure and process influence strategy implementation?" "How and to what extent do relationships between TMT characteristics and strategy implementation influence overall firm performance?" and "To what extent do TMT structure and process characteristics, that facilitate effective strategy implementation, vary with different strategies and contexts?" Such a research strategy would ensure that the so-called implementation gap or "black hole" identified by Pettigrew (1992:178) would be filled.

Unfortunately, these four questions do not identify the TMT's roles from the first stages of strategy development to successful implementation and resulting organization performance. More importantly, they do not address how the extent of TMT interaction with other organization actors, involved in implementation, affects implementation success and organization performance.

West and Schwenk's (1996) empirical analysis revealed that many of the studies linking TMT strategic process and demography to organization performance were suspect, supporting Pettigrew's contention that not enough was known about how strategies were actually formulated or implemented. At the meta-level, Lowendahl and Revang (1998) noted that, "Descriptive studies of strategic processes in complex firms have taught us that not all strategies are developed top-down and authority distributed through the formal hierarchy." (pp.763). These and other research works, referenced in the literature review which follows, revealed that the challenges faced by practicing managers, professionals and operating staff in implementing strategy were rooted more broadly in the strategic processes of the organization.

Initially, I straddled the manager practitioner / researcher divide seeking an answer to the question, "How does the TMT affect the success or failure of strategy implementation?" But as my research process proceeded, it became apparent that it was necessary to examine the roles of the TMT, other strategic actors in the organization and processes of interaction throughout the strategic management process.

This emerging viewpoint was reinforced by the contemporary business management literature. First is the assertion that "strategic difficulties" begin at the top of the organization. Senior managers are seen as defenders of strategic orthodoxy. (Hamel, 1996) Top down unilateral direction or laissez-faire management, where administrative issues over-ride strategic action, provide lower levels of the organization lack of focus and few opportunities for strategic development. (Beer and Eisenstat, 2000) There is lack of effective up-down vertical communication on strategic issues. This results from the top down management style, causing unwillingness on the part of others to share information, develop solutions and ideas, or take a leadership role in strategy creation or implementation. (Hamel, 1996, Beer and Eisenstat, 2000)

The second and more significant observation was that other strategic actors, particularly middle managers, could and should play key roles in the organization's strategic process. The classical view that middle managers lead implementation and the operating level were the implementers is being openly challenged. At both levels new roles are proposed. Operators are seen as the source of strategic insight (Campbell and Alexander, 1997), innovative entrepreneurs (Bartlett and Ghoshal,

1998), participants in strategic democracy, (Hamel, 1996) and cross-functional team members implementing strategic initiatives. (Beer and Eisenstat, 2000). However, it is at the middle level that the greatest challenges and opportunity exist for improving strategic effectiveness.

Far from being resistant to strategic change, many middle managers are straining to find a productive and creative role in the strategic process. (Hamel, 1996) However, for much of the last two decades their role has been under threat. Pulled in conflicting directions, traumatized by downsizing, afforded no respect by top management, and pressured by an operating level seeking greater involvement (Hamel, 1996, Bartlett and Ghoshal, 1998, Beer and Eisenstat, 2000) it is difficult for them to assume a key linking role in the strategic process. Making the transition from a "planning and control' orientation to one where they act as a coach, supporting and facilitating strategic processes, requires both support of top management and the willingness to assume the new role. (Bartlett and Ghoshal, 1998, Floyd and Wooldridge, 1994). None-the less, the ability of middle managers to significantly impact the strategic process does not seem in question. In particular, the value of their participation in strategy formulation as a means to ensure both the relevance of the strategy and its' successful implementation is evident.

Hamel (1996) notes that "an open-ended and inclusive process of strategy creation substantially lessens the challenge of implementation. Implementation is often more difficult than it need be because only a handful of people have been involved in the creation of strategy." (Pp. 82). Campbell and Alexander (1997) suggest that separating strategy formulation from implementation is not wise, that operating managers are a key source of strategic insight, and should not be excluded from the process. They assert that "Tomorrow's insights arise from today's operating experience. Unless implementation is also viewed as being part of strategy development, tomorrow's strategy is likely to be short on insights."

Roberto (2000) confirmed the active participation of middle managers in key strategic decisions and the processes by which they are made, through a comprehensive qualitative study. He identified that nearly all key strategic decisions required input and involvement from individuals at levels below those reporting to the chief executive. Although professionals and specialists were included in this group, middle managers were in the majority. He postulates that

the TMT, as characterized by Hambrick and Mason (1984), may not be the strategic apex of the organization with responsibility for strategy formulation and implementation. Rather, a set of fluid relationships evolves between top managers, the middle and operating levels. In a similar vein, Quy Nguyen Huy (2001), reporting on a six-year multi-method research effort, concluded that middle managers made valuable contributions to the realization of radical (strategic) change despite receiving little recognition from top management. Willingness to contribute innovative ideas, comprehensive informal internal networks, sensitivity to the needs of the operating level and the ability to balance the need to overcome organization inertia with the need to avoid organization chaos, are cited as the capabilities that make middle management effective.

Floyd and Wooldridge (1994) provide additional support, for middle management inclusion in both strategy formulation and implementation processes. Drawing upon their own prior research they note that "what differentiated higher performing organizations…was an arrangement in which middle managers actively participated in the "thinking" as well as the "doing" of strategy." (pp.49) Further, they assert that strategy developed collaboratively will be superior to that which is the sole product of top management. Also, as organization's continued to de-layer and substitute horizontal forms for hierarchical structures, the middle managers strategic roles would take on added importance. Bringing them into the strategic communication loop was seen as key. Senior management reluctance and resistance, as noted above, was the greatest potential barrier.

1.2 *Towards a middle management perspective on the strategic management process.*

This researcher started out to identify what actions of the TMT in the strategic management process contributed to effective strategy implementation. As summarized above, investigation moved the focus of inquiry to the role played by middle managers in the strategic process.

While middle managers may have traditionally been viewed as directors and supervisors of implementation, it appears that they may be capable of performing much more pivotal and significant roles. Their place in the organization can allow them to act as a key communication link. They are able to

able to transmit and filter strategic information and decisions to and from top management. The operating level relies on them to provide a conduit for strategic ideas and issues, as well as a source of implementation direction. Cross-functional peer networks and external links, particularly to customers, round out a powerful strategic presence. (Burgelman, 1983, Bartlett & Ghoshal, 1998)

Floyd and Wooldridge (1992,1994,1996) outline four strategic roles that middle managers can assume. Championing strategic alternatives and synthesizing information provide channels of upward influence to top management. Facilitating adaptability and implementing deliberate strategy allow them to influence and support the operating level. These four roles are reviewed in more detail in the literature review and methodology section of this document. However, they provide the middle managers a spectrum of strategic action alternatives that range from fully supporting the TMT's deliberate strategy to ones which screen, incubate and ultimately raise new initiatives for top management approval. All of these roles appear to take advantage of the middle manager's unique position between strategy and operations.

In the literature review that follows, the classical assumption with respect to top down direction is challenged by a number of researchers. (Burgleman, 1983, Nonaka, 1988, Kanter, 1982, Dutton and Ashford, 1993) What emerges is a much more dynamic and perhaps pivotal role for middle managers in the strategic management process. What these roles are, and how they affect organization performance is a major focus of this research.

If the role of middle managers in the strategic process is different than previously characterized, then it reasonable to expect that the strategic behaviour of the top management team towards the rest of the organization actors may also be different than previously proposed. At the least, subject to organization context, varying approaches could be expected to exist.

A review of the strategic decision making literature will demonstrate that the inclusion of other organization actors in all aspects of the process enhances decision quality and performance. (Papadakis et.al., 1998, Simon, 1993) Research into the strategic decision making process, was focused on developing an

integrated model which linked actors, process and performance. This work resulted in the concept of strategy making modes that existed within the organization and had substantial impact on the effectiveness of strategic processes and organization performance. (Hart, 1991) The most notable aspect of the strategy mode concept was the relationship that existed between the top management and other organization actors at the middle and operating levels. Varying levels of interaction and directions of influence can be expected to change the strategic process and its results.

It will be postulated that the strategy mode(s) at play in the organization will affect the ability of middle managers to exercise particular strategic roles. Subsequently, the effectiveness of strategy implementation and organization performance will be directly affected.

The rationale provided in the foregoing section places the middle manager as a key and perhaps pivotal actor in the organization's strategic process. This is represented in Figures 1 and 2, initial conceptual models that provide a preliminary identification of the dynamics and processes that are the focus of this research project. Model A reflects research and propositions that place the middle manager as a key participant in the communication and influence networks that develop and decide upon strategic direction. (See for example Nonaka, 1988, Simon 1993). It also reflects their role of as conduits of information to and from the top and operating levels. (Floyd and Wooldridge, 1994:50) Model B demonstrates the pivotal role that middle managers play in linking top and operating levels. More significantly it implies that they are able, because of this pivotal role, to have a great impact on strategy implementation effectiveness and subsequently organization performance. Van Cauwenbergh and Cool (1982) were amongst the first to suggest that middle managers were central to the strategy formulation process. After a stream of research which will be reviewed in the literature review that follows, Floyd and Wooldridge (2000:39) asserted that middle managers were uniquely positioned between top management priorities and operating level realities.

Initial Conceptual Model A

Influence and Communication Through the Strategic Management Process

Legend	
●●●●●●●● ►	Communication on strategy development
▬▬▬►	Direct influence on strategy development
■ ■ ■ ■ ■ ►	Communication on implementation
——►	Direct influence on implementation
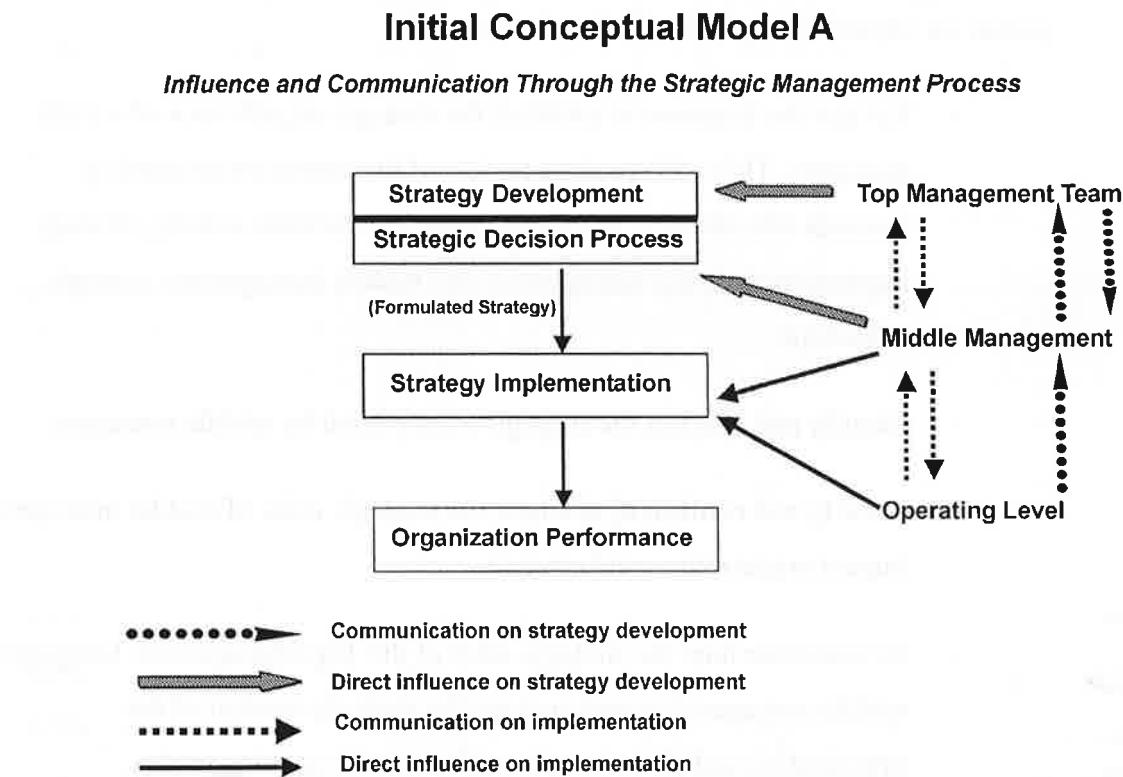
Figure 2. Initial conceptual model B: *Relationships and influence*

Initial Conceptual Model B

Relationship's and Influence

9
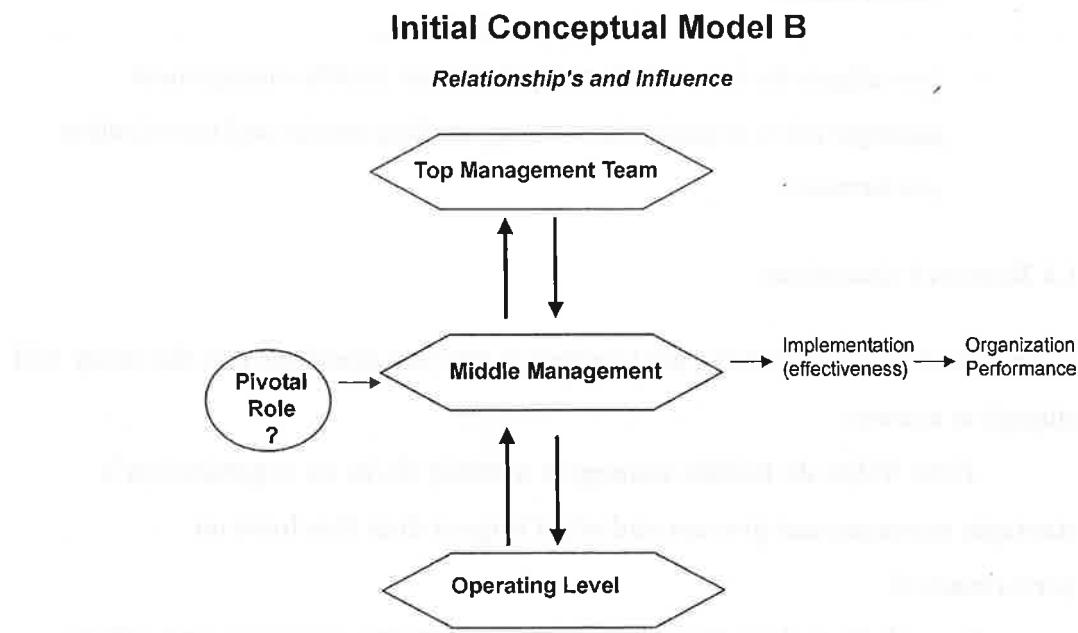
1.3 Purpose of the Research

The material above has focused and framed a research study that will seek to pursue six objectives. Specifically the research will:

- Review the literature to establish the strategic significance of middle managers. This will require a review of literatures encompassing research into strategic processes / strategic decision making, strategy implementation, top management and middle management strategic behaviour.

- Identify and confirm the strategic roles played by middle managers.

- Identify and confirm if, and how the strategic roles of middle managers impact organization performance.

- Demonstrate how the strategic roles of the Top Management Team and middle managers interact to shape the strategic context of the organization and give rise to specific strategy-making modes.

- Identify the impact of strategy making modes on organization performance.

- Investigate the inter-relationships between middle management strategic roles, organization strategy making modes and organization performance.

1.4 Research Questions

The research objectives above are targeted on two key questions that this study will attempt to answer:

First: **What do middle managers actually do in an organization's strategic management process and what impact does this have on performance?**

Second: **How does the interaction between top managers and others, primarily middle managers, effect the strategic process and impact organization performance?**

(A more detailed elaboration of these questions, benefiting from the literature review, is found on pages 133-134 of the Research Methodology chapter.)

1.5 Expected Contribution

By replicating two proven bodies of research work, the research will attempt to confirm the strategic roles that middle managers undertake and identify the strategy making modes that exist within organizations. Subsequently, the research will first demonstrate the impact on organization performance of middle management strategic roles. Then, it will identify how collaboration between top managers and middle managers can result in improved organization performance. In sum, this research study will add to a stream of inquiry that supports the strategic importance of middle managers.

As noted above, much of the research into the strategic behaviour and performance of the organization has emanated with the Upper Echelons theory. (Hambrick & Mason, 1984) While the importance of top management in the strategic process cannot be denied, this emphasis has blurred or minimized the impact of research which has sought both to clarify strategic processes and identify other actors, both internal and external to the organization. Despite admonitions from leaders in the field, (Pettigrew, 1992, West & Schwenk, 1996) and meta texts which have laid out a much more complex strategic arena, (Mintzberg, Ahlstrand & Lampel 1998, Pettigrew, Thomas & Whittington, 2002) the simplicity and appeal of linking TMT characteristics directly to performance is sustained.

Similarly, the 1990's were characterized by practicing managers seeking simple solutions for corporate challenges. As "cost cutting", "de-layering", "re-engineering" and other bottom line driven initiatives swept the business landscape, the middle manager was in the line of fire. Only later would organizations realize that corporate memory, internal networking, management succession, and strategic facilitation had suffered. (Floyd and Wooldridge, 1996)

Fortunately, as the literature review will reveal, research into the strategic importance of middle managers has grown into a significant body of work. By synthesizing the results of this prior research, a foundation for confirming the strategic roles of middle managers will be established. As noted above, the middle managers' strategic role will also be positioned within the context of the strategic

management process, strategic decision making and strategy implementation as well in relation to the strategic roles of the top management and their interaction with the middle.

Tables 1 and 3 *highlight key aspects of each of these areas and a sample of the research that address them.*

The foundation literature pointed towards two theoretical concepts that accounted for and reflected much of the research and theory development that had gone before.

First was the notion that middle managers could affect strategy formulation by exercising upward influence towards top management, while affecting strategy implementation through downward influence on the operating level of the organization. Both of these patterns of influence resulted in positive impacts on organization performance. This was refined and empirically proven in the work of Floyd and Wooldridge, (1992,1994,1996) who modeled and empirically validated the four strategic roles of middle managers noted above.

Patterns of interaction between top managers and other levels, particularly the middle, form the basis for the second over-arching concept. The development and existence of strategy making modes that affect organization performance resulted from Hart's (1991,1992) attempts to integrate and synthesize prior research into strategic decision making. He was able to establish, and empirically validate, five distinct modes of strategy making and their individual or combined impact on performance.

This study will attempt to replicate and extend the results of these two seminal pieces of research. The research will initially confirm the distinct strategic roles of middle managers and their impact on performance, and the existence of strategy making modes with subsequent effects on performance. Thereafter, the study will investigate and attempt to establish the culminating or parallel impacts of middle management strategic roles and top management's involvement in collaborative strategic processes as reflected in the existence of particular strategy making modes.

1.6 Thesis Outline.

Figure 3, on page 14, provides a graphical representation of the key elements that make up this thesis. First, a comprehensive literature review will span five key

areas / perspectives of the strategic management process. Implications draw from this review will provide the basis for refining the research questions and structuring the research hypothesis. The fourth chapter will review the research methodology that gave rise to the results presented and analyzed in the next chapter. In the final chapter conclusions and recommendations for future study are presented.

1.7 Chapter Summary

This introductory chapter provided an overview of a number of key issues surrounding the strategic management process. These included strategic decision making, strategic planning, implementation, and key strategic actors including top and middle management. The traditional role of middle managers, leading implementation under direction from the top, was contrasted against a possibly pivotal role between the top and operating levels of the organization.

It was identified that the research involves a broad literature review across a number of areas relating to the strategic management process, identification of the strategic roles of middle managers and their impact on performance, and the outlining of strategy making modes and their performance impact.

Figure 3 THESIS OUTLINE

Introduction to Thesis	Top Management Team
	Strategy Implementation
Literature Review	Strategic Decision Making
	Middle Management Perspective
	Strategy Making Modes
	Research Implications
Hypotheses Structuring	Research Questions and Hypotheses Structuring
Research Methodology	Research Design and Model
Results Analysis	Replications
	Hypothesis
	Overall Analysis
Conclusions	From Research
	Contribution
	Other Perspectives
	Future Research

2. Literature Review

2.1 Introduction

This chapter reviews five major areas and / or perspectives on the strategic management process. Figure 4 summarizes the elements and flow of the literature review.

Figure 4.

LITERATURE REVIEW OUTLINE

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┌─────────────────────────┐
│   Strategic Decision     │
│        Making            │
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            │
            ▼
┌──────────────────────────────────────┐
│   Top Management Team Perspective     │
│ (On the Strategic Management Process) │
└──────────────────────────────────────┘
            │
            ▼
┌──────────────────────────────┐
│   Strategy Implementation     │
└──────────────────────────────┘
            │
            ▼
┌──────────────────────────────────────┐
│   Middle Management Perspective       │
│ (On the Strategic Management Process) │
└──────────────────────────────────────┘
            │
            ▼
┌──────────────────────────────────────┐
│ Collaboration between the TMT and Middle │
│      (Strategy Making Models)         │
└──────────────────────────────────────┘
            │
            ▼
┌──────────────────────────────────────┐
│ Implications for Research into Strategic Roles │
│        of Middle Managers             │
└──────────────────────────────────────┘
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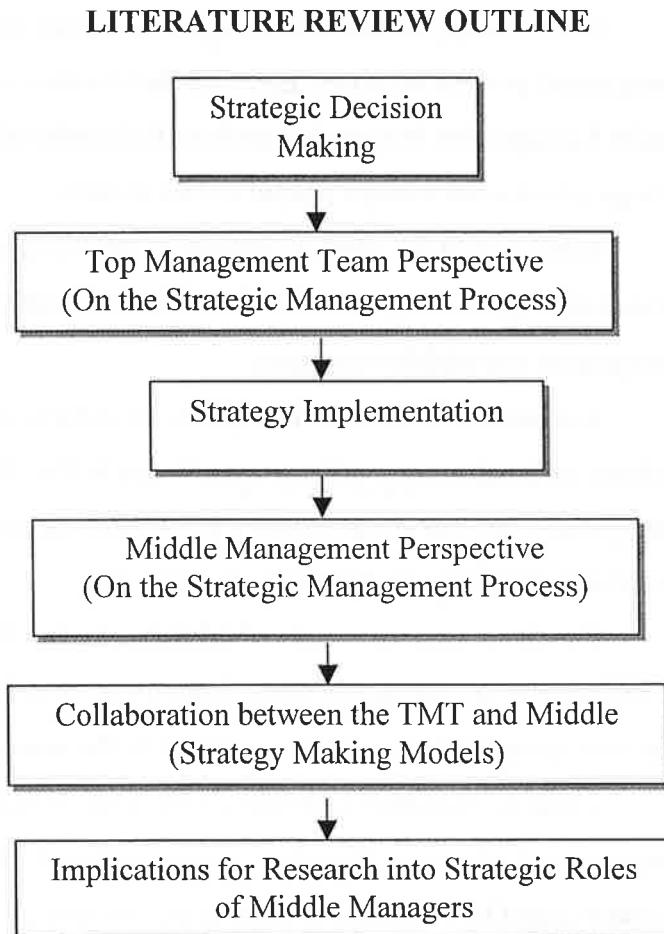
Strategic Decision Making, is reviewed from the perspectives of those researchers who have sought to develop integrated models and frameworks and in order to highlight contents, processes and participants that contribute to decision making effectiveness.

The Top Management Team Perspective undertakes a comprehensive examination of a range of areas that affect the TMT's contribution to the strategic process. Evolution of the TMT role from the initial interpretation of the Upper

Echelons Theory (Hambrick and Mason, 1984) and as leaders of a rational-analytical approach to the strategic process, emerge from this section's review.

The review of Strategy Implementation provides the opportunity to highlight research that has focused on how strategy gets translated into action. Roles of the TMT, middle managers and the operating level are highlighted in order to identify those characteristics that contribute to implementation effectiveness and result in improved organization performance.

Involvement, influence and impact of middle managers in the strategic management process are a key aspect of the literature and research reviewed in the Middle Management Perspective section. Roles played by middle managers in the strategic process are a major output of this section.

Starting with the work of Bourgeois and Brodwin (1984), the next section reviews strategy-making models, which feature collaboration between top management and middle managers.

It should be noted that throughout all sections of this literature review, evidence of involvement, influence and impact of middle managers are highlighted. This will aid in building a complete picture of their existing and potential participation in the strategic process.

Finally, a summary section highlights the key findings, and a selection of the researchers that identified them, from the review that have the potential to affect the research study which is outlined in the next chapter.

Table 1: "MAJOR ELEMENTS OF THE LITERATURE REVIEW; Topics, concepts, and selected references.", commencing at page 17, provides an overview of research and key findings in each of the major topic areas. Each of these areas is comprehensively reviewed in the relevant sections of this chapter.

TABLE 1: MAJOR ELEMENTS OF THE LITERATURE REVIEW: Topics, concepts and selected references.

TOPICS	CONCEPTS	REFERENCES	RESEARCH OBJECTIVES	RELEVANT RESULTS / CONCLUSIONS
Strategic Decision Making (SDM)	Integrated SDM Model	Papadakis, Lioukas, and Chambers, 1998	Investigates SDM process in relation to management and contextual factors.	SDM processes shaped by many factors. Decision specific factors dictate SDM process adopted.
		Rajagopalan, Rasheed, and Datta, 1993	Develops an integrative framework for SD processes from past literature review.	Framework incorporates environmental, organizational, and decision-specific process antecedents and their process and economic outcomes.
		Hart, 1991	Develops an integrated SDM model based on the varying roles played by top management and other organization actors.	Framework consists of five strategy making modes. Command, Symbolic, Rational, Transactive, Generative. Relationships between mode and performance are proposed.
	Major SDM Dimensions	Dean and Sharfman, 1996	Examines SDM processes in relation to factors which affect decision effectiveness	Decision process matters. Procedural rationality and political behaviour affect process and outcomes.
		Papadakis, et.al. 1998-	As above	Environmental instability and implementation effectiveness are also significant. Decision-specific elements over-ride influence of environmental, organizational, or managerial factors.
	Incremental versus Synoptic SDM processes.	Khatri, 1994	Research considered the synoptic formal and logical	Incremental SDM processes are more common and have a

TOPICS	CONCEPTS	REFERENCES	RESEARCH OBJECTIVES	RELEVANT RESULTS / CONCLUSIONS
			incremental perspectives on strategy making. Examined three strategic processes, strategic rationality, intuitive synthesis and the formulation-implementation dichotomy, and their impact on performance in various environments.	greater impact on performance than rational approaches. Separation of formulation and implementation results in lower performance in all environments.
	Relationship between top management and other strategic actors.	Simon, 1993	Identifies the need for a dynamic, forward looking and inclusive approach to SDM process.	Anticipating the shape of the future, generating alternatives, and implementing plans rapidly are key strategic skills. Broad organization involvement will achieve this.
		Wooldridge and Floyd, 1990, Floyd and Wooldridge, 1996	Investigated the strategic roles of middle managers in strategy formulation and implementation.	Organizations involving the middle in strategy formation had higher performance.
Strategic Planning	Process and Impact	Miller and Cardinal, 1994	Inconsistent planning – performance results are examined via a contingency model and meta analytical study.	Strategic planning does positively influence firm performance. Contingency variables, such as firm size and environmental turbulence are not significant.
		Boyd, 1991	Meta analysis reviewed impact of strategic planning on financial performance.	Despite moderate relationships in individual studies, impact of strategic planning on performance is strong.
	Skills needed	Simon, 1993	As above	As above
	Involvement	Lorange, 1985	Considered management structures and processes as	Supported the TMT directed approach to corporate strategy

TOPICS	CONCEPTS	REFERENCES	RESEARCH OBJECTIVES	RELEVANT RESULTS / CONCLUSIONS
			complementary vehicles for implementing strategies effectively. Reviewed the "top down / bottom dialogue.	development and implementation for mature business. New businesses were afforded more middle level involvement.
		Miller, 1997	Qualitative case studies to determine what factors were key to strategy implementation success.	Backing, by both key influencers and implementers, clear aims and planning, and a conducive climate, emerged as key. Involvement and communication were critical to all key factors
		Mintzberg, 1994	Comprehensive treatise on the evolution of strategic processes.	Successful development and implementation of emergent strategy dependent on middle and operating level involvement.
	Traditional planning and autonomous actions	Andersen, 2000	Investigated the dual performance effects of strategic planning and autonomous actions on strategic process.	Strategic planning and autonomous actions exist in tandem, both exerting positive but independent influence on performance.
Actors Involved	Need for input at all levels	Van Cauwenbergh and Cool, 1982	Analysis of the nature of strategy formation in complex organizations.	Strategic management is an organization wide activity. Middle managers act as the integrators across the hierarchical structure.
	Strategic alignment and performance.	Hart, 1992	As above	Strategy making not limited to the CEO or TMT, rather an organization wide phenomena
		Floyd and Wooldridge, 1992A	Investigated the relationship	Strategy formation is a process

TOPICS	CONCEPTS	REFERENCES	RESEARCH OBJECTIVES	RELEVANT RESULTS / CONCLUSIONS
			between middle management involvement and strategic type per Miles and Snow.	involving both the middle and the TMT. Involvement contributes to realized strategy and organization performance.
	Consensus	Floyd and Wooldridge, 1992B	Develops a framework for examining implementation in relation to managerial understanding and commitment across the organization	Strategy making is a dynamic, continuous phenomenon, and to understand it many managers at all levels must be involved in the process.
		Papadakis and Barwise, 1998	Examine factors that make SDM successful or cause failure.	Middle management involvement increases consensus about strategy, common understanding, shared effort and facilitates smooth implementation, resulting in high performance.
Dynamic Environments	Rationality versus Fast Decisions	Eisenhardt, 1989	Examined how the TMT made rapid decisions in a high velocity environment	Utilized more information, consulted across levels and developed more alternatives. Communication and alignment critical to implementation and high performance.
Top Management Team Perspective	Upper Echelons Theory	Hambrick and Mason, 1984	Synthesized, from prior literature, a model of how upper echelon (TMT) characteristics are reflected in organization outcomes.	TMT characteristics are determinants, at least partially, of organization outcomes, notably strategic choices and through them organization performance.

TOPICS	CONCEPTS	REFERENCES	RESEARCH OBJECTIVES	RELEVANT RESULTS / CONCLUSIONS
TMT Membership	Small group	Hambrick, 1995	Defined TMT membership as background to a study of fragmentation amongst TMT.	TMT generally small group, averaging nine including CEO. Usually included all CEO direct reports. Split evenly amongst line and staff.
	Top two management levels.	Wiersema and Bantel, 1992	Defined TMT as part of a study of TMT demography and its impact on corporate strategic change.	TMT includes all members of top two executive levels regardless of title.
	Challenge of defining	Pettigrew, 1992	Part of research review of "managerial elites"	Identified inconsistency in defining TMT. Suggested observation and interviews to determine membership.
		Amason, 1996	Defined TMT membership as part of a study examining the impact of conflict in SDM.	Limited TMT to those who actually participated in a decision.
	Participation in SDM	Roberto, 2000	Through case studies examined who actually participated in key SDMs.	Discovered that different groups were involved in different decisions. Membership was drawn from multiple organization levels.
TMT Characteristics	TMT demography and strategic change	Wiersema and Bantel, 1992	Examined the relationship between TMT demography and strategic change.	Identified that likelihood of change was related to certain demographic profiles including age, tenure, education level and background.
	Cognitive and Behavioural capabilities.	Miller, Burke and Glick, 1998	Examined the impact of TMT cognitive diversity on the comprehensiveness of SDM and extensiveness of strategic planning.	Cognitive diversity inhibits rather than promotes comprehensive examination of current threats and opportunities and inhibits extensive long

TOPICS	CONCEPTS	REFERENCES	RESEARCH OBJECTIVES	RELEVANT RESULTS / CONCLUSIONS
				range planning.
	Influence on performance	Haleblian and Finkelstein, 1993	Examined the effect of TMT size and CEO dominance on performance in different environments.	Team size was positively related to performance and CEO dominance weakened performance in turbulent environments.
		Smith, Smith, Olian and Sims, 1994	Tested three alternate models of the effects of TMT demography and process on organization performance.	TMT demography indirectly related to performance through process and process directly related to performance.
TMT Roles in SDM	Internal communication	Hambrick, 1994	As part of research into the tendency of the TMT to disintegrate, identified key components required for team cohesiveness.	"Processes" identified as one of four fundamental elements of top management group. Communication central to processes and behavioural integration.
		Papadakis et.al 1998	As above	Hierarchical decentralization and lateral communication influenced by decision specific characteristics, TMT aggressiveness, and CEO tenure.
	External communication	Geletkanyez and Hambrick, 1997	Examined the extent to which TMT boundary spanning activity affects organization strategy and performance.	Intra industry ties cause strategic conformity. Extra industry ties encourage deviant strategy. Aligning external ties with firm's informational needs enhances performance.
	Conflict and dissonance	Eisenhardt, Kahwajy, and Bourgeois, 1997	Identifies four managerial levers that executives can use to overcome the cognitive,	Conflict is essential for an effective TMT and high performance. Team diversity,

TOPICS	CONCEPTS	REFERENCES	RESEARCH OBJECTIVES	RELEVANT RESULTS / CONCLUSIONS
			emotional and political barriers to engaging in conflict.	frequent interaction, two-sided review and debate, and a multiple lens approach to problem solving on strategic issues are required.
		Burgelman and Grove, 1996	Based on their longitudinal experience with Intel, the authors identify the existence of strategic dissonance and its value to the organization.	Strategic dissonance provides the means by which top management can recognize an emerging strategic inflection point. Dissonance surfaces market threats and new opportunities and allows collaborative responses to strategic renewal.
	Managerial Discretion	Finkelstein and Hambrick, 1990	In research testing the upper echelons theory, managerial discretion's impact as a moderating variable on performance was assessed.	Strongest performance resulted from circumstances that allowed managers high discretion.
	Organization Structure	Fredrickson, 1986	Proposed how characteristics of an organization's strategic decision process are affected by its structure.	Outlines different process responses to centralized formal and complex organization structures. Impact of simple structures, machine bureaucracy, and professional bureaucracy outlined.
Strategy Implementation				

TOPICS	CONCEPTS	REFERENCES	RESEARCH OBJECTIVES	RELEVANT RESULTS / CONCLUSIONS
TMT Roles	Involvement / Tactics	Nutt, 1986	Identified implementation tactics used by managers in making strategic changes. Outlined a "Transactional Planned Change Process Model"	Four major tactics, persuasion, edict, intervention and participation, or variations thereof were identified. Intervention was the most successful, but persuasion was used most often. Model identified that involvement and support from the middle and operating levels is key at all stages of implementation.
	Strategic context	Waldersee and Sheather, 1996	Study aimed to demonstrate the potential impact of strategy on manager implementation intentions.	The type of strategy managers are implementing may potentially influence the implementation actions that managers adopt.
Strategic levers	Process	Noble, 1999	Study proposes a broadened perspective of implementation by examining existing concepts and definitions and applicable literature fields.	The impact and relevance of strategic consensus, autonomous strategic behaviours, diffusion perspectives, leadership and implementation style and communication and interaction processes were all identified.
		Hambrick and Cannella, 1989	Portray and discuss patterns of behaviour for the effective implementation of strategy.	Five key elements identified. Broad based inputs and participation at the formulation stage. Deliberate assessment of implementation obstacles. Implement using all available levers. Sell the strategy upward downward, across and outward. Remain flexible.

TOPICS	CONCEPTS	REFERENCES	RESEARCH OBJECTIVES	RELEVANT RESULTS / CONCLUSIONS
		Skivington and Daft, 1991	Model developed to study organizational framework and process modalities for implementing strategic decisions.	Strategy implementation is related to many organization elements, both framework and process. Structure, Systems were key framework elements, Interaction and Sanctions key process elements
Middle Managers	Implementation roles	Harrison and Pelletier, 1997	Examined whether the CEO should exercise sole strategic leadership or share leadership throughout the managerial hierarchy.	Identified two circumstances where the middle manager can make a major contribution to implementation and strategy development.
		Floyd and Wooldridge, 1992A, 1996	Developed and tested a model of middle management strategic roles.	In addition to implementing deliberate strategy, facilitating adaptability emerged as a second major implementation role of middle managers.
Human resources	Policies and practices	Martell, Gupta and Carroll, 1996	Tested notion that for strategy to improve firm performance, it must be matched with appropriate processes and systems including human resources.	With over two thirds of 16 HRM practices positively related to performance, the tested theory had validity.
Cognitive Processes	Creative Management Model	Hurst, Rush and White, 1989	Explains a creative management model that identifies the behaviours of top managers needed for organizational renewal.	Cognitive preferences influence renewal behaviour. Variations in TMT cognition cause differences in strategy. Cognitive diversity is healthy for the firm.
	Defensive Routines	Argyris, 1985	Outlined the concept of defensive routines and their	Defensive routines are the most important cause of failure of

TOPICS	CONCEPTS	REFERENCES	RESEARCH OBJECTIVES	RELEVANT RESULTS / CONCLUSIONS
			impact on organization / individual behaviour and performance.	strategy implementation. TMT members must acquire competency at intervening in defensive loops.
Implementation failure	Implementation / Formulation dichotomy	Kahtri, 1994	As above	Regardless of strategic environment, dichotomization has a negative impact on organization performance.
		Mintzberg, 1990	Critique of the "Design School" approach to Strategic Management.	Root of implementation failure lies in establishing a distinction between formulation and implementation. Dichotomy unable to respond effectively to emergent strategy.
	Implementation gap	Smith and Kofron, 1996	The relationship between the TMT, strategy implementation and organization performance is reviewed.	Identified the "black box' or implementation gap. TMT characteristics and processes may not lead directly to organization performance.
		Pettigrew, 1992	As above	Not clear what processes result in SDMs being successfully implemented.

2.2 Strategic Decision-Making.

"Strategic Decision Making" (SDM) is only one element of an overall strategic process in an organization. However, the literature review in this area will follow the path laid out by a majority of researchers who have placed SDM, and its impact on organization performance, at the pinnacle of strategic process research. (See for example Papadakis et.al., 1998, Schwenk, 1995)

This approach requires caution, as strategic process in an organization is an extremely fluid concept. While some organizations cling to the formal rational analytical processes that Mintzberg (1990,1994) characterized as the Design School, others have incorporated varying degrees of emergent processes to offset their intentional / deliberate strategies. Mintzberg et.al. (1998) identified ten strategic process models, which described how organizations approach development and implementation of strategy. Dimensions such as the nature of strategy, process characteristics, leadership behaviour, and the actors involved in the process differentiate the models (Mintzberg et.al. 1998:354-359)

Decision-making can occur through structured processes of analysis, alternative generation and weighted decision making. (See Simon 1993:134) However, in some business sectors, the rate of change and need to respond quickly and flexibly to a shifting external environment requires organizations to make "decisions on the fly". Ironically this situation requires that organizations have access to more relevant data, greater integration between strategy and action, and a higher level of cross level collaboration than in a classical organization process. (Eisenhardt, 1989, Brown and Eisenhardt, 1998)

The way that one views strategy formulation is very much dependent on one's assumptions about the decision context and the characteristics of the process. As many researchers have linked the strategic decision process directly to organization performance outcomes, it is important to understand the relationships that have been postulated.

Six different models or perspectives of strategic decision processes and strategy making will be reviewed.

Rajagopalan, Rasheed and Datta (1993) propose three sets of contextual antecedent factors; environmental, organizational and decision specific that significantly influence strategic decision process characteristics. The

environmental factor includes such attributes as uncertainty and complexity. Internal power structures, organization slack, past strategy and performance are significant organization influences. The third set of attributes addresses the reality that individual decision processes vary significantly in organizations. Urgency, corporate impact, and available resources are among elements that can change the process. These three sets of characteristics shape the process that, in turn, impacts both economic and non-economic outcomes, such as ROI, sales, commitment and decision speed. Figure 5. reproduces their integrated model.

Papadakis et. al. (1998) supports the view that an integrated model of decision process is required. They confirm that decision specific, environmental and organizational factors are required but add management factors as a fourth element. They also found that decision specific factors, such as magnitude of impact, threat or level of capital investment, have a much greater influence on the

Figure 5. Strategic Decision Processes: An Integrative Framework

Strategic Decision Processes: An Integrative Framework
(Adapted from Rajagopalan, Rasheed and Datta - 1993)
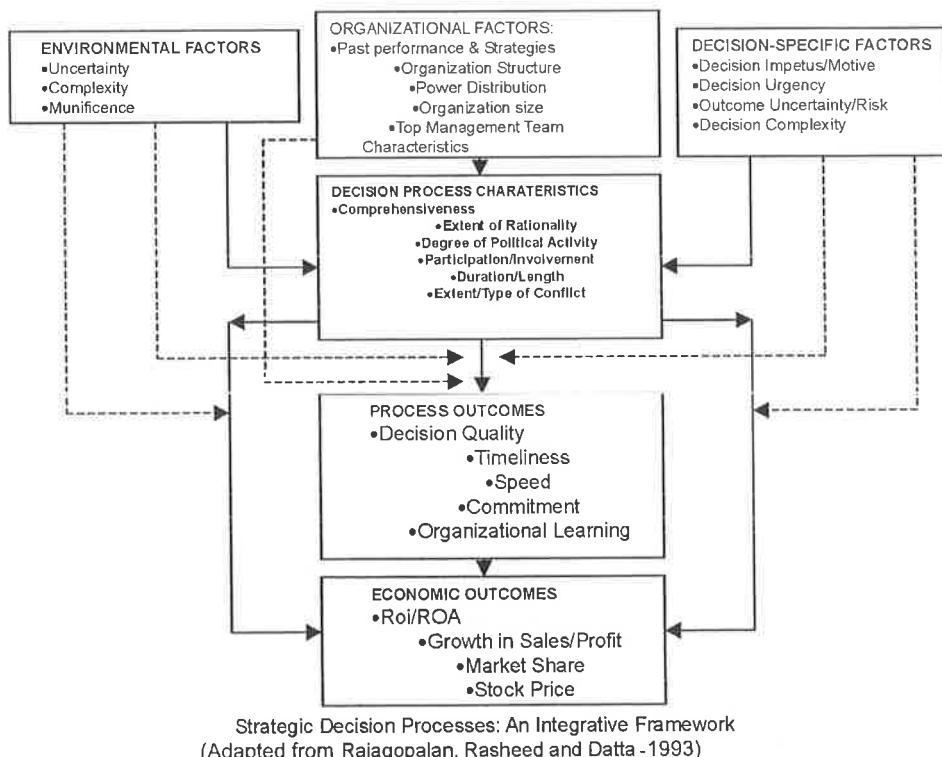
decision than the other three elements. Surprisingly, most characteristics of the top management team had little impact on the decision, except where greater

participation from other levels, particularly middle management, was required. Figure 6 outlines the key elements of the model.

Following an exhaustive review of the strategic change literature, Rajagopalan and Spreitzer (1997) proposed an integrative framework that has many similar foundations to the previous two models. They build it after applying three theoretical lenses to the literature. The rational lens perspective draws from the early days of strategic planning when strategic change was based on planned, sequential searches for the optimum solution. Environmental and organizational factors were considered to be objectively determined, directly influencing change as strengths or weaknesses. One significant weakness in the rational perspective to strategic change is that most of the organizational outcomes focus on financial outcomes alone, and research results have been decidedly equivocal. In the second perspective, the learning lens approach, strategic change is an iterative process. Managers take actions that may incrementally impact the environment and the

Figure 6. Factors influencing strategic decision-making processes

T O P M A N A G E M E N T	
C E O	**TOP MANAGEMENT TEAM**
• Risk Propensity • Education • Need for Achievement	• Level of Education • Aggressive Philosophy

NATURE OF SD	DECISION PROCESS CHARACTERISTICS

• GENERIC CHARACTERISTICS (e.g.)
    • Magnitude of Impact
    • Threat Crisis
    • Frequency
 	
• TYPE OF SD (e.g.)
    • New Business Investment
    • Investment in Capital Equipment
    • Investment in Marketing
	• Rationality / Comprehensiveness
	• Financial Reporting
	• Formalization
	• Hierarchical Decentralization
	• Lateral Communication
	• Politicization
	• Problem Solving Dissensions

B R O A D E R C O N T E X T	
EXTERNAL ENVIRONMENT	**INTERNAL CONTEXT**
• Heterogeneity • Dynamism • Hostility	• Internal Firm Characteristics (eg: planning formality) • Performance (return on assets, growth) • Corporate Control/Ownership Type (eg: SOE, private Greek company, subsidiary of Multinational • Size (number of employees)

Factors influencing strategic decision-making processes
(Papadakis, Lioukas and Chambers) - 1998

organization and subsequently cause major or minor shifts in company strategy. In this perspective managerial actions are accorded a central role and the relationship

with the environmental factors and the organization context is dynamic. Managers attempt to understand and anticipate the environment, shape the organization and have a direct impact on strategic change. As will be noted in future sections, the learning orientation to strategic process results in an evolutionary and dynamic model. Rather than strategy content being fixed, deliberate and the major determinant of outcomes, managers are able to build and influence new directions and outcomes. (Burgelman, 1983, Simon, 1993, Mintzberg et.al 1998: 176-231) In the third perspective the "thinking patterns " of managers enter as an explicit determinant of managerial actions and strategic change. While managerial cognitions have been accepted by researchers as implicitly influencing actions which impacted upon strategic change, this perspective demonstrates that knowledge structures, core beliefs, cognitive maps etc. have an explicit role to play in strategic processes. The authors suggest that managerial cognitions, through which they interpret organization conditions, may have a more direct influence on strategic change than the objective measures used in the rational lens perspective. While the three perspectives reviewed by Rajogopalan and Spreitzer are based on differing theoretical assumptions and each has limitations, they combine them into one master model (Figure 7.) The integrated framework overcomes the limitations of the individual perspectives and allows the significance of managerial processes, the antecedents and consequences of strategic change and the impact of managerial cognitions and actions on strategic content to be assessed within both the organization and environmental context.

The fourth model reviewed was that of Strategic Decision-Making Effectiveness developed by Dean and Sharfman (1996). The fundamental assumption underlying their work was that different strategic decision making processes lead to different strategic choices that result in different outcomes. Their model focuses on "strategic decision effectiveness" which they define as "the extent to which a decision achieves the objectives established by management at the time it is made." (1996:372) Selecting constructs that would be incorporated into the model, Dean and Sharfman identified items that were central to the decision-making literature, and were logically and empirically distinct. Also, they were consistent with their argument that strategic decision processes take place within an environmental context and result in outcomes that are affected by the

Figure 7. Strategic Change: A Multi-Lens Framework

Strategic Change: A Multi-Lens Framework
(Rajagopolan and Spreitzer)- 1997

Direct Links ———▶
Learning Links ----▶
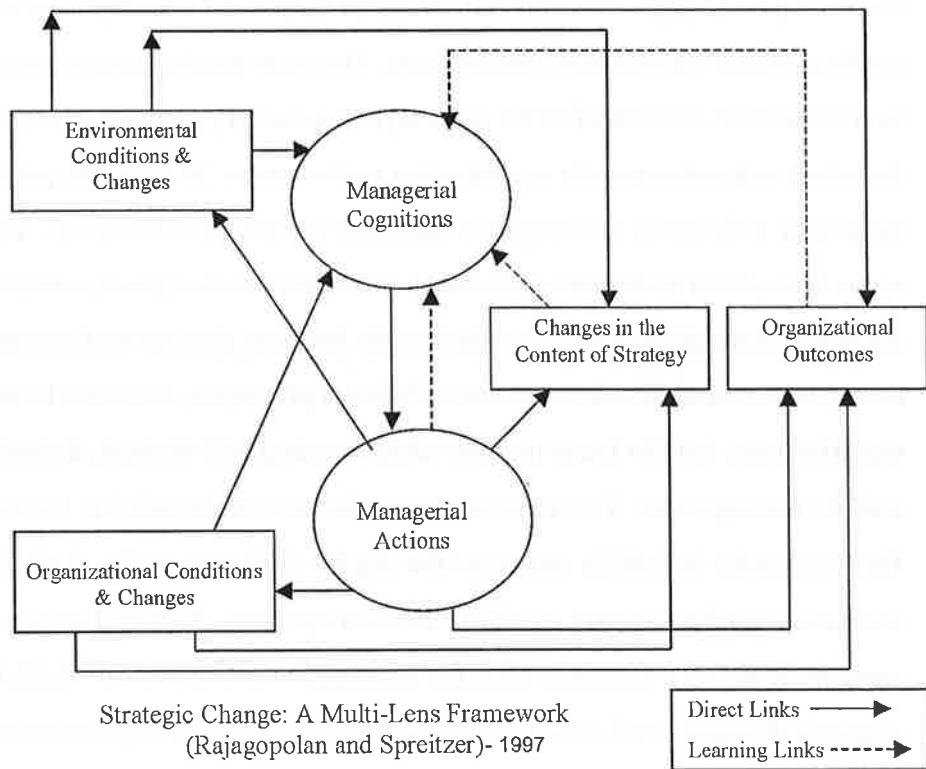
strategic choices. Based on these criteria the following model was postulated.
(Figure 8)

Figure 8. Strategic Decision-Making Effectiveness Model

[3]Dotted lines indicate control variables
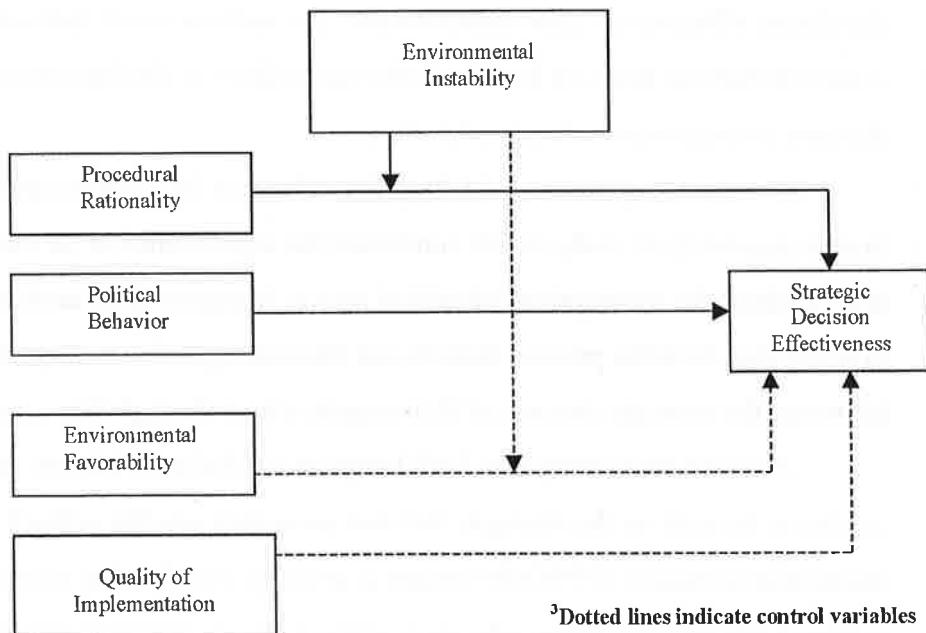
Strategic Decision-Making Effectiveness Model[3]
(Dean and Sharfman) - 1996

Procedural rationality was defined as the extent to which the decision process involves the orderly collection and analysis of data and was expected to have a positive impact on decision effectiveness. Decision making rationality appears to be a consistent element of SDM models, and generally is found to support effective decisions and subsequently organization performance. In contrast, political behaviour is found to be a negative influence on effective decisions. The authors argue that effective decisions are based on organizational goals, complete and accurate information about the relationship between choices and outcomes, and recognize environmental constraints. Political processes, common to most organizations, tend to focus on individual or group self-interest, distort information and are introspective. Two environmental factors are included in the model. Environmental instability measures the degree of change in the markets and technology of the industry in which the firm operates. As noted above, dynamic environments have a greater need for information collection on which to base strategic decisions and action. Rational processes seem to support decision-making effectiveness under these conditions. Environmental favourability was included as a control factor to recognize that environmental conditions may support implementation after a strategic choice is made.

Dean and Sharfman's final construct, quality of decision implementation, was included to recognize that how well a decision is implemented can have a significant effect on decision effectiveness. The authors assert that without this control factor one does not know whether an ineffective decision results from poor decision process or poor implementation.

The Strategic Decision-Making Effectiveness Model was empirically tested in an extensive field study which confirmed the significance of all the constructs and validated the assumptions identified above. In essence, the authors were able to assert that decision process matters and that managers have the power to influence the strategic success of their organizations through these processes.

A model that attempts to both integrate and balance the two schools of academic thought on the strategic decision processes was the subject of Khatri's doctoral dissertation. (1994) He sought to develop a model that would address the concepts advanced by those who view strategy development as synoptic formalism and those who adopt logical incrementalism as their base. Synoptic formalism is a highly rational, proactive decision process that involves establishing goals,

monitoring the environment, assessing internal capabilities, outlining alternatives, and establishing an explicit business strategy. Logical incrementalism, in contrast, implies that strategy cannot be predetermined. Consistent with his view of emergent strategy, Mintzberg (1994: 108) defines it as "a process of gradual evolution of strategy driven by conscious managerial thought". The author's view was that one's assumptions about the strategic process dictate patterns of decision making and implementation. Synoptic formalism leads to a highly explicit approach, whereas logical incrementalism furthers informal an intuitive processes.

After a review of past research he selected three constructs, of six identified, as independent variables which would serve to allow a manageable study that investigated the effectiveness of strategic decision processes in light of the two strategic schools. "Strategic rationality" refers to the formal, systematic and analytical approach to decision making. "Intuitive synthesis" is defined as expertise or experience that is based on deep knowledge of problems that continually come up in a job or the environment. "Formulation-implementation dichotomy " denotes the idea that formulation and implementation functions are sequential or separated from each other. This last construct has potentially great significance for the relationship between TMT members and other organization members, particularly middle managers, who are called upon to adopt strategy and implement it. In the synoptic orientation thinkers (the TMT?) are separated from doers through top down management. Incrementalism, in contrast, brings about a process where formulation and implementation merge in a fluid process of learning and strategy creation. The role of the TMT is to integrate the simultaneous incremental processes of strategy development and implementation. In contrast to the uni-directional synoptic orientation, shared involvement of the top, middle and operating levels is key. Mintzberg notes that "the power over the process must rest with the people who have an intimate sense of the context in which strategies have to work". (1994:274) "Environmental complexity and dynamism" is viewed as a moderating variable in this model. Complexity refers to the number, diversity and breadth of environmental factors and dynamism refers to the rate of change or uncertainty of the factors. The two figures below demonstrate how the major constructs relate and indicators that can be used to measure them. (Figures 9. & 10)

In pursuit of an integrated framework for strategy making processes Hart (1992) evolved a significantly different approach, after reviewing a literature base not unrelated to those referenced by the researchers whose work has been cited previously in this section. Hart's framework is constructed around the complementary roles that top managers and organization members play in strategy making . He uses as his parameters the spectrum of roles / relationships that top managers and organization members can assume during strategic activities. On one extreme he notes that top managers can develop strategy at the top and pass it down for implementation. This role, which he calls the commander, is contrasted with the role of sponsor where the TMT recognizes and supports strategy that has emerged from below. Similarly, organization members assume roles ranging from the good soldier, where they implement plans as directed by the TMT, to that of entrepreneur where they are free to pursue self-directed strategic initiatives.

Figure 9. Relationships between strategy process constructs and organization performance

Relationships between strategy process constructs and organizational performance
(per Khatri)

Figure 10.

The Operational Model (per Khatri)
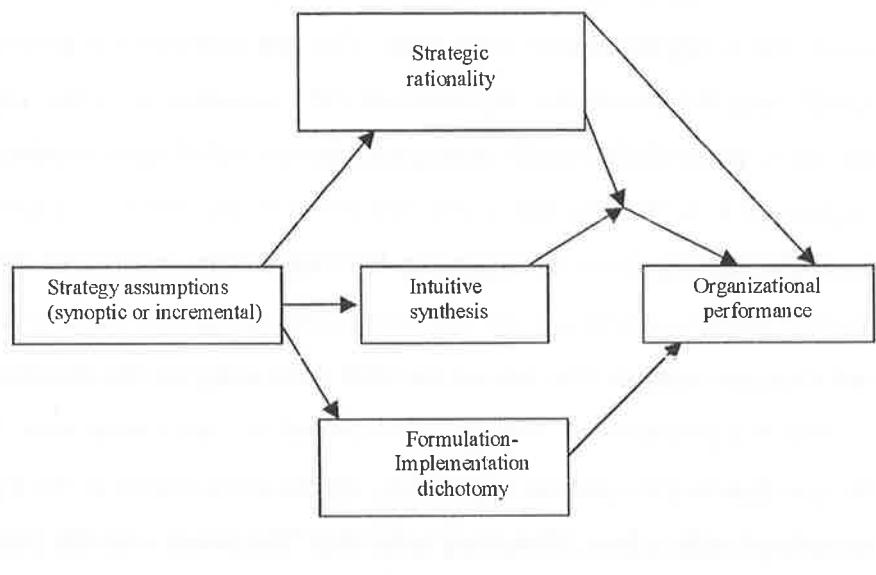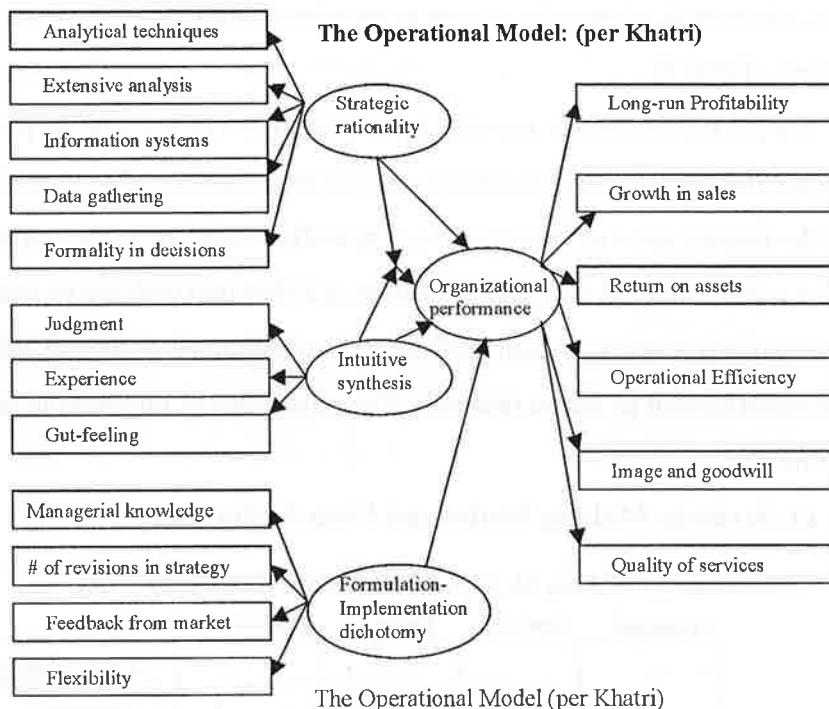
Using these complementary relationships as the basis, Hart defines five strategy-making modes. (See Figure 11) In the command mode a strong CEO and TMT exercise total control over the firm. Strategy is deliberate, the result of rational analysis, and employees are expected to implement it without question. A compelling vision and clear mission created by the TMT are central to the symbolic mode. Strategies and tactics flow from the vision and mission. The TMT's role is to motivate and inspire employees to achieve these. The rational mode is much more comprehensive and features shared data gathering, analysis and strategy formulation. Employee participation is highly formalized, within defined structure and processes. Progress in implementing the strategy is carefully controlled and monitored by management. In the transactive mode formal processes are replaced by dynamic interaction and learning. Strategy formulation requires broad interaction with stakeholders. Internally, cross-functional communication is key. The boundaries between strategy formulation and implementation are blurred. The autonomy of organization members is at its highest in the generative mode of strategy making. TMT members encourage risk taking and sponsor high potential ideas that are developed from below. In contrast to the deliberate, rational / analytical strategy making featured in both the command and symbolic modes, the generative mode exhibits many of the

35

characteristics of the emergent form of strategy identified by Mintzberg. (1994).
Ongoing adjustment of strategy occurs as new innovations emerge from
employees. (Table 2)

The six models above provide a good overview of integrative perspectives
on strategic decision making processes. However, a number of researchers have
studied the impact and / or significance of specific factors or forces on the process.
Given the acknowledged importance of strategic decision making to strategy
implementation and organization performance, a summary of this research makes a
valuable contribution to future research. The remainder of this section highlights
specific items.

Figure 11. Strategy Making Modes and Firm Performance

Strategy Making Mode and Firm Performance (per Hart)
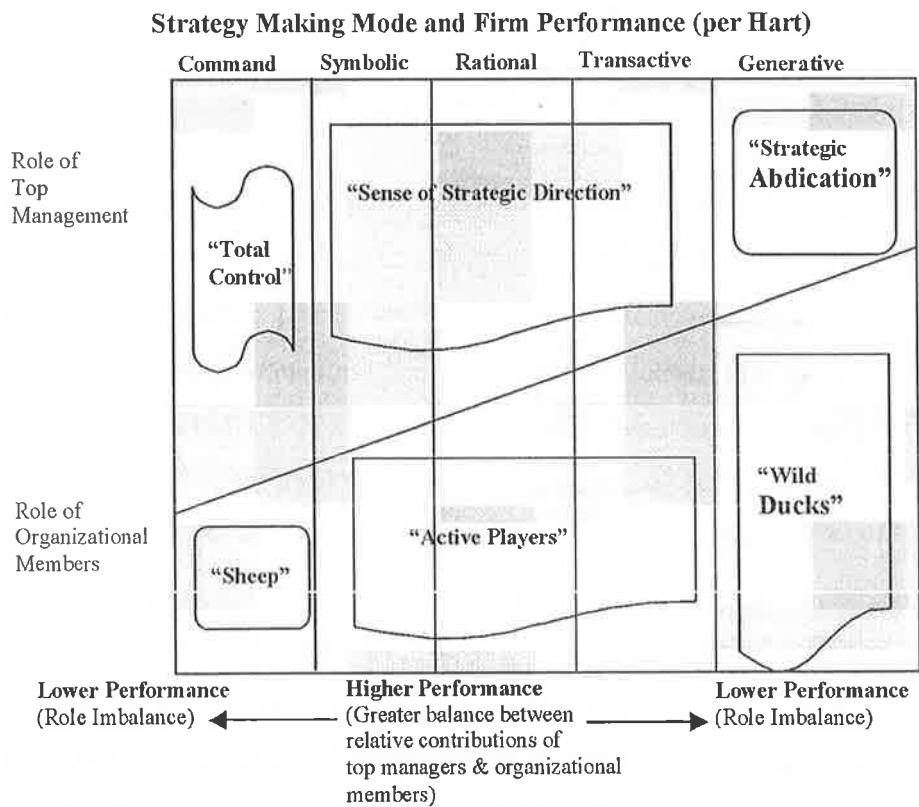
Table 2.

An Integrative Framework for Strategy-Making Processes (per Hart)

Descriptors	Command	Symbolic	Rational	Transactive	Generative
Style	*(Imperial)* Strategy Driven by Leader or Small top team	*(Cultural)* Strategy Driven by mission and a vision of the future	*(Analytical)* Strategy driven by formal structure and planning systems	*(Procedural)* Strategy driven by internal process and mutual adjustment	*(Organic)* Strategy driven by organizational actors' initiatve
Role of Top Management	*(Commander)*	*(Coach)*	*(Boss)*	*(Facilitator)*	*(Sponsor)*
	Private direction	Motivate and inspire	Evaluate and control	Empower and enable	Endorse and support
Role of Organizational Members	*(Soldier)*	*(Player)*	*(Subordinate)*	*(Participant)*	*(Entrepreneur)*
	Obey orders	Respond to challenge	Follow the system	Learn and improve	Experiment and take risks

2.21 *Strategic Planning, Decision-Making Effectiveness and Organization Performance.*

Strategic Planning has had a checkered history, both as a corporate vehicle and as a subject of academic research. Generally associated with the formal, structured process that supported the rational-analytical approaches of the Design School (Mintzberg 1994, Mintzberg et.al. 1998), strategic planning has often been seen as cumbersome, complex and slow to respond.

However, for many corporate organizations it remains the central element of their strategic management process. It is the means by which new strategic ideas are surfaced and evaluated, and the key input to strategic decision-making / strategy formulation. Three questions appear to guide contemporary research in respect to strategic planning. "How does it occur?" focuses on the elements of the processes utilized. "Who is involved?" identifies the participants and the leaders. "Does it matter?" addresses the impact of strategic planning on strategic decision-making effectiveness and organization performance.

Reducing the classical decision making to a process of choosing from pre-determined alternatives, Simon (1993:134) identifies three skill sets that are essential for participation in a contemporary strategic planning process. The ability

to anticipate the shape of an uncertain future. Skill at generating alternatives required for operational success in changed environments. Capability to implement new plans rapidly. While, as noted below, these are consistent with the needs of an effective strategic process in a dynamic environment, Simon proposes that these are the basis for a flexible, inclusive and comprehensive process. He also argues against specialized planning groups on the basis that they have a tendency to be wrapped up in responding to short-term TMT demands and also become isolated from the mainstream organization. Simon (1993:139) asserts that " participation of many organization members in a strategic planning process is the surest way of securing the dissemination of ideas that is the basis for implementation." Further, he proposes that there should be broad organization involvement in problem identification and alternative generation, "the crucial components of strategy" (pp.141), as making strategic decisions, generally a TMT responsibility, is only the last and not necessarily most important step. Also, immersion in the strategic process leads to effective implementation.

While Simon represents a number of researchers (Kanter, 1982, Pettigrew and Whipp, 1991, Miller, 1997) calling for more extensive involvement beyond the top level, and reflects much of the argument of Mintzberg in respect to emergent strategy and the learning school (1994,1998), there are those who do not accept that the key TMT role should be left to maintaining balance between operating and planning imperatives.

Although he accepted the need for the strategic process to remain fluid, and for strategic direction and implementation to be flexible, Lorange (1985) supported a much greater degree of control and coordination from the corporate centre. The top-down / bottom-up dialogue that he recognized was essential for both new and established businesses, was none-the-less focused on satisfying corporate needs. Integrating the business units into the corporate strategy, rather than modifying the strategy to meet local needs, was predominant. Also, the recognition of and acceptance of advice from specialists and leaders at the corporate level was the norm. This places the TMT as the source of strategic wisdom and operational advice. It must be noted that Lorange did not advocate an authoritarian style, as the value of business unit level input was clearly acknowledged, particularly when there was a great deal of operating level uncertainty.

Anderson (2000) in an empirical study of the traditional strategic planning and autonomous actions, the foundation of emergent strategic processes, arrived at an apparently dichotomous conclusion that might support both Simon's and Lorange's arguments. He found that " strategic planning is associated with superior performance in all of the industrial settings investigated, and exists in tandem with autonomous actions to enhance firm performance in dynamic industries." (pp.185) This conclusion is more significant, given his definition of strategy. That is, long term goals and objectives determined by the corporate leadership, and the corporate strategy process as a hierarchical process where the TMT outline an overall plan based on corporate goals, after which general management develops goals and plans which are then cascaded to middle managers.

His study did indeed confirm that organizations utilizing a strategic planning approach consistent with this traditional paradigm of corporate strategy obtained superior performance. However, he also found that autonomous processes existed side by side in the same organization with classical strategic planning and did influence organization performance. But, the impact of strategic planning processes and autonomous actions appear to be largely independent of each other, and do not seem to reinforce each other.

" The existence of autonomous actions imply that managers below the top management level can make decisions with strategic implications without prior approval from top management. The autonomous actions of managers provide fast and adaptive responses and facilitate strategic experimentation that can allow the organization to update its knowledge about the environmental conditions and devise adaptive responses." (Anderson, 2000:190). If this mechanism does not feed into the more formal strategic planning process, but co-exists in parallel, then there are significant challenges involved in managing the strategic process across the organization.

Broader research seems to support the view that strategic planning does matter, in respect to its ability to influence organization performance. Although some empirical research was equivocal, (West and Schwenk, 1996), two meta studies supported the positive orientation. Both reviews looked at studies done during the past two decades and attempted to assess the overall effects of Strategic Planning on performance. Miller and Cardinal (1994) asserted that after reviewing 26 separate studies they were able to show a strong relationship between planning

and growth and profitability. Firm size, capital intensity and turbulence were introduced as contingency variables and the researchers adjusted for methodological error. Superficially the analysis conducted by Boyd (1991) does not appear to offer as much strength to the argument. Aggregating the results of 29 studies he found that the effect of strategic planning on firm performance to be very weak. However, he also uncovered considerable measurement errors that lead him to conclude that the findings significantly underestimate the true relationship between planning and performance.

2.22 *Involvement and Strategic Consensus*

Although the bulk of research into the strategic management process has focused on the role and impact of the TMT, it has been recognized that the quality of decisions and their translation into operational outcomes depends on middle and operational level managers. (Van Cauwenbergh and Cool (1982), Rajagopalan, Rasheed, Datta and Spreitzer (1997))

Van Cauwenbergh and Cool (1982) suggested that organizational decision making practices could be categorized on two continuous variables. The degree of agreement on preferences for outcomes, and the degree of uncertainty about cause and effect relations. Effective resolution of this dichotomy requires input and involvement at all levels and not necessarily in a way which conforms to classical hierarchy. The authors were one of the first researchers to assert that the middle manager played a critical balancing role in the strategic process, occupying the organizational ground between top management and the operating level.

While research supports the value of strategic consensus amongst TMT members, (Bowman and Ambrosini, 1997) other recent research supports the view that agreement with and / or alignment to strategic decisions across organization levels has a major influence on organization performance. (Hart 1991, 1992, Floyd and Wooldridge, 1992, Fiegenbaum, Hart, and Schendel, 1996)

Floyd and Wooldridge (1992B) define consensus in a much broader organization context that has its foundation in the dual premises of shared understanding and commitment. They define strategic consensus as "agreement among top, middle, and operating-level managers on fundamental priorities of the organization. This agreement shows itself in the actual decisions taken by managers, and its strength can be assessed along both cognitive (shared

perceptions) and emotional (commitment) dimensions"(pp.28). The authors argue that extending the concept of consensus to include other than TMT members is essential to effective strategy implementation. If middle and operating level managers are ill informed or not supportive of corporate or SBU level strategy then failure to execute strategies is quite likely.

Fiegenbaum, Hart and Schendel (1996) in proposing the concept of Strategic Reference Points (SRP) predict, that in addition to the nature and frequency of SRPs, the level of consensus between top management and other organizational members in respect to SRPs will affect organization performance. The authors assert that recognizing and responding effectively to strategic reference points requires the balancing of paradoxical capabilities, broad vision with attention to detail, an external and internal focus, and flexibility with stability. This is best achieved when all organization actors are all aligned. Involvement in framing the strategic issue and in decision making is clearly the way this is achieved. Without this, strategic divergence and counter-productive divergent action is likely. Guth and MacMillan, (1986) identified that this can occur when the TMT overlooks employee involvement and ignores upward input.

Papadakis and Barwise (1997), summarizing the themes of current research, suggest that involvement and efforts to establish consensus have two major benefits. First, it contributes to a better organization performance through shared goals, shared effort and smooth implementation. Secondly, it recognizes that middle managers may have a better sense of emerging threats and opportunities and that delegating the power to make strategic decisions will also result in improved performance.

Commenting on the work of Wooldridge and Floyd (1989), Bowman and Ambrosini (1997) note that it is likely that middle managers have a different view or perception of strategic priorities than the top. Subsequently they are more likely to shape realized strategy. These perceptions may be out of line with those of top managers and espoused corporate strategy. Intended and realized strategy will not confirm to a top-down model of decision making or planning.

2.23 *Strategic Decision-making in a Dynamic Environment*

As demonstrated with respect to the integrated strategic decision models discussed above, factors within the organization's operating environment play a significant

role in the decision-making process, strategy implementation and firm performance. This is particularly true with respect to organizations that are developing and implementing strategy in dynamic environments.

Characteristics of a dynamic environment are a high rate of change, uncertainty and / or unpredictability of the environment. In these circumstances top management must exhibit greater adaptability and high-speed decision making. This has the potential for creating significant differences between intended and realized strategy,

Two competing perspectives have been advanced with respect to the impact of environmental dynamism on rational strategic decision-making. One suggests that unstable environments are not conducive to rational processes because they require comprehensiveness, time and integration. Priem, Rasheed and Kotulic (1995) in their review of the contrasting literature, draw attention to the research of Fredrickson and his colleagues in respect to this position. (For example, in cooperation with Iaquinto (1989) he concludes that fast decisions are usually made using a less thorough decision process with limited information, analysis, and participation.) In contrast, Eisenhardt (1989) concluded that decision-makers in dynamic environments actually gather more information, consider more alternatives and engage a higher percentage of organization leaders in the decision. What is different is that they accelerate their processes dramatically. However, despite the speed, the processes used are highly rational and integrated. Her position was supported by Papadakis and Barwise (1997:281)) who noted in their concluding remarks that in dynamic environments "successful strategies tend to emerge both from formal plans and from a series of decisions, often initiated by mid-level managers close to markets and technologies. The strategic decisions that form the building blocks of this kind of "emergent" strategy usually involve resource allocation often including substantial capital investment. (Therefore) strategic decisions are also the building blocks through which deliberate strategy is implemented."

Kahtri (1994) pursued a "middle ground" with respect to the impact of strategic rationality on organization performance in complex and dynamic environments. He hypothesized that "strategic rationality will have a curvilinear relationship with organization performance. That is, a moderate level of strategic rationality will be associated with high performance; high and low levels of

strategic rationality will be associated with low organization performance."(pp.23) His research identified that high performance might be associated with all three conditions. Results from the stable environment conformed with the view of Fredrickson et. al., that strategic rationality is positively related to organization performance. As expected, results drawn from the total study sample showed that for companies with higher complexity and dynamism, higher emphasis on strategic rationality resulted in lower performance. However, a specific sample drawn from the computer industry identified that better performance resulted from greater amounts of rationality. It would appear that highly dynamic, "high-velocity" environments might benefit from rational strategic processes.

The results of the study undertaken by Priem, Rasheed and Kotulic (1995) strongly supported the notion that environmental dynamism was a moderator of the rationality-performance relationship. However, it found that the moderating impact was in the opposite direction to that suggested by Fredrickson and colleagues. The relationship was highly positive when firms faced highly dynamic environments and non-existent in medium or low levels of dynamism. Eisenhardt and Brown (1998: 27-56) suggest that the challenge facing managers in dynamic environments is to balance the requirements of formal structure / process with innovation and improvisation while avoiding the dual "sins" of bureaucracy and chaos. As with her previous work, Eisenhardt acknowledges that managers do follow a rational and inclusive process, gathering more data at high speed. However, the research of these authors shows that the strategic processes of successful, highly dynamic companies are less structured, inclusive at all levels of the organization, and feature diverse networks of simultaneous strategic communication.

2.3 Top Management Team (TMT) Perspective

2.31 *Introduction*

The significance of the top management team (TMT) in providing guidance and direction to the strategic management process of the organization has been well established in the literature for at least 15years. Hambrick and Mason (1984), in their seminal presentation of the "Upper Echelons Perspective of the Organization" suggested that the characteristics of the TMT act as determinants of strategic

choice and, because of these choices, organization performance. In the intervening years there has been a great deal of research focusing on these characteristics and their impact on performance, as well as the processes which occur within the TMT and between it and elements in the external environment and the organization. Although Hambrick (1994) later questioned whether the TMT was as focused and cohesive as he had earlier implied, he did reassert that any researcher wanting to predict or explain organization outcomes should pay particular attention to the characteristics, interactions and experiences of the executives at the top of the organization.

However, the relatively straightforward model which Hambrick and Mason had proposed to delineate the relationships between TMT characteristics, strategic choices and organization performance posed significant challenges to researchers. As a precursor to outlining an integrative framework for strategy making processes, Hart (1992) summarizes a detailed literature review of the strategy field by identifying three major themes. First is the focus on rational-analytical strategic process, which dominates both academic and practitioner approaches to strategy formulation. The symbolic role of the TMT in providing strategic leadership to the organization is the second. That "implementation problems" emerge as the third major theme, suggests an area of concern and potential challenge to the implied causal relationship between TMT strategic choice and organization performance.

While much of the research supports the relationship between particular TMT characteristics and performance, there are a number of inconsistencies between research on similar factors. Schwenk (1995), in a review of strategic decision making research, identifies both the tendency of researchers to translate strong relationships between TMT characteristics and organization performance into propositions that the characteristics cause the performance, and that the results of much of the research are "weak". He implies that as much of the research relies on public data sources, the weakness is a result of a failure to identify other factors that affect performance besides the quality of the decision making.

Implicit to the acceptance of the Upper Echelons theory and much of the research that has cascaded from it is the notion that "the performance of an organization is ultimately a reflection of its top managers" Hambrick, 1987:88. As a foundation to the original theory the authors premised their argument on the view that top executives mattered and could shape the strategic future of the

organization, rather than be swept along by it. (Hambrick and Mason, 1984) By extension, much of the research into the TMT's strategic roles has focused on the link between characteristics such as composition, demographics, process, and relationships on organization performance.

In the following sections, research which details the roles undertaken by the TMT in the strategic management process, is reviewed. Topics covered include the composition of the TMT, TMT characteristics and their effect on performance, TMT roles in SDM including internal and external communication, and the impact of conflict, consensus, dissonance, managerial discretion, and organization structure on SDM effectiveness.

2.32 *Who is the Top Management Team?*

Hambrick (1995) observed that the emergence of the TMT in the academic literature after 1980 represented a significant shift in the focus of thinking about executive leadership. Prior to that time there had been a bias towards the "all powerful" role of the CEO, despite the dominant coalition concept advanced by. Cyert and March (1962).

Defining the TMT as *"the relatively small group of the most influential executives at the apex of an organization"*, Hambrick draws upon his work with CEOs to identify that the TMT usually includes all who report to the CEO. Although he drew on a good cross sectional sample of CEOs and organizations, to establish that on average the TMT consisted of nine members evenly split between line and staff, the variability in responses only served to highlight the dilemma confronting TMT researchers. It is the inconsistency in defining who the top team is that Pettigrew (1992) attributes to contributing to the variation in empirical results.

One common approach is to ask the CEO. Here the focus is on the "exclusive" or "active TMT subset" (West and Schwenk 1996), the group of executives that make "key decisions". Similarly Smith, Smith, Olian & Sims et.al. (1994) polled CEOs to identify the members of their "real" management teams. Their finding that an overwhelming majority of those named were also officers of the corporation is consistent with Haleblian and Finkelstein (1993) who selected their TMT samples on the basis of "all corporate officers who were also board members". Implicit in the selection of the TMT sample in both cases is the

dominant coalition concept which accepts that a small inner circle of top managers make the critical decisions. In a more specific approach, Amason (1996) asked CEOs to identify a small number of the most recent key strategic decisions and then to identify the top managers involved in these decisions.

Regardless of the method chosen to define the TMT, there is one common reason that threads throughout the literature. The inclusion of executives and managers who do not have a great impact on strategic decisions may distort data and reduce the credibility of the results. (Miller, Burke & Glick 1998). Wiersema and Bantel (1992) attempted to avoid this by defining the TMT as the top two tiers of the organization regardless of titles. They acknowledged that the arbitrary selection of everyone with the title "Vice-President" and above could take the researcher five levels down in some organizations. "By defining the top management team as the two highest executive levels, regardless of titles used, we achieved greater consistency across the sample of firms than have other studies" (pp.104)

Although the survey instruments used later in this research allowed self-selection by the respondents of "top management" or "middle management" roles, this latter definition provided overall guidance and appeared to provide a valid and acceptable base line.

If the role of the TMT in strategy development and implementation is to be credible it must reflect what actually happens and who actually participates. The majority of research in this area is based on questionnaires, retrospective interviews and /or industry data sources. Pettigrew (1992) asserts that only through some combination of observation and interviewing of top management teams in action can a true perspective be obtained. (See Eisenhardt 1989).

Another limitation emerges from research that suggests that the TMT may not always exist as a tight cohesive body. Hambrick (1994) although reasserting the value of the top management group that exercises strategic leadership, raises the specter that TMTs cease to be teams over time, being pulled apart by "centrifugal forces". Roberto (2000) provides another confounding perspective by suggesting that critical organization decisions are made by different teams, consisting of representatives of top management and other levels.

2.33 *TMT Characteristics That Impact the Strategic Management Process.*

Hambrick's "Upper Echelons" paper (1984) outlined a number of possible "observable managerial characteristics" such as age, tenure in the organization, education, corporate function, socioeconomic background and financial position. In a 1989 article he further builds on this list of items as he identifies the key characteristics of strategic leadership. Team tenure, team size and team heterogeneity, as well as knowledge, skills, aptitudes, personalities, values and cognitive styles are additions to the key characteristics.

Individually or collectively many of these factors have formed the basis of research over the last decade. The role of age, organizational tenure, top management team tenure, education level, and educational specialization, in corporate strategic change were examined by Wiersema and Bantel (1992). Top management team size was a key variable studied by Haleblian and Finkelstein (1993) in respect to firm performance in stable and turbulent environments. Heterogeneity and tenure were both key variables in Boeker's (1997) model relating the TMT, CEO and firm performance to corporate strategic change. A 1990 study saw Finkelstein and Hambrick research the effect of top management team tenure on strategy and performance, while examining the moderating effect of managerial discretion.

While much of the "early" research focused exclusively on the demographic diversity of the TMT, more recent work focusing on the effectiveness and results of the strategic decision process has developed a broader perspective. Cognitive diversity has been postulated to impact firm performance, (Miller, Burke & Glick 1998). "Degree of aggressiveness" of the TMT as well as CEO traits related to achievement and risk taking were factors researched by Papadakis, Lioukas and Chambers in respect to the role of management in the strategic decision making process. In a 1996 study, Martell, Gupta, and Carroll further added to the evidence that personal characteristics and abilities of individual TMT members impact organization outcomes by asserting that "we would expect that the skills and behaviours of the TMT are especially important to the successful implementation of a firm's strategy and to firm performance". Their work

examined the impact of 16 TMT human resources management practices on performance.

Hambrick (1994) concluded a decade of study of the top management's impact on organization strategy by outlining a model that defines "the conceptual elements of the top management group". He proposes five key elements: composition, structure, processes, incentives and the group leader (usually the CEO or SBU general manager). He asserts that, "Ultimately, all elements of a top group influence each other. The composition of the group will affect its processes, its structure will affect its incentives, the group leader's personality will affect structure and so on."(pp.180) This interaction, between elements in the internal TMT model and with the actors and processes external to it, is a key to solving the implementation problem referred to earlier by Hart.

2.331 *Do TMT Characteristics Influence Organization Performance?*

The research, quoted above, shows that organization performance is influenced by a broad range of variables, forces and processes.

In his review of current approaches to strategic decision making research, Schwenk (1995) acknowledges that research on TMTs (upper echelons) sometimes shows significant relationships between TMT characteristics and performance. But he takes issue with arguments that suggest differences in TMT characteristics are the cause of differences in performance. An example of this is provided in the concluding remarks to Haleblian and Finkelstein's (1993: 859) study of TMT size, CEO dominance and firm performance. They note, "although we stated our hypotheses in associational terms, the logic behind them implies that team size and CEO dominance "cause" performance. Unfortunately, even with multiple years of data it was not possible to completely disentangle causal direction....our discussion focused on their effects on decision quality and firm performance. However, we did not explicitly consider the implementation process, which may affect outcomes."

Although many characteristics do not have a direct impact on performance they do influence other constructs or process variables which may impact organization outcomes. This was noted with respect to the work of Miller, Burke and Glick (1998) who identified that the impact of executive diversity on performance was achieved through two highly significant process variables,

comprehensiveness and extensiveness. Yet, while previous research (Frederickson and Iaquinto, 1989) had shown that these two process variables generally had a positive relationship with performance, cognitive diversity was shown to have a negative effect despite overwhelming theoretical arguments to the contrary.

Similarly, Smith & Smith et. al. (1994) identified the complexity of the relationships between TMT demography, team processes and performance. For their research they tested three alternative models. In one, TMT demography was predicted to have a direct significant effect on performance without an impact by process variables. A second model proposed that TMT processes directly effects performance, while demography will also have a direct and independent impact on performance. Process will account for variation left unexplained by demography. A third model, which the authors designate as the intervening model, suggests that team demography influences organization performance entirely through team process and it has no direct effect on performance.

The results of their research, which had utilized a broad range of demographic and process variables including TMT heterogeneity, tenure and size, social integration, and communication informality and frequency, provided partial support for the intervening and process models and no support for the demography model. One clear general conclusion that emerges from this study is that process factors have a significant impact on performance outcomes and that TMT demography has a much more complex effect on performance.

The contradiction and uncertainty, that may result from studies that examine similar relationships from different perspectives, was highlighted in a review of research that examines the effects of different process characteristics on both process and economic outcomes. (Rajagopalan, Rasheed, and Datta (1993)) The authors observed that "not only do different combinations of environment and strategic decision process characteristics have different performance effects, but within a given environment, different combinations of decision processes and organizational contexts may also give rise to different performance implications."

2.34 *Top Management Team Roles in Strategic Decision Making*

If one accepts Hambrick's view that an organization's performance is a reflection of its top management then one must explore just how this occurs. What

characteristics of the SDM processes involving the TMT allow them to occupy this predominant position and to be effective?

The concept that an organization's strategic choices were made by an "elite" group was established long before Hambrick and Mason advanced their conceptual framework. Miles and Snow (1978) build on the concept of the dominant coalition (Cyert and March, 1963) by defining it as a group of decision-makers who shape the organization's environment, assign strategic responsibilities and resources to sub-units, set the tone for environmental scanning, and adapt strategic responses to the constraints imposed by past and present strategy, structure and performance. Very clearly the SDM activity of the dominant coalition is intended to support their leadership role.

2.341 *Internal Communication Processes*

Smith & Smith et. al. (1994) note that process variables had been left out of earlier studies because it may have been difficult to obtain them from senior managers. Yet, their research revealed that team process explained much of the variability in outcomes that demography left unexplained. In fact they were able to empirically show that while team demography has both direct and indirect effects on organization performance, team process had a direct impact on performance. This led them to assert that, " the relationships between team demography, team process and organizational performance are not as straightforward or as simple as scholars have previously believed." (pp.428)

While reviewing the research into executive diversity, Miller, Burke and Glick (1998) noted that the results were inconsistent in respect to whether this diversity had a positive or negative effect on the amount of communication, effectiveness of decision making and organization outcomes. As one possible explanation, they suggest that the mediating effects of process variables have not been examined in most studies of executive diversity and organizational outcomes. Communication and collaboration between team members and the existence of cohesion within the team are clearly significant TMT variables related to internal processes. Smith and Smith et. al. identify informality of communication, communication frequency and social integration as key process variables interacting in a TMT environment where team heterogeneity, team tenure and team size were significant demographic variables.

The notion that an organization will perform poorly when the TMT fails to operate as a coherent, collaborative information processing and decision-making unit is advanced in two Hambrick articles. (1994,1995). He asserts that top management should strive for behavioural integration, " the degree to which the group engages in mutual and collective interaction." He identifies that often, in contrast, the TMT is not a team but a group of senior executives pursuing their own agendas, with very little collaboration or communication. "Fragmentation" can be caused by organization success, but may leave the former team unable to respond effectively to strategic challenges. Hambrick, in these later works, identifies that there is a set of centrifugal forces that gradually breaks down the cohesion of the TMT. (Most significant were organization size, domain breadth, business strategy, organizational slack and environmental dynamism.). It seems reasonable to conclude that if the TMT is prone to "breakdown" when these forces are at play, then maintaining effective internal processes is a major need if they are to lead an organization through successful strategy development and implementation.

Other researchers have supported the key role of the TMT in various stages of the strategic management process. In concluding their research on decision making processes, Papadakis et.al. (1998) refute the argument that management only plays a secondary role in such processes. "So contrary to the allegations on the significance of environmental determinants, management seems to play an important role."(pp.136) Their research identifies that certain characteristics of the CEO, (risk propensity, education and tenure) and TMT aggressiveness are important determinants of decision process determinants including rule formalization, financial reporting, hierarchical-decentralization, and lateral communication.

2.342 *External Communication Processes*

Top management does not function in a vacuum. They are neither isolated as a team within their own firm or as part of an organization that is remote from its industry or marketplace. The "external environment" and the forces that it brings to bear on the TMT are an integral part of strategy development and implementation models.

Much of the early work in the strategy field focused on the interaction of strategy and environment. One school of researchers had suggested that the

environment was the overwhelming determinant of strategy and that managers had little influence on it. (See for example Hall (1977)). Although this view has been generally discounted, it is evident from the structure of the strategic decision models reviewed above that environmental factors remain powerful influences on both the strategy processes and TMT members.

The external environment is both a source of strategic opportunity to be exploited and threats to be mitigated. Subsequently, the external relationships of TMT members, within and outside their industry, have the potential to significantly influence both strategic choices and performance. Information and perceptions of the external environment are critical to allow TMT members to make effective strategic choices. Senior managers invariably gather a lot of that data themselves through contacts they have built up over long periods of time. Geletkanyez and Hambrick (1997) made two observations based on a review of literature used to establish the theoretical base for a longitudinal study of external TMT ties in the computer industry. First, external ties serve as conduits for information that shape managerial views of the environment and contribute to the set of alternatives from which strategic choices are made. Secondly, they also serve as conduits for social influence that promote the diffusion of views and practices across firms.

Their research studies the effect of two sets of external ties on strategy development and organization performance. Links within the same industry were found to contribute to a condition defined as strategic conformity, where the organization's strategy tends to very similar to the central themes of strategy for the industry at large. Conversely extra-industry ties bring a totally different perspective to the organization. This contributes to diversity of beliefs and knowledge amongst TMT members and also results in innovation and different strategic responses. The extra-industry ties tend to pull the organization away from strategic conformity.

These two sets of ties can have specific and complementary impacts. Reaching similar conclusions to Eisenhardt (1989), the research confirmed that strategic conformity had a positive impact on organization performance in uncertain environments. As might be expected, the combination of strategic deviance and strong TMT extra-industry ties did result in higher performance, whereas the combination of strategic conformity and intra-industry ties only demonstrated weak support for performance.

While the impact of external ties appears to vary, depending on the organizations strategic posture and / or the industry in which it operates, it is clear that these relationships have an important role in how TMTs make strategic decisions and implement them. Later in this review, research will be summarized that indicates that middle managers can play an important part in ensuring that TMT members get access to the environmental information they require. (See for example, Floyd and Wooldridge, 1994, and Liedtka, 2000)

2.343 *Conflict, Consensus and Strategic Dissonance*

Decision quality, successful implementation and organization performance are heavily influenced by what appears to be a TMT paradox. Organization success is linked to the ability of the TMT to act as a team, communicate a consistent picture of corporate strategy, and demonstrate a shared commitment to its implementation. Yet, if the interactions of the TMT are characterized by easily obtained consensus, little or no disagreement and no debating of strategic alternatives, it is highly likely that their decisions will be of poor quality and that there will be very little commitment to action.

As Eisenhardt, Kahwajy and Bourgeois (1997:43) assert, " Conflict is not only likely within TMTs, it is usually valuable." Without constructive conflict about alternative strategic directions, effective strategic choice is unlikely. These authors suggest that conflict may contribute to positive organization performance because TMTs that engage in thorough and creative discussions are likely to have a richer understanding of the strategic issues. Implementation is enhanced because the TMT members who have engaged in conflict are likely to understand the strategic choice and what it takes to achieve it.

Amason (1996) states that decision quality, consensus among TMT members, and affective acceptance by TMT members, are all needed to sustain high performance. However, he notes that cognitive conflict during SDM appears to contribute to decision quality. Again, the contesting of diverse perspectives is thought to result in superior decisions to which TMT members have a greater implementation commitment.

Both groups of researchers acknowledge that the challenge is to avoid creating dysfunctional conflict. This tends to be emotional, interpersonally focused and foster an environment within the TMT that will destroy consensus, positive

relations between members and threaten decision quality. Establishing diversity, encouraging "role-playing" by TMT members and frequent meetings / opportunities for interaction are common themes for creating positive conflict.

While positive conflict will contribute to increased decision quality, it appears that consensus may also be a critical element for ensuring that the TMT can successfully implement a decision. Consensus has been defined as "the extent to which managers...share similar perceptions of strategic priorities" and "shared understanding" (Bowman & Ambrosini, 1997:244) and much more than simple agreement or compliance to the decision. Amason (1996) extends the definition to understanding and commitment. However, both studies do little to provide a definitive role for consensus in the strategic management process. Bowman and Ambrosini observed that consensus amongst the TMT was invariably present when they were implementing a positive strategy but noted that the results of their own study only support a weak link between consensus and performance. By utilizing a research methodology that assessed perceptions of strategic priorities in an organization, they asserted that "the results offer only a qualified support for the consensus-performance relationship, but they do not provide overwhelming evidence for the benefits of consensus". (pp.252)

Another study that set out to prove a positive relationship between TMT consensus, TMT homogeneity, and performance, totally failed to gain any support from the study's results. West and Schwenk (1996) reported they were "resounding non-findings". Perhaps the most significant element of their work was that they were unable to replicate the results of previous researchers. They were left to conclude that dependent variables were inadequately measured leaving the true relationship between independent variables and firm performance unknown.

Strategic dissonance would appear to be a force that tends to "destroy" a prior strategic decision, occurring when strategic intent and strategic action are no longer in alignment. Burgelman and Grove (1996) suggest that in extremely dynamic industries it is inevitable that strategic action will lead or lag strategic intent. However, rather than creating disarray in an organization's strategy, the authors identify that this actually creates an opportunity for re-birth and a new beginning. They note that dynamic organizations encounter "strategic inflection points" where there is a need for new strategy. An organization's success rides on the ability of management to recognize these critical points and respond to them.

"Strategic recognition" is a critical skill of top management in a highly dynamic organization. They must try to anticipate evolving inflection points by recognizing divergence between espoused corporate strategy and actions being taken by managers. After suggesting such a point has been reached they must facilitate debate and encourage the development of new and sometimes radically different strategies.

Together, strategic dissonance, strategic inflection points and strategic recognition are tools that allow companies to manage major transformations brought about by unpredictable change. TMT members are key to the effective use of these tools. They must ensure that effective information is available inside the organization to allow an accurate assessment of external competitive environments. In addition to asking awkward questions themselves they must encourage constructive dissent. Emotional fortitude to accept the need for major strategic change and to encourage others to follow is essential. Finally, faced with the traumatic change that inflection points represent, can TMT members develop a picture of the industry and the company after the new strategy has taken effect. It is others at the middle and operating levels of the organization that will wait for this insight. (See for example Dutton and Ashford, et.al., 1997)

2.344 *Managerial Discretion*

The ability of TMTs to shape strategy and to influence performance outcomes will depend on the freedom they are afforded.

Finkelstein and Hambrick (1990) looked at the relationship between strategic conformity, strategic persistence and organization performance in the context of managerial tenure. They focused on the ability of discretion to moderate the relationship between tenure and organization outcomes. The authors define managerial discretion as "a means of accounting for the differing levels of constraint facing different top management groups." Where discretion is low, the TMT role is limited. When it is high, managers can shape the organization, and as a result managerial characteristics will impact organization outcomes.

Quoting from their own previous work, (1987) the authors note that discretion is determined by three sets of forces. It is influenced by the degree to which the environment allows variety and change, the organization considers multiple alternative actions and allows the TMT to formulate and implement them,

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and individual TMT members are free to envision and create alternate courses of action.

The research confirmed the importance of TMT tenure as a key construct. Long tenure teams were risk adverse, engaged in little strategic experimentation and pursued strategic initiatives in line with industry trends. These teams also achieved performance outcomes that were close to industry averages. In contrast, short-tenured teams deviated significantly from industry norms with respect to strategies and performance. The authors' hypotheses with respect to the role of managerial discretion in strengthening the impact of TMT tenure on strategies and performance were strongly supported. It was also found that in high discretion industries, such as the computer industry, managers really mattered .In contrast, in low discretion industries, such as natural gas, the TMT had very little bearing on organizational outcomes. Similarly, in organization that afforded their TMT freedom, there was a direct relationship between tenure and outcomes such as strategic persistence and conformity. In more restrictive organizations, generally larger with little slack, there was no link between managerial characteristics and outcomes.

Managerial discretion is clearly a useful concept in accounting for differences in strategic decisions and organization outcomes that are caused by some organizations affording TMT members more opportunity to make an impact than others.

2.345 *Organization Structure*

Classical theory, per Chandler et.al. (1962), is emphatic that structure should follow strategy. This view was supported by Miles and Snow (1978) who characterized "organizational adjustments", the combination of structural and process changes, as a primary strategic tool used by organizations. In particular, the more dynamic and growth oriented of organizations, which they labeled Prospectors, tended to use these adjustments frequently as a strategic tool. (pp.223) However, once a structure is in place it seems logical to suggest that it will influence an organization's decision process and subsequently its strategy.

As a premise for his review of the impact of key structural elements on strategic processes, Fredrickson (1986:281) argues that "the characteristics of the firm's strategic decision-making process are affected by the overall dominant

structure." His work focuses on three dimensions of structure; centralization, formalization and complexity. In respect to centralization he proposes that the strategic decision process will be controlled by the TMT, features consistent strategic action towards relatively stable strategic goals, and has relatively high integration of decisions. In the case of formalization, the process is initiated when variables monitored by the formal system encounter difficulties. Actions result from standardized organization processes and focus on remedial goals and incremental change, and decision integration is intermediate. Organizations that tend towards complexity make it more likely that the signals that should initiate strategic decision-making will be ignored. In a complex organization environment strategic action will result from internal political bargaining and feature incremental change directed towards unit rather than organization goals. Low decision integration is an expected outcome of the complexity.

Fredrickson observes that the three dimensions pose different limitations on the comprehensiveness of the strategic decision process. The TMT's cognitive limitations, detail design features of the standardized processes and managers' parochial perceptions are linked respectively to centralization, formalization and complexity.

If these three dimensions predominate in organizations, then Frederickson's (1986:294) conclusion that "a balanced view of the strategy /structure relationship must acknowledge that the strategic decision process and its outcomes can be facilitated, constrained, or simply shaped by structure's direct effects". While the classical view accepts that structure is a tool to implement strategy, this stance would see structure as either a positive or negative force influencing the effectiveness of both strategy formulation and implementation.

2.4 Strategy Implementation

2.41 *Introduction*

The foregoing has shown that many characteristics, forces and elements that come into play during the strategic decision process may influence organization performance. However, the immediate product of the SDM process is the formulated strategy or strategic plan. While much can be done to improve the quality, relevance and acceptance of that plan, it is only of value if it can be translated into action and results. There is consensus amongst strategic researchers that the transition from strategy formulation to implementation can be very difficult. As Burgelman and Grove (1996:21) noted, " Seeing, imagining, sensing the new shape of the company is only one step. Getting there requires more wrenching action." They suggest that strategic plans, which identify strategic intent, are abstract and afford managers too much flexibility. Implementation requires focused strategic action. The need for dedicating as much TMT effort and attention to implementation as tends to be addressed to formulation was stressed by Hrebiniak (1992) in his review of the dynamics of global strategy implementation. He suggested that the greatest possibility of successful company performance occurs when both strategy formulation and implementation are taken seriously and ample resources are devoted to each task.

2.42 *The role of the TMT in strategy implementation: styles and tactics.*

In many organizations the early development of strategic management featured TMTs spending days of effort, supported by staff functions, to prepare excellent strategic plans. When the results were not left to gather dust on an executive shelf, the plans became an edict from on high to the staff who were expected to implement them. Yet, invariably very little happened. Mintzberg (1994:284) refers to a 10% success rate as optimistic.

A critical aspect in making the transition from developed strategy to strategy implementation, across the organization at large, is the level of direct involvement of the TMT. Nutt (1989) notes that implementation short cuts and tactics, which minimized their involvement, were key causes of failure. In a similar light Hrebiniak (1992) emphasizes that the commitment and support of top

management is critical to successful strategy implementation. The CEO in particular can provide an example to follow by actively communicating with and supporting those charged with implementing strategy. It is significant in the model developed by Hart (1992), discussed above, that the three modes of strategy making that individually have a positive impact on performance all feature significant interaction between TMT members and other organization members.

Both Nutt and Hrebiniak also identify that the manager must deal with resistance that is created by the political and cultural systems of the organization. (For a more detailed description and analysis of "defensive routines" which may underlie this phenomenon, see Argyris (1985) discussed below) Taking steps to ensure support, cooperation and compliance with strategy is a key TMT role.

How managers bring about the communication, involvement, commitment and participation, identified above, is situational and contingent. Nutt (1989,1993,1995) identifies that there are distinct patterns of implementation tactics that managers respond to particular circumstances. He initially (Nutt, 1989) defines these as intervention, persuasion, participation, and edict. Intervention occurs when the manager adopts a stance as a change agent in order to help the implementers see the benefit of the strategic initiative and facilitate the development of a plan. (Similar to the "process consultation school", Schein (1964) et. al.) In contrast, persuasion features extensive "selling" of the strategic plan by experts and / or consultants, who were involved in its creation, with tacit support (form) the manager. Participation involves the manager delegating the structuring of the implementation plan to a selected group of employees. The manager generally sets the boundaries for action but then leaves the group free to design (there) own tactics, Edict occurs when managers opt for power over process. Providing formal directives may be appropriate when the strategic direction has high organization priority.

Empirical results from this study showed that while intervention was the tactic most often appropriate and successful, managers tended towards approaches which were more expedient and generally less successful, such as persuasion and edict. The author suggests this shows that senior managers have a tendency to devote too little time to implementation and that they prefer low involvement approaches.

While his later studies refine the concepts of strategic processes and tactics, there is considerable overlap.

Four process models are defined in his 1993 work. Idea process features solution ideas imposed on the formulation process by the decision-maker. Issue processes support analysis that results in options being introduced into the decision process. Objective-Directed processes use specific and general targets to guide development. Reframing Processes require the decision-maker to carefully justify actions by proposing solutions or identifying problems that need responses[1]. Intervention tactics, noted above, support this approach to decision-making.

It is worthy of note that the "Transactional Representation of Decision Making" model outlined in this study requires significant involvement of a "support team" throughout all stages of the strategic process. (Nutt, 1993:229-230 and Fig.1) Regardless of the process / tactic style used, the involvement of others in providing advice, ideas, options and decision input was a common theme. It is in the re-framing style that this integration is its greatest. Not surprisingly, decisions made in this style had the highest probability of success.

Nutt's 1995 work, where he attempts to match implementation style with approaches available to them, defines these approaches as accommodation, bargaining, incentives, and argumentation. He notes that both incentives and argumentation attempt to coax stakeholders, the former using rewards to entice acceptance and the later sells the ideas. Accommodation and bargaining both seek compromise. Reflection and adaptation are the means by which accommodation identifies and manages potential conflict with minimal participation. In contrast, bargaining seeks compromise by involving all the stakeholders.

Utilizing a Myers-Briggs Type Indicator (MBTI) Nutt postulated four styles that managers could use for implementation. Tuner, where the managers prefer reflection and adaptation and would use an accommodation approach because success was likely, resistance low and action ethical. Influencer, where the manager will regulate and control with minimal people contact and prefer to use the incentives approach for implementation. Broker, where managers promote compromise by creating forums for people to openly discuss their positions and will prefer a bargaining approach. Persuader, where the manager attempts to appeal to reason and values and will use an argumentation approach.

Using a case simulation approximately 160 senior managers were assessed for their MBTI / implementation style and asked to participate in the simulation by rating the chances of success of each approach and the prospect of resistance. The findings that emerged from this study, combined with those noted above, may have profound implications for the study of the TMT 's role in implementation. First, it confirmed that top managers have very different beliefs about which approach should be used to implement a strategic plan. Secondly, regardless of implementation approach chosen, the more senior of TMT members are likely to be less optimistic about chances for implementation success and tend to anticipate greater resistance.

Overall, an accommodating approach seems to be viewed positively by all levels of the organization. This would suggest that TMT members, when dealing with other organization actors, might want to use this approach. The same is true of bargaining, which Nutt's results identified as being less favoured by TMT members but accepted by middle managers and staff.

It is clear that matching the implementation approach to the situation increased chances of success. The results of all three studies suggest that TMT members should be aware of their implementation preferences and the implications of these on implementation situations. They should be willing to abandon approaches, such as argumentation, that are prone to failure.

Waldersee and Sheather (1996) hypothesized and found support for the proposition that the nature and content of the strategy that TMTs are implementing will influence the implementation styles that are used. This at odds with the personality based foundation in Nutt's third study cited above. However, it is intuitively appealing that the manner in which a TMT might implement a conservative strategy, such as maintaining lowest cost production, will differ from its actions in the case of an aggressive strategy which might focus on an assault on a competitor's home market.

Utilizing case simulations, managers were asked to assess the leadership approach to change and planned functional involvement. Seven styles were proposed; Command through exercise of power and control; Secure control over organizational resources; Communicate and persuade by appealing to reason or emotions; Study the history of the organization; Bargain through economic

exchange; Form joint decision making teams; Establish pilot projects. Locus of control, risk aversion and background were control variables.

The results of the study did identify that managers intended to use very different strategies when faced with entrepreneurial or conservative strategies. In the case of entrepreneurial strategy, persuasion, pilot projects, joint decision making, study of the organization and restructuring were key. In contrast, conservative strategy stimulated command, control, bargaining, involvement of line and union staff, and focus on finance and monitoring. In addition to supporting the proposition that strategy type does have an impact on managerial selection of implementation action, the authors asserted that managers do have the capability to recognize differences between strategies and their implications for implementation. The stark differentiation between the collaborative / involved approach to the entrepreneurial strategy and the autocratic tone taken towards the conservative strategy appears inconsistent with prior research. The authors do acknowledge that the cases used epitomized the most commonly encountered strategic situations. As a result, they may have triggered cognitive scripts that were clearly embedded in the subject managers' minds, and caused an exaggerated response.

2.43 *Structure and Process: Strategic Levers for the TMT*

While the researchers cited above have focused their work on strategic processes and the strategic styles adopted by TMT members, others have recognized that two paths are available to initiate implementation. Processes, both organizational and individual, and frameworks, both structures and organization systems, may come into play.

Hambrick and Cannella, Jr. (1989) while acknowledging that resources, structure, rewards and people were amongst the substantive implementation levers available to the organization, exhorted TMT members to "sell, sell, sell the strategy to everyone who matters-upward, downward, across, and outward." (pp.278). Although this implicitly recognizes that the TMT requires the support and involvement of other organization actors, it more significantly shows how top mangers can use established communication channels to forward the strategic agenda.

Skivington and Daft (1991) propose a business strategy implementation model where framework and process are dual modalities. Framework is divided

into structure and systems. Structure reflects division of labour through two variables. Formalization, rules and procedures that guide behaviour and Specialization, identifying task differentiation. Systems are the formal means by which top managers may operationalize strategy. This includes budgets, information and operating systems. In contrast, organization processes "pertain to actions or events that are episodic and attributable to individuals rather than to systemic organization wide activities." (pp.49) Interactions, one element of the process side of the model includes both formal and informal communication. The authors also introduce the concept of "idea champions", individuals who take responsibility for promoting strategic initiatives they believe in. They suggest that they are generally senior managers that work to create shared meaning and consensus towards the new strategy. In the review of the middle management perspective, which follows, it is apparent that the champion role is a relevant and highly effective role for middle managers to assume. (Burgelman and Grove, 1996, Wooldridge and Floyd, 1990) Sanctions constitute the other element of the process dimension and include managerial replacement, monetary and symbolic rewards.

The most significant result that emerged from this study was that managers utilized both levers, framework and process, often simultaneously. Formal approaches to structure and systems did not predominate. Interactive approaches were used frequently on more complex strategic tasks and Championing emerged as the most frequently used approach across all strategic situations.

After reinforcing the structural view of implementation levers, within the two elements of organization structure and control systems, Noble (1999) asserts that interpersonal processes are an important part of strategy implementation. He identifies strategic consensus, autonomous strategic behaviour, (to be reviewed below), diffusion or "trickle down" process, leadership and implementation style, and communication / interaction processes as the major process elements available to the organization.

Simons (1994) proposed four major levers that new top managers could use to control business strategy. These were belief systems, boundary systems, diagnostic control systems, and interactive control systems. Consistent with the discussion above, he found that the two sets of management control systems were used extensively by new managers. Specifically they were used to (i) Overcome organizational inertia, (ii) Communicate the substance of their new agenda, (iii)

Structure implementation timetables and targets, (iv) Ensure continuing attention through incentives and (v) Focus organizational learning on the strategic uncertainties with their vision of the future. (pp.186) The research also reinforced the contingency perspectives noted above. Managers in turnaround situations tended to utilize a command orientation until the new strategy was installed and functioning. Even then interaction was top-down. It generally took a year before a truly interactive style was in effect. In contrast, top managers inheriting evolutionary strategic situations were often able to adopt a fully interactive approach shortly after assuming control.

2.44 *Middle Management and Implementation*

Strategy implementation has been described by some researchers as a "great theoretical leap of faith", a black hole and grand casual assumption. This writer has noted before, the tendency of other researchers focusing on strategy formulation or TMT traits to virtually ignore what happens between development of the strategy and organization performance outcomes. As a result, little research exists on the specific role and behaviour of the TMT in implementation. (See also Smith and Kofron (1996) for a broader discussion of the implementation research gap.) However, in recent years there has been more attention paid to the role of other organization actors in both strategy formulation and implementation. The foundation of the integrated framework for strategy making proposed by Hart (1992) was that the TMT and other organization members engage in various levels and types of interaction. In the case of the three productive modes the ultimate ends of the decision process were effective implementation and high performance.

If TMTs are indeed handing off much of the implementation task to others, then who is assuming the key role of "linking pin" between the TMT and the organization members at large? In defining the requirements of shared organization leadership, Harrison and Pelletier (1997) note emphatically that, "the commitment of middle managers is essential to ensure that the results of strategy correspond with its objectives. Middle managers provide the critical link between the strategic decisions made at the top of the organization and the implementation of such decisions in the operational areas." (pp.303) Floyd and Wooldridge (1992) asserted that the bulk of unsuccessful strategy implementation is caused by middle and

operating level managers who are either ill informed or not supportive of the chosen strategy.

Similarly, Papadakis, Lioukas and Chambers (1998) note that while testing their integrated decision model they found that performance, as expressed by return on assets, was positively related to hierarchical decentralization. They note that increased participation, particularly by middle managers, is likely to have a positive impact on performance because of two sets of causes. First, involvement of more people in decision making (and subsequent implementation) is likely to increase consensus, common understanding, shared effort and smooth implementation. Secondly, middle managers because they are tuned in to the threats and opportunities in their own environments are able to act as information monitors. This is a critical role as TMT members are stretched to the limit in contemporary business environments and yet are expected to anticipate strategic issues.

Floyd and Wooldridge (1992) had also identified the value of the monitoring and communication roles. They identified that the best performing firms had middle managers who assertively communicated alternative strategies to top management. Later (1994) they confirmed that middle managers' strategic roles remained crucial to organization success. Building upon the notion that long-term economic performance is related to the organization's ability to build new capabilities, the authors defined four possible roles for middle managers in establishing dynamic capability. These were; Championing Strategic Alternatives; Synthesizing Information; Facilitating Adaptability; Implementing Deliberate Strategy. It is interesting to note that the first three roles could be characterized as "up against the organization" as they imply the ability to bend, adapt and even refute elements of the TMT established strategy. Such behaviour was thought to give rise to an implementation gap in some organizations. However, in organizations looking to sustain innovative growth in turbulent environments they are fundamental linking behaviours. (Floyd and Wooldridge's framework of middle management roles is reviewed more thoroughly in the section dealing with the middle management perspective as well as in the Research Methodology chapter.) Figures 12, 13 and 14 provide a graphical representation of the model.

Figure 12.

Middle Management Involvement's Four Strategic Roles

		Divergent	Integrative
		Nature of Contribution	

		Divergent	Integrative
Upward Influence	Lateral	Championing	Synthesizing
Downward Influence		Facilitating	Implementing

Source: Woolridge and Floyd, "Middle Management Involvement in Strategy
and Its Association with Strategic Type A Research Note," *Strategic Management
Journal,* 1992, 13, 153-167

Figure 13.

Simplified Model of How the Four Roles Combine (Floyd & Wooldrige, 1996)
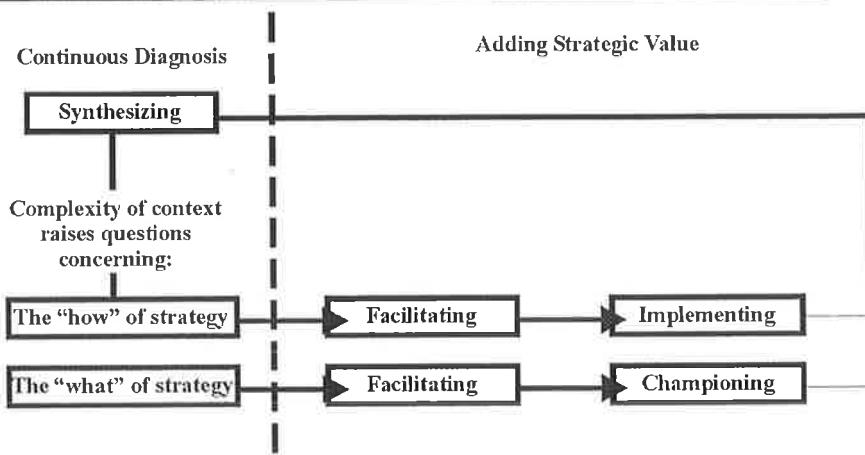
In the case of the process model, represented in Figure 14, two fundamental
elements are evident. First, the middle managers' strategic roles act as a bridge and
mediating factor between top management's deliberate strategic intent and
emergent strategy surfaced from the operating level and external environments.
(Mintzberg, 1994) Secondly, the model opens the window to the complex nature of
the interactions between the four middle management strategic roles. Floyd and
Wooldridge (1996:107) note that 'There is a great deal of interdependence among
the four roles, and effective middle managers move from one to the next in an
almost seamless series of activities."

Figure 14.

Middle Management's Strategic Roles and the Strategic Process
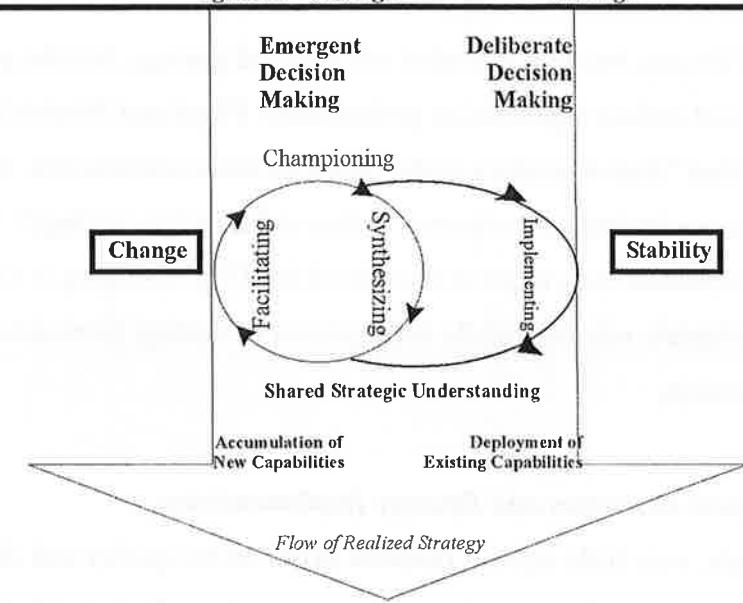
The existence of an "implementation gap" is widely reported in both academic and business literature. (Smith and Kofron (1996), Floyd and Wooldridge (1992)) Simply stated it identifies that there is a divergence between intended strategy and realized implementation of that strategy. Often middle management has been blamed for this breakdown. However, the fault usually lies at the top. Hamel and Prahalad (1996:63) note that middle managers are often tossed five or six strategic initiative "balls" at once by top management. They are then expected to both juggle them and to figure out which are priorities for action. The failure does not lie with the middle manager, but with the top manager who failed to sort out and communicate strategic priorities.

In the classical view of strategy, top management is responsible for formulating the strategy and middle and functional management for implementing it. But this does not work in contemporary organization reality. Even in stable environments, priorities and tactics need adjusting. Floyd and Wooldridge (1994:51) note that " implementation is best characterized as an ongoing series of interventions which can only be partly anticipated in TMT plans and which adjust strategic directions to suit emergent needs."

The dichotomy between views of functional managers (middle managers) and the top was acknowledged in Bowman and Ambrosini's (1997) work on the consensus -performance relationship. They noted that it was likely that the view of

strategic priorities held by the TMT would align with the intended strategy and that perceptions of functional managers would be a more true reflection of the realized strategy. This gap, between intended and realized strategy, has the potential to both minimize and deflect organization performance. Floyd and Wooldridge (1992A: 37) assert that "shared strategic understandings and commitments, not top-down delegation, are the basis for coherent action and effective strategy". Defining this strategic consensus they argue is the role of the TMT. Bringing it about requires a full and complete role for middle management in strategy formulation and implementation.

2.45 *Human Resources and Strategy Implementation*

Surprisingly, very little explicit research exists on the quality and abilities of human resources in the strategic management system. Perhaps Hrebiniak (1992) expressed it best when he noted that he had made no formal reference to human resources because qualified people are central to implementation success. Despite a significant amount of discussion in the popular business press about the contribution of skilled managers to organization performance, there is little to define the impact of strategic human resources initiatives on strategy implementation.

The work of Martell, Gupta and Carroll (1996) is an attempt to identify what human resource management practices, applied to the TMT, have a direct or indirect positive impact on performance. H.R practices in staffing, training, performance appraisal and compensation were assessed for their impact on firm performance. In all, 16 variables were examined. In the staffing area three types of selection criteria were associated with superior performance. The attributes contained in the measures of personal characteristics, managerial skills and executive tenure led the authors to suggest that the TMT should be staffed with aggressive, creative individuals capable of dealing with uncertainty, with strong traditional management skills and organizational experience in order to achieve strong firm performance. Only two of six compensation practices yielded a positive relationship. It appears that TMT members, in top performing organizations, relate to market driven considerations rather than internal equity to establish compensation. Also, while top performing organizations are invariably compensation market leaders a strong causal relation between compensation and

performance does not exist. In contrast, four of five variables related to performance appraisal were positively related to performance suggesting a key role for both formal and informal appraisal mechanisms in supporting strategy implementation. The authors suggest that top performing firms take managerial evaluation seriously and make greater use of the results for such uses as merit increases, development and staffing. As a result, TMT members will be more sensitive to what kinds of performance the firm wants emphasized. In the case of training the results, which showed no universally positive relationship between training and organization performance, were confounding to the researchers. They had expected that levels of training participation were an indicator of corporate commitment to long term upgrading of managerial skills and excellence. This in turn would translate into improved organization performance.

2.46 *Thinking as a Foundation to Doing: How Cognitive Processes Support or Hinder Implementation*

Hurst, Rush and White (1989) argue that the classical strategic decision models are not wrong, just incomplete. They suggest that, in a traditional SDM process, intuition, insight and feelings are suppressed, and that conformity and the status quo preservation are enhanced. In order to succeed in the future, organizations "capable of creating tomorrow's businesses while maintaining today's will require a diverse group of senior managers, able to perceive the world differently, yet able to participate in a process that transcends these different views to enact a complex organizational reality". (pp.89) Their creative management model (CM) is based on four cognitive levels; Intuition, Feeling, Thinking, and Sensing. Classical decision models, based only on the latter two levels are unable to provide insight into how organizations develop radically new approaches to doing business and how they learn. Two distinguishing characteristics of the CM model are worthy of note. First, rationality is brought about by the reflections and logic developed after action has occurred. That is, strategy is "formulated" after implementation. (This is not particularly far removed from Mintzberg's concept of realized strategy.) Secondly, because there is no need for pre-justification, radical innovation can proceed swiftly without the structured thought and traditions that accompany classical models.

The CM model has a number of implications for the structuring and conduct of the TMT. It proposes that individuals will have distinct cognitive preferences and that a blend is necessary for the TMT to function effectively. Deliberate efforts should be made to ensure that cognitive diversity is present in the team. All four modes should be present. Secondly, the approach to communication and relationships in the TMT are based on a formal power hierarchy in the classical strategic process. In contrast, the CM model stresses rich multi-routed communication patterns and relationships in a "neural network". This allows the broad distribution of influence within the TMT and beyond that is needed for effective organization renewal.

Almost a decade before Hurst, Rush and White's model of creative management, Chris Argyris had identified the potential impacts of cognitive orientations on strategy implementation. In the introduction to his definitive work, "Strategy, Change and Defensive Routines" (1985:3) he provides a warning for those who believe that just involving individuals in developing and implementing strategy will necessarily lower resistance or bring about commitment. "Defensive routines are probably the most important cause of failure in the implementation of sound strategy regardless of the approach used."

Argyris's concept of defensive routines is premised on the belief that implementing new strategic initiatives often implies significant change and are perceived as threatening to many who are asked to implement them. It is this threat that triggers pre-programmed behaviours known as defensive routines. Both for the individual and the organization they pose a unique paradox. They are an attempt to block the pain that results from threatening change. However, they subsequently block out the ability to learn and correct the causes of the pain.

Defensive routines are triggered by a number of circumstances; Not agreeing with the strategy but not wanting to be seen resisting; unreasonable expectations of a superior; a desire to be supportive of peers; or a desire to bypass a challenging interpersonal or inter-organizational situation. What makes them so nefarious is that they are triggered automatically, not discussed openly and stimulate conformity "to the way it's always been."

Argyris later (1989) blamed these routines for organizations designing in errors into the implementation process which cause it to fail. This is particularly true in the strategy implementation process. Companies often develop routines for

implementing strategy that tend to be taken for granted. To question them is to invite criticism. Subsequently, the implementation process may decay but no one will have the nerve to question it. Organizational defensive routines become part of the formal infrastructure. They are "any policy, practice or action which prevents the people involved from being embarrassed or threatened, and, at the same time, prevents them from learning how to reduce the causes of embarrassment or threat."(Pp.7)

Dealing with these routines is a challenge. It must start with attempting to deduce what is wrong with the implementation design. It is critical not to place blame with either the TMT or lower levels. The problem is rarely one of right or wrong. Interrupting the defensive loops that make the situation worse is the prime challenge. The TMT must take a lead by providing an example for others to follow. They should also have the opportunity to learn that, under certain conditions, they should expect resistance and lack of commitment stimulated by defensive routines. (See Guth and MacMillan, 1986 for an investigation of middle management resistance)

The cognitive orientation of both TMT members and other strategic actors can clearly impact organization performance in both a positive and negative way. Unexplained shortfalls in organization performance, resulting from implementation, may have a hidden cause in the minds of the organization leaders or implementers.

2.5 Strategy Implementation / Formulation Dichotomy

Early evolution of strategic planning / strategic management established a dichotomy between the two major elements of formulation and implementation. Development of the strategy was undertaken by an elite few and passed down for implementation by the organization (See the Command mode in Hart's model above.) Neither process impinged on the other, information flow was uni-directional, and very little interaction occurred between the actors at each level. While the strategic management process has become much more sophisticated, more inclusive and less autocratic, the separation of formulation and implementation remains.

Quinn (1980) mounted the first significant challenge to this dichotomy. In addition to advancing the concept of logical incrementalism as a basis for strategic change, he proposed that integration of strategy formulation and implementation was the central art of strategic management. Mintzberg (1990), in his critique of the Design School, attributed the dichotomy to this group. He attempted to demonstrate the absurdity of the separation by challenging the assumptions on which it was based. For example, "Information can be aggregated and transmitted up the hierarchy without significant loss or distortion. (pp.185) is an assumption that often fails, destroying carefully formulated strategies in the process. In "The Rise and Fall of Strategic Planning." (1994:285) Mintzberg proposes that although formulation can be ill conceived and implementation badly executed, real blame cannot be placed on either. The real difficulty lies in the very separation of the two elements. "It is the disassociation of thinking from acting that lies closer to the problem."

It has been noted above how Khatri (1994) proposed a model of the strategic process that attempts to integrate the formulation / implementation dichotomy as a fundamental construct. Four operational variables were used to assess the level of dichotomy or integration. Involvement of field staff in strategic decisions, provided an index of integration (or lack of separation) of formulation and implementation. Senior managers knowledge of lower level activities, may indicate the extent of their involvement in implementing strategic decisions .The more knowledgeable about lower level activities TMT members are, the less separated formulation and implementation are likely to be. The number of revisions to an original strategy may suggest the importance that senior managers attach to information received from the field. A large number of revisions would imply greater integration of formulation and implementation. Lastly, flexibility in decision making was likely to be present when there was not a formal separation of the two elements. An experiential, interactive approach to strategy will result in formulation and implementation being more interconnected.

The most notable finding of the quantitative portion of Khatri's research was that, "no matter what the nature of the business environment, a dichotomization of formulation and implementation functions in the strategic process has an adverse effect on organizational performance."(1994:94) This is particularly significant as it indicates that separation of formulation and

implementation will have a detrimental effect on performance even in a stable environment where it had been assumed that such separation would not affect the flow of data across an organization hierarchy.

Khatri concluded that the challenge was to find more effective ways to achieve integration between the formulation and implementation functions in strategy making. His work and the literature cited above and in the next section of this review, led this researcher to the position that integrating the strategic efforts of the top and middle levels of the organization will contribute significantly to overcoming the dichotomy.

Hewlett-Packard provides a striking example of how it is possible to develop a dynamic strategy environment where formulation and implementation are not only integrated but also inseparable! (Feurer, Chaharbaghi, and Wargin (1995)) The H-P situation accepts as its premise that, "In the face of a high level of uncertainty and change there is a need for a dynamic approach in which strategy formulation and implementation are carried out simultaneously."(pp.4) This is achieved by the use of strategic processes that provide complete decentralization, total involvement, and both level and functional integration. Two observations from the authors are particularly revealing; "it is apparent that corporate strategy is not centrally formulated but reflects the culmination of aligned business level strategies that have been formulated throughout the organization."(pp11) "H-P achieves dynamic strategy formulation and implementation by making every individual a strategy owner."(pp.15) The company does have a structured review system, to ensure that strategies are constantly reviewed, changed, communicated and aligned, and there is still separation of roles and focus across levels. However, the organization has achieved a seamless and iterative process in which no dichotomy exists between strategy formulation and implementation.

2.51 *The "Implementation Gap"*

Despite the acceptance of the differences between intended and realized strategy, acknowledgment of the existence of intervening processes between the TMT 's role in strategic decision making and organization outcomes, and the delineation of the critical roles of other organization actors in implementation, a gap in our understanding still exists. Smith and Kofron (1996) who outlined the "leap of faith" that many researchers engage in, from TMT characteristic(s) direct to

outcome, have suggested that the definition and operationalization of effective strategy implementation is the first priority for future research agendas. They believe that there is a need to define measures that differentiate how well implementation was carried out (effectiveness) from the results achieved through effective implementation (superior organization performance).

The inadequacy of economic measures of performance (ROA, ROI, earnings, sales, etc.) to fully measure the results of strategic processes has been raised by a number of researchers. Rajagopalan, Rasheed, and Datta (1993) called for a broader conceptualization of outcomes of process effectiveness that would incorporate both process related measures as well as economic performance related measures. They note, "that given the variety of organizational and environmental influences on economic performance, cause-effect relationships are much harder to assess in the case of economic outcomes than in the case of process outcomes."(pp.380) Khatri (1994) makes a similar observation with respect to the weakness of accounting or financial measures. He argues that in addition to economic measures, operational measures such as product quality, quality of customer service, and operating efficiency should be used to reflect overall performance. This has an interesting implication for implementation as the control over operational measures invariably rests with the organization members at large, not the TMT.

Researchers suggest that strategy implementation is the missing link between strategy and performance. Dean and Sharfman, (1996) noted how they had originally defined quality of implementation as a control variable but the strength and pervasiveness of its relationship with strategic decision making effectiveness suggested further research. Pettigrew (1992:178) asserts, " the black box in TMT research contains the assumed but unobserved mediating process which are purported to link demographic characteristics with organizational outcomes." He argues that further "close-up" research is necessary to define the processes that result in successful implementation, and link formulation, SDM, the key actors, implementation and performance.

2.6 Transition to a Middle Management Perspective

Throughout the discussion of the strategic decision-making process and the review of the TMT roles in the strategic management process, undertaken above, it is apparent that the influence of other actors is significant. (Papadakis, et.al 1998, Simon, 1993, Mintzberg, et. al. 1998) In particular, the concept of the middle manager acting as a pivotal link or intermediary between top management and the operating level emerges from a number of studies cited. (Mintzberg, 1994, Hart, 1992, Anderson, 2000). As the next section of this literature review will demonstrate, this concept did not emerge as a recent phenomenon amongst either practitioners or academics. Yet it would appear that a wide range of valid indicators were suppressed or over-ridden by the attention paid to the TMT perspective on strategy formulation and implementation.

In attempting to explain this situation, Floyd and Wooldridge (2000) noted that the work of some researchers, such as Bower (1970) and Kanter (1982), had provided valuable data and indicative interpretations but had failed to provide a theoretical foundation to move on from. However, and importantly, they identify three fundamental assumptions that obscure middle management's importance in strategic process research and literature. "Strategic choice results from a process of hierarchical ordering"; "Information from the environment and organization is encountered by top management, who process it and formulate the organization's strategy" and "Once the choice has been made, top management decisions lead directly to organization outcomes. (pp.22) One can see the relationship between these key assumptions and concepts that are embedded in the TMT theory and research discussed previously.

Ironically, it fell to the architect of the Upper Echelons theory to be one of those who raised cautions about the absolute application of these assumptions to strategic process research. Hambrick, (1994), referring to the research which had linked TMT characteristics with group characteristics, (Wiersema and Bantel, 1992, Frederickson and Iaquinto, 1989) noted that very little attention had been paid to the mechanisms that actually caused organization outcomes. Values, thought processes and relationships were lost in a "black box". In respect to one construct, group composition, he notes that "connecting group composition,

processes, structure, and incentives-all elements of the (TMT) group-would seem important for achieving a complete understanding of the effects of the top groups on performance." (pp.186) Implicitly, Hambrick was acknowledging the need to move beyond the TMT to gain a full picture of the strategic management process in action.

Pettrigrew's (1992) harsh indictment of the state of TMT research also highlighted the existence of the "black box", created by "arms length" methodology and assumed but unobserved mediating processes. He highlights "the limitations of studying managerial elites several paces from the actors, processes and issues facing those elites." (Pp.117)

Lawrence (1997) provides a more theoretical counterpoint against these assumptions by postulating that the "black box" is actually populated by an array of weak variables, intervening constructs and potentially non-linear or uni-directional relationships. At the very least, the notion that there is a direct relationship between TMT action and organization performance is open to question.

The desire of researchers to find straightforward and simplistic relationships between the TMT and organization performance, may be a reflection of commonly held views of the TMTs' place in the organization's strategic process. Analyze input –develop alternatives-make strategic decisions – communicate strategy – oversee development of action plans and budgets – monitor implementation – initiate revisions as required. Although somewhat reduced to basic steps, this process path is reflected in many organization's strategic reality. That strong leadership at the top can set direction, in isolation of other organization actors, communicate that direction from the top down and cause there to be positive organization outcomes, is still strongly reflected in research. After a meta review of strategic leadership literature, Nahavandi and Malekzadeh, 1993, conclude emphatically, and reflect in a research model (pp.414), that leadership style reflects directly on strategy formulation and many leaders need to exercise control over implementation. Eisenhardt and Zbaracki, 1992, summarizing the "political" model of SDM, suggest that because varying levels of conflict over choices occur within organizations, "strategic decision making is ultimately political in the sense that powerful people get what they want". The authors suggest that this often achieved through political tactics such as coalition building.

More significantly they advanced the notion that both research and real world experience supported this assertion over data that supported the existence of classical bounded rationality approaches.

In the conclusion of their classic treatise on strategic change, Pettigrew and Whipp (1991) make two fundamental observations that bear directly on the emerging perspective. First, "...strategic change is an organization wide activity, with all that implies for the commercial, social and political nature of the firm. It is not the preserve of the executive suite, even though so many behave as if it were. Attempts to write about strategy ignoring such considerations is rather like those management groups who go off-site for a meeting in the hope of ridding themselves of their preconceptions as easily as barring interruptions of the telephone-it simply does not reflect reality."(pp.276) Based on longitudinal case studies of large UK. companies, the authors' research clearly showed that in successful organizations the strategic processes were broad based, integrated and inclusive. Secondly, " The evidence from this study points to the need to avoid undue reliance on a single source of leadership. Instead, creation of leaders at different levels in the organization is more helpful in managing the process of change." (pp. 291) This was particularly true in respect to the strategic turnaround at Peugeot Talbot, UK., where "multiple levers at multiple levels" required a wide and deep involvement in strategic leadership. (pp.166)

Floyd and Wooldridge, (2000), suggest that much of the research that supported the TMT perspective was premised on the traditional views of organization structure and process, accepted the "Upper Echelons" orientation, tended to be oriented towards rational- analytical strategic processes, and was premised on one or more of the assumptions identified above.

As has already been cited, a number of researchers had raised the spectrum of a significant role for middle managers prior to 1983. However, it was the work of two pairs of researchers towards establishing strategy typologies and the case work of an organization ecologist that were to provide a firm theoretical foundation for future study.

In both the research of Bourgeois and Brodwin, (1984) and Mintzberg and Waters, (1985) models are proposed that balance TMT involvement with middle management involvement. The former's Crescive model suggests that "strategies are rarely created by single individuals; usually they are developed by

groups..."(pp.259). These groups form across levels. The authors identified this as a cause of a blurring of the distinction between strategy formulation and implementation and strategic responsibilities across levels. Shared involvement between TMT and middle managers was also reflected in two of the eight strategy types proposed by Mintzberg and Waters, the Process and Consensus approaches. The Process type features control of the strategy process by the top, but strategy content or details is left to other organization actors. In contrast, Consensus type reflects most closely the concept of emergent strategic process. Strategic convergence does not result from any previous input or direction from management. Rather, "the consensus strategy grows out of the mutual adjustment among different actors as they learn from each other and from their spontaneous responses to the environment and thereby find a common, and probably unexpected, pattern that works for them." (pp.267)

While conceptual in nature, both of these studies clearly identified the potential for higher levels of middle management involvement in strategy. The work also raised the possibility that classical separation of strategy development and implementation could be ended if other organization actors assumed an integrating or linking role. Mintzberg and Waters additionally imply that it is possible for middle managers to both stimulate and support an emergent strategic process in the organization.

Burgelman's comprehensive, qualitative casework at Intel, USA, was to prove that this was the case in the real world. (1983) While observing that top management still controlled the decision-making processes that shaped the organization's strategic context, he uncovered that middle managers could determine that context through influence. His work discovered the concept of "autonomous strategic behaviour", or internal entrepreneurial activity by operating level actors. Simply stated, operating staff undertake new directions or variations of existing strategy using existing resources. As a result, new ideas, opportunities, and approaches emerge way below the TMT. The emerging strategic context "reflects the efforts of middle level mangers to link autonomous strategic behaviours at the product / market level into the Corporation's concept of strategy." (pp.66).

Rather than the traditional concept of middle managers as supervisors and monitors of implementation, the three studies cited above characterize them as

learners, strategic links, influencing agents, and potentially strategic leaders. In the section that follows, research over 32 years is referenced to explore the strategic roles of middle managers in more detail. A quote from Floyd and Wooldridge, (2000:39) provides an apt springboard into this review. "Middle level managers are uniquely positioned between top management priorities and operating realities."

2.7 A Middle Management Perspective on the Strategic Management Process.

The foregoing review of Strategic Decision-Making processes and outcomes, TMT roles and actions, and the Strategy Implementation processes and outcomes have shown that middle mangers clearly play a much greater role than that of the organization's (director) of implementation. The data and ideas that they input are critical to SDM effectiveness, TMT members must cultivate relationship with the middle or face isolation from the operating-level, and the power of the middle manager to bend or "veto' deliberate strategy is well documented. This section of the review will build upon the evidence revealed previously to identify the breadth of the strategic roles of middle managers and mid-level professionals and suggest their strategic importance to the organization.

One fundamental assertion, underlying the concept of the middle manager as a wide ranging influential strategic actor, is that they possess the capability and are afforded the opportunity to perform a portfolio of roles in the strategic process. Although some researchers still argue that the prime emphasis should be placed on senior corporate managers, (Chakravarthy and Doz, 1992) a significant body of research is pointing towards the vital and complementary roles that the middle managers can play.

After noting that their position in the middle of the organization required them to be sensitive towards imperfections in strategy, Bower (1970:297) asserts "They are the only men in the organization who are in a position to judge whether issues are being considered in the proper context." Three decades later, Floyd and Wooldridge (2000) supported the validity of this view by noting that middle managers and mid-level professionals have greater access to information in their

linking roles. Subsequently, they are able to develop a good understanding of the organization's strategic context and may possess insights not available to the TMT. Suggesting that the middle has broad awareness and capability in the organization's strategic process does not mitigate the significance of the TMT. Rather, it changes the classical relationship. In the following, it will be apparent that the links across the top, middle and operating levels are not necessarily premised on strategy having been initiated at the top. Floyd and Wooldridge, (2000:41) observe that a lack of top-down direction does not eliminate the top from the strategic equation. "Top managers do, of course, have a conception of strategy, but-and this is the important point-so do middle- and operating level actors."

This researcher discovered that a rich literature exists and is evolving with respect to middle managers strategic capability and influence. A significant portion of it is summarized in Table 3."Middle Management Roles in the Strategic Management Process", at the end of this section at pages 101-113. The references contained within it will be incorporated into much of the material that follows. However, a synthesis of the results / conclusions presented identifies a series of strategic behaviours / actions that middle managers can and do adopt. Table 4. "Middle Management Roles: Research Highlights" highlights these roles and researchers who have elucidated them.

In the next section seven composite roles of middle managers, and the research that supports them, are reviewed. These roles are expressed in generic terms, in order to capture and synthesize key elements of research that spans the roles.

2.71 *Agent of Strategic Change*

Classical approaches to management and strategic process, reviewed previously, support the view that significant organization / strategic change emanates from the TMT. That implies that without top-down direction and initiative there will be no major strategic changes developed or implemented. However, leading researchers have shown this position to be less than absolute.

In her seminal book, "The Change Masters", Kanter (1982) asserts that middle managers are a key source of strategic change and should be encouraged to develop and surface new strategic initiatives. She identified that because middle managers "have their fingers on the pulse of the operations, they can conceive,

suggest and set in motion new ideas the (top) managers may not have thought of." (pp.96)

Pettigrew and Whipp (1991) go beyond the idea that middle managers can be involved in strategic change to imply that their participation must occur for their to be any hope of effective strategic change in large corporate organizations. The authors' view that leadership must be dispersed across the organization is quoted in the previous section. Further, they suggest that because leading strategic change requires "dealing with interwoven problems and dilemmas at all levels of the organization" (pp.281) leadership and involvement at all levels is important. This is further accentuated by the fact that strategic and operational changes are occurring within a framework that features intentional and emergent processes at all levels. Organization success is dependent on people at all levels having the skills and knowledge to contribute strategically.

In a similar vein, Huff, Huff and Thomas, (1992), reinforce the position that major changes in organizational strategy cannot occur solely through top management initiative. They suggest that top management's role is to support linkages across the organization hierarchy and respond to stresses generated by other levels. In particular, they conclude that organizational units isolated from the top will (and should?) initiate new strategic directions before they are formally adopted by top management. The conclusion that middle managers will, and should, initiate strategic initiatives autonomously was strongly endorsed by Burgelman. (1994) Evolving from his research into how Intel made the strategic transition from a company focused on semi-conductor memory to a microcomputer company, were findings that pointed directly to the strategic behaviour of middle managers. Specifically, he found that middle managers were able to play a much greater role in influencing change in business direction than had been thought possible. In fact, they were responsible for the new initiatives that caused Intel to change direction. Burgelman credits the middle managers' links to both internal and external networks as giving them broader awareness of environmental / competitive shifts. Top managers must encourage middle managers to challenge the status quo and involve them in changing strategy in response to environmental signals.

Table 4. MIDDLE MANAGEMENT STRATEGIC ROLES; RESEARCH HIGHLIGHTS

Strategic Roles	Source Reference	Key Observations
Strategic Change Agent	Kanter, 1982	Middle managers are able to conceive and implement new ideas that TMT members may not have thought of.
	Pettigrew and Whipp, 1991	Strategic change is an organization wide activity, not exclusively an executive activity. It requires linking together people at all levels. Leadership and involvement at all levels is important
	Burgelman, 1994	Middle managers are able to play a much greater role in influencing change in business direction than originally thought possible.
Developing Strategy	Van Cauwenbergh and Cool, 1982	Middle management must be capable of integrating proposals from the front line with strategic guidelines from the top.
	Thakur, 1998	Middle managers are able and desire to make a significant contribution to strategy making. Top management must be prepared to facilitate this involvement.
	Floyd and Wooldridge, 2000	Because of their unique position between top management priorities and operating realities, middle managers are able to frame and advance new strategic initiatives.
Integrating the Top and Operating Levels.	Floyd and Lane, 2000	Middle management is the hub through which most strategic information flows. Middle managers require technical and organization knowledge to relate to the operating level. A good understanding of the organization's strategy and political context are required to work with the TMT.
	Nonaka, 1988	Middle managers are in a position to create organization information. By managing upward flow to the TMT and down to the operating level, they are able to lead strategic renewal.

Strategic Roles	Source Reference	Key Observations
	Bartlett and Goshal, 1993	In respect to the integrating process in organizations, it is the middle manager, acting as a horizontal information broker and integrator of capabilities, that is in the best place to link top management to the front line.
Upward Influence	Dutton and Ashford, 1993	Middle managers have the capability to raise strategic issues. Top management must facilitate the process and be prepared to respond to the information and ideas.
	Floyd and Wooldridge, 1992A	Upward strategic influence through Championing Alternatives and Synthesizing Information may have more of an impact on organization performance than implementation activity.
	Mintzberg and Waters, 1985.	Organizations should attempt to blend elements of deliberate (TMT's strategic intent) and emergent (from the organization at large?) strategy making. Middle mangers have the potential to act as gatekeepers and facilitators of strategic communication.
	Burgelman, 1991 and Burgelman and Grove, 1996.	Middle managers play a key role in surfacing, promoting, and implementing autonomous strategic initiatives, which have the ability to shape new strategic directions.
Broad Involvement	Guth and MacMillan, 1986	Middle managers are motivated more by self-interest than by organizational interest unless they coincide.
	Westley, 1990	Middle managers want to be included in the strategic conversations of the organization. The degree to which they are included or excluded will determine their orientation towards the organization and its strategic process.
	Schilit and Paine, 1987	Middle managers can and wish to play a part in the identification of strategic issues and the generation of alternatives. They must be afforded the freedom to communicate broadly, generate solutions independently, and obtain the resources necessary

Strategic Roles	Source Reference	Key Observations
		to implement effectively.
	Liedtka, 2000	Inclusion of middle mangers in strategy making results in better environmental sensitivity, customer intelligence, commitment and wider dissemination of ideas.
Effective Implementation	Floyd and Wooldridge, 1996, 1997	Implementation is a series of interventions designed to align organization action with strategic intent. Facilitating Adaptability and Implementing Deliberate Strategy are roles that focus on working with the operating level.
	Bourgeois and Brodwin, 1984	Crescive Model of strategy implementation integrated strategy formulation and implementation into an organization wide activity. The creativity, knowledge and energy of an organization can only be tapped when the middle and operating levels are involved in the strategic process.
Strategy Making Modes (TMT – middle collaboration)	Mintzberg and Waters, 1985	Process and consensus models both feature involvement by both the TMT and other actors. In the former strategic details and implementation are left to the middle and operating levels. Consensus features wide spread development of and dialogue about strategic issues, evolving into a coherent strategy.
	Hart, 1992	Identified a spectrum of five strategy making modes featuring varying degrees of top management involvement and other actor participation. At one end almost total top control is characterized as the Command mode, at the other the Generative mode borders on organization anarchy. The Symbolic, Rational, and Transactive modes feature varying levels of TMT and other actor involvement and process leadership.

Strategic Roles	Source Reference	Key Observations
Impact on Performance	Hart, 1991 and Hart and Banbury, 1994	Strategy modes that incorporate TMT leadership with participation of other actors will result in superior organization performance. To achieve the highest level of performance firms should develop the capability to use all five modes flexibly.

2.72 Developing Strategy

Contrary to the view that strategy formulation is the exclusive purview of top management, (see Pettigrew and Whipp, 1991: 276), there is extensive research quoted in the literature that identifies that middle managers are significant players in the formulation process. As noted previously, Van Cauwenbergh and Cool (1982) boldly proposed that middle managers occupy the central position in the strategy formulation process. They were amongst the first researchers to advance two propositions that are fundamental to an acceptance of the middle manager's key strategic roles. First, they identify that middle managers face the challenging role of integrating input from both top management and operating line management. Balancing strategic directions against the operational / technical change ideas requires them to operate in both the TMT and operating level spheres of influence. What Bower (1970) identified as resulting from the unique position of mid-level general managers, the ability to act as a pivotal facilitator, is reflected throughout the contemporary literature that will be reviewed in the following section.

The ability of middle managers to work across levels strategically is the second key element that Van Cauwenbergh and Cool (1982) outline. Strategic management is an organization wide activity. Internal and external linkages allow middle managers to gather and share information and ideas in a way that brings order and balance to the strategy formulation process. Specifically their "judgement, opinion, values, and evaluation affect the strategy formulation and implementation in a decisive way." (pp.253)

Although Burgleman (1983) concluded that top management usually controls the choices that determine the structural context of strategy making in an

organization, his reflection on his research into internal corporate venturing highlighted the critical role played by middle managers in the strategy formulation process. Developing a model which helped to place the concept of autonomous strategic behaviour in the strategy / structure context, he observed, as noted above, that the determination of the organization's strategic context is a reflection of the efforts of middle managers to link these behaviours at the operating level to corporate strategy. Posing a dichotomous view to the classical "structure follows strategy" concept (Chandler, 1962), Burgelman suggests that if an organization has the right structures and processes in place middle managers can integrate the results of the autonomous strategic behaviour into the organization wide strategy process. Here again, the middle manager's key role results from the ability to link across the organization hierarchy.

Bourgeois and Brodwin, (1984) in their classic foundation to the study of strategy implementation, proposed a Crescive model as one in which strategy formulation and implementation were integrated activities. As noted previously, strategic decisions resulted from group processes and required the distinctions between levels to be dropped or at least blurred. The authors asserted that in order to gain broad involvement from all levels it was necessary to share responsibility and authority beyond the ranks of top management. In a manner that was the portent of the concept of emergent strategy, at a time when the exalted role of the CEO was in vogue, the authors suggest that commitment may outweigh accountability as a cause of implementation effectiveness. Also, that initiatives championed from below may have more positive impact on performance than those directed from a TMT driven perspective. Fundamental to this model is the notion that the knowledge, creativity, and energy that a large organization must tap into will only be accessible when the strategic process engages both middle management and the operating level.

Thakur (1998) also places responsibility on top management to facilitate middle management's involvement in strategy formulation. He states that they need to provide "forums where the reflective monitoring of strategic events is possible." (pp.738). In contrast to the once a year process that involves the TMT, Thakur found in his empirical study that middle managers are involved in strategy making as a day to day activity. As a result, they are able to see the big corporate picture and should be able to participate in formulation of the corporate strategy.

The ability to communicate across levels, gather information both internally and externally and subsequently develop the big picture view, is the third key aspect of middle level participation in strategy formulation.

The combination of the ability to go across levels, to integrate the aspirations and directions of operating and top management levels, and to develop a big picture view provide the underpinnings for the position stated by Floyd and Wooldridge (2000) in the introduction to this section. Supporting their concept of "unique positioning" for middle managers, they identify that linkages to the external environment through exposure to customers, suppliers and peers are strong. Also, social interactions give middle managers a great deal of influence both upwardly and downward.

2.73 *Integrating the top and operating levels: A pivotal role*

We have already seen that in order for middle managers to influence strategy at the corporate level they must have the capability to link across levels. The manner in which the organization facilitates this interaction determines its effectiveness. It requires a combination of competencies, processes and structures to support this effort.

Van Cauwenbergh and Cool (1982:252) observe that in order to undertake the integrating task, middle managers require a "sufficient technical competence" to deal with the operating level and "high skills in interpersonal or political behaviour" to work with the TMT. This observation was elaborated by Floyd and Lane (2000) who identified that "in order to interact with operating management, middle managers must maintain a degree of technical competence and a detailed understanding of the organization's capabilities. To interact with top management, they must also understand the organization's goals and competitive strategy, as well as the political context in which these are developed." (pp.164)

The concept of ensuring that middle managers have the skills and knowledge required for their key strategic roles was reinforced by Nonaka (1988). Recognizing that the middle manager occupied the core position in the strategic process, he noted that executive selection could make or break organizational effectiveness. This is because in Nonaka's concept of "middle-up-down management" the middle manager manages the flow of information, acts an agent of strategic renewal, and plays the key integrating role by balancing TMT

visionary expectations and implementation needs of the operating level. "Middle management occupies a key position, it is equipped with the ability to combine strategic macro (context-free) information and hands-on micro (context-specific) information. In other words, middle management is in a position to forge the organizational link between deductive and inductive management." (Pp.15)

In both this article and a subsequent review of longitudinal case studies at Honda and Matsushita (Nonaka, 1991) he concluded that middle managers must be afforded the freedom to communicate broadly, generate solutions independently and acquire the resources to initiate action. In particular, the ability to broker tacit knowledge from all levels and translate it into explicit information that can be shaped into new products and technologies is a major middle management role. Although the structures, staffing and information flows associated with the development of Honda's City Car might have appeared chaotic, the middle manager brought order, communication and creativity. "As team leaders, middle managers are at the intersection of the vertical and horizontal flows of information in the company. They serve as a bridge between the visionary ideas of the top and the often chaotic market reality of those on the front line of the business. By creating middle level business and product concepts, middle managers mediate between "what is" and "what should be" (Emergent strategy?) They remake reality according to the company's vision." (Nonaka, 1991:107)

The willingness of Japanese senior management to allow middle and operating levels to both develop and execute emergent strategy was seen in Pascale's (1984) review of the entry of Honda motorcycles into the USA. During a now legendary strategic transition, Honda shifted emphasis from large motorcycles targeted on enthusiasts to small and medium cycles for the sport / family market. However, this change did not reflect new direction resulting from top down strategic process. Rather, it was the strategic action of operating level and mid level managers that radically transformed Honda US. Pascale notes that " What saved (Honda) was the cumulative impact of "little brains" in the form of salesman and dealers and production workers, all contributing incrementally to the quality and market position......middle and upper management saw their primary task as guiding and orchestrating this input from below rather than steering the organization from above along a predetermined strategic course. " (pp.64) The ability to move information and ideas from the bottom to the top and back again in

continuous dialogue is the basis for ongoing strategic adaptation and successful performance. The pivotal role of the middle manager is critical to the functioning of such processes.

Bartlett and Ghoshal (1993) described this key role as "horizontal integration" within the three level / process management model they defined. The middle manager becomes responsible for linking skills, knowledge and resources to and from the operating level that drives the entrepreneurial processes and top management who develop and share the overall vision. In respect to the strategic renewal processes of the organization, "creating and maintaining credibility in the system, is a key requirement and these tasks define the main responsibilities of middle management." (pp.39) To be effective in the activities of horizontal information broker and capability integrator, middle management must be able to secure access to the top and be positioned in such a way that they are respected by their peers and those at the operating level. Visible support from the top, including active involvement in all strategic activities, appears to be key.

If one accepts that valuable organization knowledge exists throughout the organization, then the pivotal linking activity of middle level managers and professionals becomes the conduit by which it is surfaced and shared. While this research focuses on strategic processes and their impact on performance, the emerging literature in organization knowledge transfer reinforces much of what is covered in this section. (See in particular, Floyd and Wooldridge, 2000: 67-86) As noted above with Nonaka, the literature points towards the concept of organization knowledge as the critical input into strategic renewal.

2.74 *Upward Influence: Moving Ideas to Top Management; Issue Selling / Synthesizing Information / Championing Alternatives; Facilitating deliberate and emergent strategy / autonomous strategic initiatives.*

Issue selling is the approach that middle managers use most often to influence top management to initiate, modify or abandon strategic initiatives. Dutton and Ashford, and collaborators (1993, 1997 and 2001) indicate that issue selling can be a powerful tool to increase an organization's strategic effectiveness. They indicate that there are positive consequences to exposing top management to views that are much closer to the day-to-day operations of the firm. In fact they have the

capability to fundamentally affect the strategic direction of the firm if they are able to provide critical information to decision makers at the top of the organization.

However, the authors also reveal the very significant obligations that rest on the TMT to facilitate the issue selling of the middle. Middle managers will undertake upward issue selling only when they perceive the top management team as supportive and open. This entails the TMT's willingness to listen, creation of a positive organization climate and the removal of barriers that prevent the surfacing of potentially strategic issues. Also, it means that middle managers must be given access to corporate strategic information and plans, and be encouraged to develop the skills to raise issues and participate in the strategic dialogue. In the conclusion to their 1997 study, Dutton, et.al. note "middle managers have crude but coherent screens for reading the organizational context. Like sailors who had to navigate rough seas long before the age of advanced technical instruments, these managers read the wind before engaging in an action, issue selling that requires their time, effort and political capital." (pp.422) In both this study and their 2001 work, they conclude that top management must take steps to enable middle management participation in issue selling. " The best top managers will not only be mindful about the cultures they create, the enabling structures they put into place, and the resources they allocate, but will also be mindful about how these factors contribute to patterns of change that occur over time." (2001:732) Without this, the organization may be robbed of a vital source of internal change initiatives. Lastly, the process must acknowledge that middle managers will bring their own self-interest and the needs of their units to the table. Top management awareness and sensitivity to these elements is essential. "Many middle managers raise issues because there is a link between top management's recognition and legitimization of the issues and middle managers' ability to achieve their unit's or their personal goals." (Dutton and Ashford., 1993:402)

It is clear that if top management ensures that there are strategic processes which allow middle level actors to surface issues and ideas, the middle manager is more likely to perceive that they are actively involved in the strategic process. While a number of researchers, (Bower, 1970, Burgelman, 1983, Mintzberg and Waters, 1985) had identified that the strategic process went beyond the scope of the TMT and involved the middle, Wooldridge and Floyd (1990, Floyd and Wooldridge 1992A, 1997) were amongst the first to address two key issues. Does

this involvement matter? That is, if real does the involvement have a measurable impact on organization performance? Secondly, if involvement impacts performance, what are the processes and roles that facilitate this outcome? In their initial study the authors found that involvement was a much more powerful determinant of organization performance than consensus or understanding of the strategy. Also, and equally significant, they confirmed that the highest potential for a middle manager to influence performance was through participation in strategy formulation as opposed to implementation activities. In their conceptual process model, Figure 15 " Middle Management Involvement in Strategy and Organization Performance" Path A appeared to predominate. It also implied that relationships with the TMT were likely to be key to the middle managers effectiveness. In this respect the authors present three relevant conclusions. "First, the involvement of middle managers should be substantive rather than nominal." "Second, top management should clearly define the strategic context."" Finally, top management should expect middle-level managers to question strategic decisions."(1990:240) These conclusions delineate a "new" relationship which seeks to balance top management purpose with middle management initiative. The authors recognized the need to define the roles that would allow this to occur.

Figure 15.

Middle Management Involvement in Strategy and Organizational Performance

Source: Woolridge and Floyd, "The Strategy Process, Middle Management Involvement, and Organizational Performance," *Strategic Management Journal,*1990, 11, 231-241.

Floyd and Wooldridge (1992A) developed the conceptual model, and validated it empirically, that sought to define the major strategic roles performed by middle managers and identify how they influenced overall organization

performance. Figure 12, graphically represents the typology of middle management involvement in strategy developed by Floyd and Wooldridge.

Figure 12.

Middle Management Involvement's Four Strategic Roles

		Nature of Contribution	
		Divergent	Integrative
Upward Influence	Lateral	Championing	Synthesizing
Downward Influence		Facilitating	Implementing

Source: Woolridge and Floyd, "Middle Management Involvement in Strategy and Its Association with Strategic Type A Research Note," *Strategic Management Journal,*1992, 13, 153-167

The behavioural axis represents the reality of the middle managers role as linking top and operating level involvement in strategic process by exercising both upward and downward influence. The cognitive axis reflects the spectrum of strategic activity, ranging from the need for divergence to facilitate strategic change to the coordination of different activities into a coherent integrated direction.

Four key strategic roles emerged. Two, championing alternatives and synthesizing information gave middle managers upward influence. Facilitating adaptability and implementing deliberate strategy provided downward influence directed primarily at the operating level.

The four roles were defined as follows: (1992A:155)

Championing Alternatives: The persistent and persuasive communication of strategic options to upper management.

Synthesizing Information: The interpretation and evaluation of information.

Facilitating Adaptability: Fostering flexible organization arrangements.

Implementing Deliberate Strategy: Managerial interventions that align organizational action with strategic intentions.

Figures 13 and 14, adapted from Floyd and Wooldridge (1996), show how the four roles combine with each other to create strategic value and how they provide the middle manager the capability to function across the strategic management process. In the Figure 14, the opportunity for the middle manager to

become aware of, and nurture, new ideas that may shape emergent strategy at the operating level, is clearly reflected.

Figure 13.

Simplified Model of How the Four Roles Combine (Floyd & Wooldrige, 1996)

Continuous Diagnosis | Adding Strategic Value

Synthesizing

Complexity of context raises questions concerning:

The "how" of strategy → Facilitating → Implementing

The "what" of strategy → Facilitating → Championing
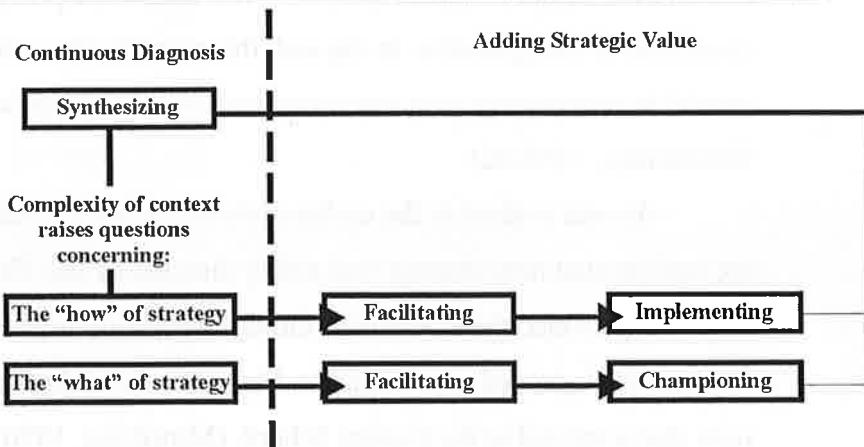
This provides the context for them to act as a champion of alternative strategic initiatives and to be a conduit of key internal and external information to the top management. (Synthesizing Information) As was mentioned above, middle managers' motivation to undertake this is not entirely ultraistic. In addition to providing the valuable link between operating level and the TMT, middle managers often use these roles to promote their own agendas.

Figure 14.

Middle Management's Strategic Roles and the Strategic Process

Emergent Decision Making | Deliberate Decision Making

Championing

Change | Facilitating | Synthesizing | Implementing | Stability

Shared Strategic Understanding

Accumulation of New Capabilities | Deployment of Existing Capabilities

Flow of Realized Strategy

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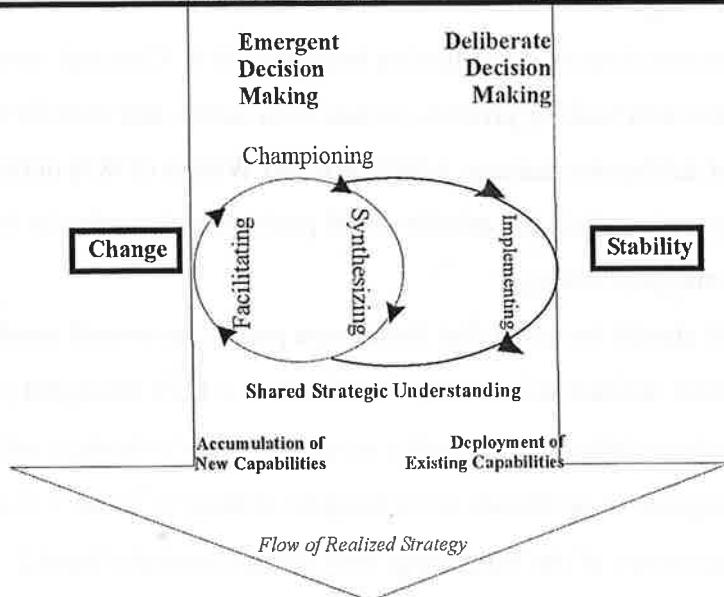
" Middle managers are often able to control or at least influence top management perceptions by framing information in certain ways. They have been called information filters or "uncertainty absorbers", but the process is not necessarily conscious or manipulative. In the end, this role (Synthesizing Information) can be crucial in encouraging cautious top managers to take needed risks." (Floyd and Wooldridge, 1996:42)

As was evident in the earlier review of strategic decision-making processes, the notions that new strategy was solely directed by the TMT and that their direction provided the framework through which strategy was rationally implemented, proved unsustainable. None-the –less, through the work of what is now characterized as the Design School, (Mintzberg, 1990, 1998), the concept that strategy development was a leader lead, analytical process, and that the resultant "intended" or "deliberate" strategy was the basis for the separate activity of strategy implementation, persisted throughout the 1970's and early 1980's.

Both theory development and research began to challenge these perspectives. Prior to his 1985 article delineating strategic types, Mintzberg and collaborators had evolved a definition of strategy as "a pattern in a stream of decisions".(Mintzberg and Waters, 1985:257) This had allowed them to distinguish between intended and realized strategy, that is the difference between what the TMT indicates they want to achieve and what the organization actually delivers. In turn, this allowed them to distinguish between deliberate strategy and emergent strategy. The former is realized as intended, while the later evolves as a coherent pattern despite never having been intended. Classical views of the strategic decision making process, as has been noted, saw middle managers as implementers of deliberate strategy. Mintzberg and Waters (1985) outlined two major strategic types in which the middle could perform major roles in developing and surfacing emergent strategy.

(It should be noted that these were part of an overall model in which strategic types were defined from a fully deliberate to a fully emergent perspective. The authors acknowledge that in reality an organization's strategy will be a blend of varying degrees of deliberate and emergent strategy) (Table 5. Page 115 provides a summary of the Mintzberg and Waters strategic types.)

The "Process Model" represents the middle ground between deliberate and emergent strategy. Although control of strategic process remains with the TMT, development of strategic details and implementation is left to lower levels. It is suggested that this type fits complex organizations faced with unpredictable circumstances. The TMT establishes the parameters that allow other actors needed flexibility. Note how this compares with the rational but high-speed strategic process that Eisenhardt (1989,1992) and collaborators found in the high technology industry.

In contrast, the "Consensus Model" represents the epitome of unintended emergent strategic process. "The (strategic) convergence is not driven by any of the intentions of a central management, or even by prior intentions widely shared among the other actors. It just evolves through the results of a host of individual actions." (pp.267) However, the process is not chaotic. Consensus emerges through an iterative, incremental series of discussions / negotiations and results in an organization-wide, shared strategic direction.This strategy type highlights the opportunity for middle managers to take the initiative in linking actors across the organization and facilitating the communication process.

The need to stimulate and balance both deliberate and emergent strategic processes was reflected in Burgelman's 1991 study of the intra-organizational ecology of strategy making. Based on his evolutionary framework that identifies and differentiates induced and autonomous strategic processes, his research suggested that top management should stimulate and reinforce the existence of both processes. Induced processes, build upon the organization's current strategy and learning, while autonomous initiatives emerge outside the existing strategic and learning boundaries. Burgelman states that whereas induced strategic process is clearly within the domain of top management, autonomous initiatives can originate at all levels. However, "they are most likely to emerge at a level where the managers are directly in contact with new technological developments and changes in market conditions, and have some budgetary discretion. As the organization grows in size they are increasingly likely to emerge at levels below top management...." (Burgelman, 1991:246)

Once again this reinforces the obligations and opportunities for both the top management and the middle level in an organization's strategic process. The TMT must demonstrate commitment to its existing strategy, yet allow input from below.

They must encourage middle managers to experiment with new strategic initiatives and challenge the status quo. Burgelman (1991:256) proposes three factors that will determine the long-term strategic success of the firm. Top management's attention to the balance of induced and autonomous process, the ability of the TMT to maintain strategic intent while stimulating "bottom-up" strategic experimentation and selection, and allowing the internal experimentation and selection to guide strategic reorientation / renewal.

In their joint reflection on Intel's experience, Burgelman and Grove (1996) further explore the strategic value of the balance, or lack thereof, between strategic intent and autonomous strategic action. They suggest that dissonance and dissent should be encouraged not suppressed. This often signals a strategic inflection point when major strategic shifts are in order, and middle managers are usually the first to possess the knowledge that the top requires to respond effectively. In an effort to maintain active strategic debate yet sustain organization alignment, "the culture that works best (involves) top management navigating between letting chaos reign and reigning in chaos". (pp.23)

The ability to utilize the strategic process to surface and gain acceptance for emergent initiatives was highlighted by Floyd and Wooldridge (2000). Echoing the work of Dutton et.al., they note that middle level actors must become aware of the processes, politics and circumstances that guide top management responses to autonomous initiatives. They propose that; "Ratification of emergent initiatives is facilitated when those championing the initiative possess an awareness of the informal norms governing top management decisions." (2000:130)

2.75 *Broad Strategic Involvement*

The extension of classical management theory implied that middle managers would diligently implement the TMT's strategic intentions without question. Operating reality, however, suggested otherwise. Guth and MacMillan's (1986) classic study bluntly defined the consequences of taking for granted or not involving middle managers. They suggested that middle managers are motivated more by their own self-interest than by organization goals. Only when the two coincide will the middle manager exert positive energy towards achieving organization strategies.

Desire for involvement, and the potentially negative risks associated with autonomous middle management action, was also highlighted by Schilit and Paine. (1987) They noted that, " although we generally think of top level managers being the only individuals involved in strategic decisions, middle level managers often do, in fact, have an impact on the nature and outcomes of these decisions." (pp.162) In a similar context to Guth and Macmillan (1986), the authors suggest that middle managers will not blindly follow TMT direction. They will interpret for themselves, engage in coalition building, evaluate the strategic initiatives on the basis of risk / return potential for their own functions and apply their own analysis to situations confronting them.

Westley (1990) identified clearly that middle managers wanted to be included in the strategic conversations of the organization and subsequently influence its future strategic direction. However, she also found that top managers often had a very different view of the role that middle managers could or should undertake versus the expectations middle managers had of themselves. TMT members still tended to cast the middle level in a purely "supporting" role. That is, that middle managers provided information from the bottom for use in the strategic process but were not afforded a chance to influence strategic decisions. (Note how this contrasts with the results of Nonaka (1988), Burgelman (1983, 1994) and others who propose a pivotal role for the middle manager.)

If middle managers are both to be involved and feel involved, what must the organization do? Schilit and Paine (1987) suggest the organization must develop strategic processes that recognize that the middle managers wish to and can play a significant part in the identification of issues and the generation of strategic alternatives. Their research discovered that this will occur at the greatest level during periods of high organizational uncertainty when problem identification is occurring and strategic choices are being made. Guth and MacMillan (1986) draw upon expectancy theory to suggest that middle managers will only exert effort towards implementing organization goals when they believe that they have a good chance of success, their success will contribute to the organization' s success and the organization's goals are compatible with their own. This places a strong imperative on the TMT members to build individual and organizational commitment. The authors conclude " the ability to understand, anticipate and manage processes needed to secure positive and pervasive commitment to strategy

on the part of middle management is a critical general (top) management skill." (pp.325)

The need to create organizational conditions and processes that encourage participation of the middle in strategic conversations is echoed by Westley (1990). She also suggests that it is top management who must take the lead in trying to avoid middle management apathy and unresponsive, which can result from imposed top-down strategic direction. This stance must be embedded in the organization's strategic culture. "Top managers who share with their middle managers the belief that middle managers have a valuable role in the strategic process, or who see strategy as driven by organizational initiative as opposed to market demand, will have an easier time engaging middle managers in conversation than top managers who feel otherwise."(pp.347)

In this and the previous section, the "clash" between the TMT's strategic intentions and direction and the desire of other organization actors to initiate their own strategic actions is a central dynamic. Middle management's pursuit of a voice in the organization's strategic processes creates tension on top management to balance these competing tensions and maximize the contribution of the middle to organization performance. It was the interplay of these two elements, that were characterized as top management intentionality and organizational actor autonomy, that lead Hart (1991) to seek an integrating framework for describing strategy making modes and measuring their impact on organization performance. While the strategy modes are discussed more thoroughly below, Hart's observation that it is important that the organization provides channels and opportunities that will ensure that both top management and other organization actors are afforded the chance to maximize their strategic contributions, is highly relevant to this discussion.

Liedtka (2000) also stresses the value of the interplay between top management and other organization actors to improve the strategic process. She observes that this relationship must be built upon trust, openness and listening and top management's willingness to act as facilitators of strategic thinking across the organization. However, by affording others the inclusion they desire, the strategic process benefits from better environmental and customer intelligence, generates and disseminates widely new ideas, and synthesizes the diverse cognitive

perspectives across the organization. Ultimately, she argues, this results in more effective implementation of strategic change.

Acknowledging the contribution of human resources across all organization levels to the success of the firm from a resource based perspective, Barney (1991) suggests that organizations encourage the development of informal strategy making processes. These will allow other organization actors, particularly middle managers, to take an active role in strategy development and provide a strategic competitive advantage to the organization.

This section shows that an involved middle manager, with good knowledge and understanding of the organization's strategic context, will be committed to synthesizing strategic intelligence from across the organization and developing new strategic alternatives. However, TMT members must ensure that processes are in place and functioning effectively that allow middle managers to develop and implement strategy collaboratively with the top. The alternatives are either passive or active resistance and independent initiation of courses of action that may cause organization chaos.

2.76 *Effective Implementation*

The emphasis that this review has placed on the shaping and facilitating of the middle's role in developing strategy should not blind the reader to the powerful impact that can accrue through the middle managers role in directing and facilitating strategy implementation.

While an intuitive assumption might lead one to believe that upward influencing strategic activities, such as the Championing Alternatives and Synthesizing Information roles described by Floyd and Wooldridge (1992,1996), would have a superior impact on organization performance, empirical research suggests a more complex relationship. First, it appears that downward influence exerted consistently over time results in high performance. (Floyd and Wooldridge, 1997) This suggests that the middle manager may be able to establish and sustain credible relationships with the operating level in order to lead and facilitate implementation of deliberate strategy that has emerged from the formal corporate process. In contrast, it was found that varying levels of upward influence supported high performance. Recognizing that it may not be appropriate for the middle managers to be constantly "in the face" of top management to achieve their ends, a

flexible contingent approach is more effective. Dutton et.al. (1993,1997,2001) stressed that understanding when to begin, and feeling comfortable about, selling issues required "reading the wind" of top management orientation. However, the consistent approach to downward influence does not imply straightforward.

Within the context of the four role model outlined by Floyd and Wooldridge (1992,1996), downward influence occurs by Facilitating Adaptability and through Implementing Deliberate Strategy. In the former, managers work to increase organization flexibility, improve organization learning and increase the organization's strategic response capability. This is typified by their creation of innovative organizational arrangements and through their nurturing of experiments and autonomous initiatives by operators. This places them in a difficult position between the demands of the operating and top levels.

It is in the implementation role that middle managers are really stretched to balance the aspirations of these two levels. Although the classical view of the strategic process has the implementation activity of middle managers limited to controlling activity towards meeting top management goals, the reality of balancing different orientations poses significant challenges. Building on a definition of implementation as " a series of interventions designed to align organizational action with strategic intent", the authors suggest that middle management's implementation role requires a blend of strong leadership and sincere follower-ship. (1996:96-104) In the former they promote understanding and acceptance of the organization's new directions, in the later they solicit contributions, ask questions and coordinate diverse inputs. This allows the development and implementation of a plan that utilizes organization resources most effectively.

TABLE 3. MIDDLE MANAGEMENT ROLES IN THE STRATEGIC MANAGEMENT PROCESS

Study Source	Fundamental Perspective	Key Observations	Implications
Bower (1970)	Middle management performs an integrating role between the needs of the operating units and the corporate direction set by top management.	Bower describes the task of the "man in the middle" as ensuring the consistency between the strategic considerations raised by product - markets sub-units and the long-range program objectives of the corporation. . "The managers in the middle must be sensitive to the inevitable imperfections in the strategy. They are the only men in the organization who are in a position to judge whether issues are being considered in the proper context." [Page 297] "Each manager must be receiving and transmitting information up and down the hierarchy over many levels." [Page 337]	This work clearly showed that the middle manager was undertaking a pivotal linking role between the corporate level of the organization and those initiating and implementing strategic activity. Information and action in respect to strategic definition, action planning and organization structure passes in two directions through the integrating middle manager.
Kanter (1982)	Middle managers are a key source of strategic changes in an organization	"Because middle managers have their fingers on the pulse of the operations, they can also conceive, suggest and set in motion new ideas that managers may not have thought of" [page 96]	Middle managers should be encouraged to develop and surface new strategic initiatives.
Van Cauwenbergh & Cool (1982)	Middle management rather than top management occupies the central position in the strategy formulation process.	During strategy formulation, proposals for technical and operational change arise from front line management. Top management proposes strategic guidelines. Middle management faces the difficult task of integrating the two perspectives. Middle management must be capable of exercising	Strategic management is an organization wide activity. Middle managers play a key role in bringing coherence and balance to the process. Their "judgement, opinion, values, and evaluation affect the strategy formulation and implementation in a decisive way." Organization structures and

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Study Source	Fundamental Perspective	Key Observations	Implications
		technical, political, and interpersonal skills while working in both spheres of influence.	processes need to facilitate this.
Bourgeois & Brodwin (1984)	One of five models of strategy implementation proposed was the Crescive model where the strategy formulation and strategy implementation activities are integrated into one within the organization.	Fundamental to this approach, is the fact that strategic decisions are the result of group activity at all levels of the organization. When the desire is to involve all levels of the organization in strategic development then it is necessary to accept that the distinctions between strategy formulation and strategy implementation, and the levels in which responsibility for these two functions exist will become blurred.	In order to have broad involvement with all levels of management it is necessary to share both responsibility and authority beyond the ranks of the top management in. The knowledge, creativity, and energy that a large organization must tap into will only be accessible when the strategic process engages both middle management and the operating level.
Mintzberg & Waters (1985)	Among strategic types identified in this study were two that featured broad involvement by managers and others who were not part of the Top Management Team. They were identified as the "Process" and "Consensus" models.	The process model represents a middle ground between deliberate and emergent strategies. The process is still very much in control of the top of the organization. However, the development of strategic details and implementation is left purely with those below the top management team. The consensus model provides an example of strategic development without prior direction. In this approach, actors throughout the organization become actively involved in developing a strategic convergence through spontaneous dialogue and initiation of strategic actions. The development of the consensus does not occur through chaotic activity rather an ongoing serious of interactions result in gradual movement towards an organization wide consensus.	Contemporary organization should attempt to blend elements of both deliberate and emergent strategy making into their strategic processes. The potential for middle managers to act as gatekeepers and facilitators of communication exchanges must be enhanced. The challenge is to engage the organization actors in a proactive and broad process with respect to strategy making and implementation.
Guth & MacMillan (1986)	Middle managers are motivated more by their perceived self-interest than by the organizational	When the goal structure and perceptions of middle managers are not in line with that of the of the	Insensitive imposition of strategic direction will be met with resistance and less than stellar

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Study Source	Fundamental Perspective	Key Observations	Implications
	interest unless they coincide.	senior team, the chances that middle managers will view the strategic objectives set at the top as less desirable and with less commitment than expected are high. Also, differences in the information that is available to middle managers vs. their senior peers will result in lowering still further the level of commitment and may result in middle managers openly disagreeing with the strategy. Passive or active behavior can result in the strategic initiatives being distorted or totally thwarted. Expectancy theory suggests that middle managers will exert little effort to strategic implementation when they believe either, they have a low probability of successfully implementing strategy or even when they do succeed the organization's goals will not be realized or, and most notably, achievement of the organization's goals 1s not consistent with their own goals or needs.	implementation. Securing commitment at the individual and organizational level is absolutely critical.
Schilit & Paine (1987)	"Although we generally think of top level managers as being the only individuals involved in strategic decisions, middle level managers often do, in fact, impact on the nature and outcomes of the decisions." [Page 162]	Middle managers were actively engaged in the upward influence, sometimes over extremely long time periods. The greatest degree of such activity took place during periods of the greatest organizational uncertainty. That is, during periods when strategic issues were being identified and when strategic choices were being made.	The organization, in developing its strategic processes, must take into account that middle managers can and wish to play a significant part in the identification of issues and generation of strategic alternatives that is part of the strategy formulation activity. Middle managers will not follow blindly direction from above. They will interpret for themselves, engage in coalition generating activities, evaluate the risk return potential of strategic initiatives from their own functional perspectives and apply their own systematic

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			analysis to the situations confronting them.
Nonaka (1988)	Nonaka advances the concept of "middle-up-down management". In this managerial style the middle manager is the core. "Middle management occupies a key position, it is equipped with the ability to combine strategic macro [context specific] information. In other words, middle management is in a position to forge the organizational link between deductive and inductive management." [Page 15]	Middle managers are in the key position to create organizational information, manage the flow upward to top management and down to the operating level, and behave as key change agents for organization strategic renewal. Middle management plays an integrating role. They must balance the expectations created by top managers' vision with the concrete needs of implementation faced by operating level management. This integrating role is critical to the success of the organization.	Such an approach requires that talented middle managers be afforded the freedom to communicate broadly, generate solutions independently, and be given access to the organizational resources necessary for them to do their jobs.
Nonaka (1991)	(From Honda / Matsushita study of knowledge creation.)	Middle managers synthesized the tacit knowledge of both front line employees and senior executives, made it explicit and incorporated it into new technologies and products	Confirmed the pivotal role of middle managers in the strategic process.
Westley (1990)	Middle managers want to be included in the strategic conversations that are part of the organization's strategic process.	Middle managers have a distinctly different view of what constitutes an appropriate role for them in the strategic process than that held by top management and many management theorists The degree to which middle managers are included or excluded from strategic conversations will determine their orientation towards the organization and their strategic roles. This may range from empowerment to apathy. The orientation of top management towards the middle managers will have a significant impact on the role that middle managers are encouraged to perform and the manner in which top management and middle management engage in the strategic conversations	If an organization wants a middle management group that is responsive and committed to action, then it must create organizational conditions and processes that encourage participation of the middle in strategic conversations.

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Pettigrew & Whipp (1991)	On the basis of analyzing longitudinal qualitative cases, the authors propose a set of characteristics and skills required for strategic change. " Great pains have been taken to show how strategic change is an organization wide activity, with all that implies for the influence of the commercial, social and political character of the firm. It is not the preserve of the executive suite, even though so many behave as if it were." (pp.276)	Leading change involves linking action by people at all levels. Linking strategic and operational change involves both intentional and emergent processes at all levels. Top management must build a climate that is receptive to change, ensure that the organization has the capability to undertake strategic change, and assist all levels to interpret the external / internal signals. Sustaining the energy and focus of strategic change is best done with effective leaders at all levels.	The notion of the "heroic leader" does not fit the reality of organizations undergoing strategic change. Because leading strategic change requires "dealing with interwoven problems and dilemmas at all levels of the organization" (pp.281) leadership and involvement at all levels is important. People at all levels must be afforded the opportunity to develop the skills and acquire the knowledge that will allow them to contribute to strategic change.
Barney (1991)	Human resources, in particular managerial talent, may be a resource by which the organization can sustain competitive advantage.	It is through the informal strategy making process of the organization that the opportunity to gain a competitive advantage. These informal processes are likely to be dominated by middle management participation.	To ensure that the organization gains strategic competitive advantage, encourage the development of informal strategy making processes. Allow other organization actors, particularly middle management, the opportunity to take an active role in informal strategy development.
Huff, J.O. & Huff, A.S. & Thomas (1992)	The authors develop a four-stage model that moves an organization towards organization renewal. A key element of the renewal process is the development and sustaining of "stresses" generated from parts of the organization other than Top Management	The strategic decision process requires linkages to be established between different hierarchical levels of the organization and individuals who may not be aware of the organization stresses that are growing. Organizational units isolated from the top will initiate new strategic directions before they are formally adopted by senior management.	Major changes in the organizational strategy cannot occur solely through top management initiative. The top must be willing to listen to and respond to stresses generated from within the organization.
Bartlett & Ghoshal (1993)	The authors propose a "new" managerial model in which top management is viewed as a group that creates vision and challenges the status quo, middle management acts as horizontal information brokers and integrators of organization capability. Front line management is	"Creating and maintaining credibility and trust in the system, therefore, is a key requirement and these tasks define the main responsibilities of middle management in the renewal process." [Page 39] In respect to the integrating process within	To be effective in the activities of horizontal information broker and capability integrator, middle management must be able to secure access to the top and be positioned in such a way that they are respected by their peers and those at the operating level. Visible support from

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	afforded an entrepreneurial role with a strong performance focus.	the organization, it is middle managers who are in the best place to facilitate the link from top management to the front line.	the top, including active involvement in all strategic activities, appears to be key.
Burgelman (1983)	While developing a working model to explain how corporate strategy actually gets formulated, the critical role played by middle management in many elements of the strategic development process was highlighted.	Top management generally controls the choices that determine the structural context of strategy making. In contrast, the determination of strategic context "reflects the efforts of middle level managers to link autonomous strategic behaviors at the product/market level into the Corporation's concept of strategy." [Page 66]	Clearly, autonomous strategic behavior will occur of the operating level of the organization. However, if the organization has in place the structures and processes to facilitate it, middle management is able to play a significant role in integrating the results of this behavior into the cohesive organization wide strategic process.
Burgelman (1991)	Based on the evolutionary framework towards strategy making, the field study explores the existence and functioning of both induced and autonomous strategic learning processes. It is proposed that when top management stimulates and reinforces the presence of both processes, and when top driven strategic intent is balanced with bottom-up experimentation and selection, organizations will sustain strategic success	Top management should legitimately stimulate induced processes, which build upon the organization's current strategy and learning. However, maintaining the link between the top's strategic intent and middle managers' strategic initiatives is critical. Autonomous initiatives, which emerge outside the existing strategic and learning boundaries, can originate at all levels. However, they are most likely to emerge when managers are aware of changing technology and market conditions. In large growing organizations this will occur more frequently at levels below top management. The two processes need to exist together to ensure organization survival. Multiple strategy making approaches, at work simultaneously, support both current focus and future dynamism	Top management must attempt to blend strategic processes that emerge from classical strategic planning models with the evolutionary processes that emanate from internal / external selection models. This requires committed leadership of existing strategy while allowing input from below. Amongst middle managers, the opportunity to experiment with new strategic directions and / or challenge the status quo must be encouraged. An organization's strategic renewal is dependent on the later. Incremental adjustment may sustain short-term success. Survival is dependent on a fully dynamic strategic environment in the organization.
Burgelman (1994)	(As part of a longitudinal study of Intel the author found that) middle managers were able to play a much greater role in influencing change in business direction than had been thought possible. In	If top managers stimulate an environment in which middle managers are not discouraged from challenging the status quo, they may lead the development of new strategic initiatives	The tendency of middle managers to initiate divergent strategic direction in response to external environmental changes is a key behavior. Rather than suppresses this tendency, top management

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	fact, it was at the level of the middle manager that initiatives began which caused the organization to ultimately change its strategy.	towards a high state of readiness. Middle managers, collectively, often have a much more extensive network of external contacts than those of top management.	must develop the capability to recognize the strategic clues provided by the middle and engage them in developing new strategy at the corporate level.
Burgelman & Grove (1996)	When an in-balance develops between strategic intent and strategic action in an organization, strategic dissonance emerges. Middle management communication and action often signals the need to respond to a strategic inflection point. Top management requires the capability of strategic recognition, to be able to interpret and respond to these signals.	The independent strategic actions of middle managers represent one of the strongest sources of strategic divergence. Generally, these actions are positive for the organization. However, when they make transition from existing strategy difficult they pose a challenge to top management. Top management must learn to recognize the strategic importance of these initiatives.	Top management must allow dissent and not dismiss dissonance. Middle management strategic input should be weighed against the "big picture". Balancing top-down strategic intent with bottom-up forces is key. Active debate sits side-by-side with organizational alignment. "That is the culture that works best when top management has to navigate between letting chaos reign and reining in chaos." (pp.23)
Dutton & Ashford (1993)	The advantage of involving middle managers in issue identification is the opportunity to expose top management to the views of those much closer to the day-to-day operations of the firm.	It is in top management's interest to understand the process by which issues are sold to it. Many middle managers raise issues because there is link between top management's recognition and legitimization of the issue and middle managers ability to achieve their units and their personal goals." Page 402] When in issue is relevant to the functional or operational responsibilities of the middle manager they're more likely to raise it as an issue to the top. Middle management will initiate issue selling more frequently when top management is perceived as supportive and open. Issues will become strategic when top management believes they are relevant to organization performance over the longer-term.	Middle managers must be assisted to develop the skills and opportunities to undertake issue selling . Top management must work to reduce barriers that prevent individuals surfacing potentially strategic issues.
Dutton & Ashford et.al. (1997)	Top management's willingness to listen, and a positive organization climate, are major	If provided the opportunity, middle managers can play an important role in speeding	The choices middle managers make as to whether to engage in strategic issue selling

Study Source	Fundamental Perspective	Key Observations	Implications
	contributors to supporting middle management's raising of issues.	up the strategic decision making process by providing critical information to decision-makers at the top of the organization. However, their willingness to do this is affected by behavior that causes them to. actively manage the impressions that top management has of them. Middle managers appear to pay attention to clues from both inside and outside the organization when determining the advisability of selling issues upward. They are very aware of trends, developments and events taking place outside the organization.	activity have the capability to fundamentally affect strategic direction. It is critical that this behavior be encouraged. Top management has a critical role to play in creating a context in which middle managers are willing to initiate issue selling. . Because middle management will read the wind in a very fluid manner, that is interpreting organization factors as both positive and negative, establishment of a consistent context is important if the organization is to gather, interpret and respond to the strategic clues that exist.
Dutton & Ashford et.al. (2001)	This study served to confirm and build upon earlier work. It clearly confirmed that issue selling was successful when the "sellers" were able to identify their causes as strategically important, when top management was able to respond and when there were obvious payoffs to the organization. Selling, particularly in relation to the strategic / business plan, was much more complex than originally conceived.	Political and organization context were more significant than individual impression management. The political and commitment processes revealed were more consistent with strategic renewal roles for middle management. (See Floyd and Wooldridge,2000) 'The process is also deeply contextual in the sense of requiring issue sellers to have in depth knowledge of" how the system works" in order to effectively make change happen' (pp730)	In order to be effective issue sellers and positively influence organization strategy and performance, individuals require deep and broad knowledge of the strategy, its content, the context in which it is developed and implemented, and the organizational / external relationships which impact its' success. Top management can play a key role in ensuring that middle management has the opportunity to acquire the knowledge and skills. Failing to do so will rob the organization of a vital source of internal change initiatives.
Miller (1997)	There can be no effective strategy implementation without significant involvement of those lower in the organization.(than top management.)	Traditional approaches to assessing strategic effectiveness, such as financial and market measures are ineffective. Three factors, completion, achievement, and acceptability provide better measures of implementation success. "To complete implementation, achieve everything which is intended, and do all of this in a way which is acceptable to organization members- that is, to attain comprehensive success,	Direct backing, maintaining a positive culture and providing clear direction are all within the purview of top management. If they wish to assure successful implementation then this umbrella must be extended to the other organization actors that can make or break their strategic decisions

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		there needs to be support [especially from influential persons, and those implementing the decision], clarity about what the objectives are and how to reach them, a positive organization climate and a little bit of luck-or at least no bad luck." [Page 59]	
Thakur (1998)	An elitist approach to strategy development is not realistic. Top management, when involving the middle managers, needs to provide forums where the "reflexive monitoring of strategic events is possible."	Middle management is involved in strategy making as a day-to-day activity not as a once in a period activity. Middle managers are quite able to see the "corporate big picture" and do not exhibit parochialism in their strategic thinking.	Middle managers are able and desire to make a significant contribution to strategy making. Top management must be prepared to create the environment that facilitates this participation.
Currie (1999)	A case study of the role of middle managers in the business planning process of the UK. National Health Service reveals that despite the bureaucratic restraints of the public service they are able to wield considerable strategic influence.	Top management, particularly those at the centre, discounted middle managers ability to influence strategy formulation. Middle managers were able to "read" the strategic environment and engaged in substantial local innovation to forward their business plans. They were also prepared to challenge imposed top-down performance indicators when they were not relevant to their strategic context. Middle managers had a tendency to manipulate and modify deliberate strategy because their avenues of upward influence were limited.	Top managers must recognize the strategic value of middle managers. Instead of imposing standards and direction upon them from above, top managers should attempt to engage the middle in a two-way learning dialogue. Decentralizing responsibility to middle mangers will allow them to play a much greater role in both upward and downward strategic processes.
Hart (1991)	Hart developed four generic modes of strategy making. The four modes, rational, transactive, symbolic, and generative featured different degrees of top management control vs. other actor involvement. The mode or modes of strategy making employed in an organization are a significant predictor of overall organization performance. A blend of all four modes was correlated with the highest performing firms.	Two dimensions are key to understanding the strategy making process. These are top management "intentionality" and organizational actor "autonomy". The first dimension refers to the extent to which strategy is deliberate and the plan work of top management, while the second refers to the extent to which strategy is influenced by the of autonomous	Strategy modes which incorporate top management leadership with the participation of other organization actors, are those that are likely to result in superior organization performance. It is important that the organization provides channels and opportunities that will ensure that both top management and other organization actors are afforded the chances to

Study Source	Fundamental Perspective	Key Observations	Implications
		behavior of other organization actors.	maximize their strategic contributions.
		"High performing firms appear capable of blending competing frames of reference in strategy making. They are simultaneously plan for an incremental, directive and display, controlling and empowering, vision rate and detailed." [Page 121]	
Hart (1992)	Identifies a fifth mode of strategy making, that of Command. Able to differentiate the spectrum of roles for both top management and other organization actors. At one extreme, the Command mode features almost total control by top management and other organization members are relegated to the role of sheep. At the other end of the spectrum virtual organization anarchy reigns with top management having abdicated its strategic role and other organization actors are free to pursue independent initiatives in a climate of unstructured entrepreneurship. The paper reconfirmed the proposition that the ability to develop multiple strategy making modes was likely to result in high organization performance.		"Strategy making can no longer be limited conceptually to the chief executive or the top management team. Rather, strategy making must be conceptualized as organization wide,. Specifying the complementary roles played by top managers and organization members serves to clarify strategy the actually gets made in organizations"(Page .347)
Hart & Banbury (1994)	Simultaneous use of multiple processes of strategy making [modes] will facilitate superior performance under particular organizational and environmental conditions.	Firms that developed strategy-making capability that combined skills in all five modes of strategy generally exhibited higher performance than average.	"The process through which strategy is made holds the potential for competitive advantage and requires purposeful design and management attention. To achieve high-performance, top managers must provide a strong sense of strategic direction and organizational members must be active players in the strategy making process." [Page 266]
Wooldridge & Floyd (1990)	Improved organization performance does not come through the route of improved implementation. Rather, it comes through	CEO's and middle managers believed that middle management could make a meaningful contribution to strategy	Top management should be aware that the involvement of middle managers in the strategic process should be substantive rather than

Study Source	Fundamental Perspective	Key Observations	Implications
	the development of superior strategy as a result of middle management input to the strategic decision process.		nominal; that middle managers expect them to define the strategic context but feel able to develop and initiate their own courses of action; and that middle managers will challenge strategic decisions, and that the ability to critique strategic action contributes to feelings of substantive involvement
Floyd & Wooldridge (1992A)	The authors outline a typology describing the involvement of middle management in strategy. It delineates four strategic roles, Championing, Synthesizing, Facilitating and Implementing.16 variables were isolated that identify the strategic orientation of specific middle managers.	"The typology is premised on the view that strategy is "a pattern in a stream of actions" and that it develops out of a continuous, interactive learning process involving managers throughout the organization."(Page 154)	
Floyd & Wooldridge (1992B)	Strategic consensus results when both the understanding of, and commitment to strategic initiatives is shared across all levels of management and operating staff.	The most common reason for strategy not to be implemented successfully is when middle and operating level managers are ill informed or unable to support the chosen direction of top management. In contrast, successful execution of strategy occurs when managers are acting on a shared set of strategic priorities and are able to achieve it because of a shared level of understanding and commitment to the strategy. In order to create strategic commitment, is necessary for managers to perceive that the contemplated strategy addresses the needs of the organization and the manager's own self-interest. Without the input of the middle manager the likelihood that full organizational commitment will be achieved is lessened dramatically. "In short, strategy making is a dynamic, continuous phenomena, and to	As top managers have a tendency to separate strategic ideas from strategic action, it is imperative that they stimulate two-way communication with middle and operating level managers to insure that the strategic details are not lost. "Moving from concept to organizational action may be the most difficult step in the strategic decision process. We argue that strategic understandings and commitment, not top-down delegation, are the basis for coherent action and effective strategy."(Page 38)

Study Source	Fundamental Perspective	Key Observations	Implications
		understand it, managers at many levels must be engaged firsthand in the thought process."(Page 35)	
Wooldridge & Floyd (1994)	The four strategic roles that middle managers play can have a distinct impact on organization performance	Effective implementation requires that middle managers understand the strategic rationale behind the plan. Such understanding appears to result from broad participation in the strategic process. Middle managers play an important role in bringing new strategic initiatives to top management attention Middle managers can act as collectors and conduits for information that is valuable to top management Middle managers play a significant but almost hidden role in facilitating positive organization change. When middle managers are excluded from the strategy development process they lack commitment towards implementation. Implementation requires that middle managers often must adjust the plans formulated by top management to respond to emergent situations.	It is imperative that top management recognize the link between middle management, organizational capability and organization performance.
Floyd & Wooldridge (1997)	The level of strategic involvement of middle managers is directly correlated with improved organization performance	The overall pattern of strategic influence amongst an organization's middle management most affected overall performance. The degree to which managers were able to engage in boundary spanning activities both internally and externally was a significant predictor of strategic influence. Very few middle managers were positioned to be fully influential in the strategic process.	Top managers if they are to fully utilize the power of middle managers to initiate and participate in organization strategic renewal must provide the opportunity and circumstances that allow them to input and to communicated broadly with the internal and external environments. Middle managers are key link between the organization strategy and overall competitiveness and performance. Enhancing, rather than downgrading, their roles seem to be the key to organization survival.

Study Source	Fundamental Perspective	Key Observations	Implications
Floyd, S.W. & Lane, P.J. (2000)		Middle managers are able to evaluate new information in the context of the firm's strategy, operations, and markets and thereby direct top managers' attention to an understanding of strategic issues "Middle management forms the hub through which most strategic information flows... in order to interact with operating management, middle managers must maintain a degree of technical competence and a detailed understanding of the organization's capabilities. To interact with top management, they must also understand the organization's goals and competitive strategy, as well as the political context in which these are developed.	
Liedtka (2000)	An organization's strategic processes can engage a broad group of organizational actors in strategic dialogues. This will develop and test new futures, in a cognitive loop, which by utilizing new capabilities can be implemented in a behavioural loop.	Broader inclusion of managers in the strategy making processes has many advantages. Better environmental sensitivity, customer intelligence, energy and commitment, and wider dissemination of ideas are all possible. An effective process, with shared dialogue brings about a collective understanding by building on the cognitive diversity present inn the broader group.	An inclusive strategic process requires a relationship between the top managers and others based on trust, listening and openness. Shared purpose and future focus are also key. Rather than be exclusive strategic thinkers, top managers must enable and develop the strategic thinking skills of all organizational members.

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2.8 Strategy-Making Modes: Collaboration between the TMT and the middle?

Two of the foundation elements that the material in this section has identified are attributed to the relationships that exist between top and middle management. First, the nature of the relationship will determine the strategic effectiveness of middle managers and of their organizations. Secondly, the processes that support strategy development and implementation must allow the objectives of both levels to be satisfied. That is, the TMT's strategic intent and the autonomous actions of the middle will be balanced in such a way to give rise to aligned implementation of emergent strategic direction. However, theorizing and research has demonstrated that in reality this relationship spans a wide spectrum ranging from absolute top-down control of the strategic process to a circumstance described best as middle and operating level anarchy. In the former, strategy emerges from a TMT driven, orderly, analytical process from which the middle takes its implementation directions. In the latter, high degrees of freedom permit operating and mid level actors to shape their own strategic destiny in an often haphazard manner, with little or no input from the top. Across this spectrum there are approaches which feature varying degrees of influence from top management, the middle and operating levels.

Bourgeois and Brodwin (1984) were among the first to identify how the relationship with the top could shape the organization's strategic effectiveness. While their five models were focused on strategy implementation, they were distinguished by the degree of control from the top, level of participation of other actors and degree of freedom allowed others to initiate action. As characterized by the authors,(pp.242) looking from a CEO's point of view, the five styles are;

Commander	*"How do I formulate the optimum strategy?"*	rational-analytical top-down driven
Change	*"I have a strategy in mind; how do I implement it?"*	manipulates organization levers
Collaborative	*" How do I involve top management to get commitment to strategies from the start?"*	dominant coalition driven
Cultural	*"How do I involve the whole organization in implementation?"*	wide participation

Crescive	*"How do I encourage managers to come forward as champions of sound strategies?*	bottom up driven

This model, while derived from the perspective that the CEO was the ultimate strategic champion, is significant in that it was prepared to go way beyond the then accepted view that the majority of strategic activity was rational analytically directed from the top. Most significantly, as was noted above, they suggested that strategy development and implementation were not necessarily separate activities. This was a precursor to the redefinition of strategic roles that has been reviewed in this chapter.

Previously the implications of the work of Mintzberg and Waters (1985) on the opportunities for organization actors, other then top management, to shape strategy have been reviewed. Their model placed top management intentionality as a dimension anchored by totally deliberate and totally emergent strategies. Along this dimension lay a range of strategy making modes. The eight modes spanned a spectrum of deliberate, top driven to emergent, organization actor and /or environment driven

Table 5. Summary–descriptions of strategy types per Mintzberg and Waters, 1985 (As summarized by Hart, 1991)

Strategy Type	Major Features
Planned	Strategies originate in formal plans; precise intentions exist, formulated by the management and backed up by formal controls.
Entrepreneurial	Strategies originate in central vision; intentions exist as vision of a single leader, under the personal control of that individual.
Ideological	Strategies originate in shared beliefs, intentions exist as collective vision of all actors, controlled normatively through indoctrination and socialization
Umbrella	Strategies originate in constraints; leadership defines boundaries or targets within which actors respond or create
Process	Strategies originate in process; leadership controls process aspects of strategy (structure, planning system)
Unconnected	Strategies originate in enclaves; actors loosely coupled to the rest of the firm engage in their own actions in the absence of (or in contradiction to) central intentions
Consensus	Strategies originate in consensus; through mutual adjustment, actors converge on patterns that become pervasive in the absence of central intentions
Imposed	Strategies originate in environment; environment dictates patterns of action.

As was covered earlier in the sections of this review dealing with the development of integrated strategic decision making models and autonomous strategic action, it was left to Stuart Hart to develop theory based models that would balance and integrate the desire for intentionality and the need for autonomy. His initial work (1991) postulated four strategy making modes defined by two axis, one spanning deliberate to emergent strategy and the other induced to autonomous behaviour. In 1992 he added one more mode, to reflect the strength and persistence of top directed strategic process in some organizations. As shown in Table 2, the new model featured five strategy making modes, Command, Symbolic, Rational, Transactive, and Generative. Highlights of each mode follow; (adapted from Hart, 1992:335-339)

Command

In this strategy-making mode a strong leader (CEO?) or a limited number of top managers (segment of the TMT?) have total strategic control over the organization. The process is deliberate, controlled at the top and rational-analytical. Strategies emerge from the top ready to implement, and other organization actors are expected to do just that.

Symbolic

The top remains the key driver in this mode. However, they are expected to be the source of a compelling organization vision and a clear directional mission. This defining of strategic intent is meant to provide a framework for all organization members to refine and implement strategy. Top management plays the role of 'cheerleader'', motivating others to act in pursuit of the long-term goals. In this mode, other organization actors including the middle do not have any significant involvement in influencing and shaping corporate strategy. The symbolic approach does, however, create a perception of engagement and a shared part in strategic execution.

Rational

Significant amounts of information gathering and analysis are a key feature of the rational mode of strategy making. Extensive amounts of internal and external information are collected. Analysis is usually formalized through institutional approaches such as strategic planning. The systematic processing and synthesizing of organization data requires a great deal of upward communicating by organization members other than the TMT. However, the TMT maintains control

through manipulation of strategic levers such as structure, formal systems and incentives that induce the required implementation behaviour from other actors. (This mode equates most closely to the Design School approach to strategic planning outlined by Mintzberg.(1990))

Transactive

Strategy making based on interaction between organization levels, shared learning, and iterative development of strategy is central to the transactive mode. An ongoing dialogue involving employees, suppliers, customers, and other external actors shapes strategy. Cross-functional communication is key to success. Top management takes the lead role in facilitating the internal and external interaction and then provides the procedural framework in which the results of these exchanges can be integrated into forward strategy.

Generative

While the transactive mode facilitates and demands high levels of middle management and operating level involvement, the generative mode is absolutely dependent on the autonomous strategic behaviour of these levels. Upward influence from these levels shapes the organization's new strategic direction. Operating level employees are allowed to generate innovations outside their day to day job requirements. In this mode top management virtually abdicates strategic control. Their key role is that of sponsor and encourager of experimentation and risk taking. In this mode, as with the transactive, the middle manager has the opportunity to wield the greatest degree of upward influence. The openness of top management to involvement, the need for free flowing information and the intrapreneurial behaviour of the operating level, make the linking ability of the middle manager a critical organization capability.

2.81 *Impact of Strategy Making Modes on Performance.*

The potential for the nature of the interaction between top management and other organization actors to have varying impacts on performance was summarized by Hart.(1992) Essentially, he proposed that because the Command and Generative modes do not fully utilize the capabilities of the organization, the other three modes would be greater predictors of high performance. He also advanced the notion that firms which were able to combine a number of modes into their

capability repertoire would achieve higher performance levels than those restricted to one.

These propositions were tested empirically by Hart and Banbury (1994). Somewhat surprisingly, they found that organizations able to develop capabilities across all five strategy-making modes achieved the highest level of performance. It appear that flexibility across both the spectrums reviewed above, the induced to autonomous behaviour and deliberate to emergent strategy, provide the organization the flexibility to respond effectively to a range of strategic environments. It should be noted that the three central modes did correlate positively against some of the performance measuring constructs adopted by the authors. None-the-less, combinations of strategy making mode capability did perform better.

Rather than mitigate against a "broader" role for middle management in the strategy process these results served to reinforce the need for it. The authors suggest the following implications. "The process through which strategy is made holds the potential for competitive advantage and requires purposeful design and management attention. To achieve high performance top managers must provide a strong sense of strategic direction and (other) organizational members must be active players in strategy making process. " (Hart and Banbury, 1994:266) This perspective will be a key element of the research work and is elaborated more fully in the Research Methodology section.

2.9 Implications for Research: *Lessons learned and directions for study that emerge from the Literature Review.*

The review of literatures encompassing a number of the key elements / perspectives of the Strategic Management Process in organizations has revealed that a number of "classical" foundations of the field are open to question. Rather than being a highly structured, systematic process driven by the TMT, Strategic Decision-Making appears most effective when characterized by a highly flexible, inclusive approach. Middle managers are not content to act as supervisors of strategy implementation, but desire to shape the organization's strategic direction. Strategic renewal starts with autonomous strategic initiatives developed at the operating level and surfaced by the middle. Organization performance is

maximized when the top, middle and operating levels of the organization collaborate on developing an implementing strategy.

The following section will highlight elements of the literature that are particularly significant to this researcher's exploration of the strategic roles of middle managers, the strategic relationships of the middle with the TMT, and the impact of these roles and relationships on organization performance. These observations are organized around the framework that guided the literature review, with the addition of a separate item on organization performance, and reference some of the key contributions to the literature that help establish the relevance and importance of particular elements.

2.91 *Strategic Decision Making*

Inclusion of organization actors, other than the TMT, in the SDM processes is seen to benefit the quality of SDM and indirectly / directly influence organization performance.

Simon, (1993) asserts that the ideal SDM process is future-oriented, generates multiple alternatives, creates implementing ability and features procedural flexibility. This, Simon says, can only be achieved through a comprehensive and fully inclusive process where middle managers play their full part. A similar perspective is reflected in the work of Papadakis and Barwise, (1997) who propose that multi-level participation increases idea generation and implementation effectiveness.

Improved SDM effectiveness resulting from collaboration between the TMT and other organization actors, is a basic tenet of Hart's (1992) conceptualization of strategy making modes. Inclusion of others, including middle managers, appears to contribute to the SDM process, the strategic outputs, the commitment to and implementation of strategic actions, and improved organization performance. The need for multi-level involvement in formulating strategy and reaching consensus on it, as a precursor to the potential of achieving high performance, was also identified by Bowman and Ambrosini, (1997).

2.92 *Top Management in the Strategic Process*

The Upper Echelons Theory (Hambick and Mason, 1984) may have inadvertently left an assumed view that the TMT alone could direct and manage an

organization's strategic process. Also, the stream of research that followed tended to imply that TMT characteristics were the direct or indirect cause of organization performance.(See for example, Wiersema and Bantel, 1992, Miller, Burke and Glick, 1998) Although Hambrick(1994) would later suggest that this body of research had done little to uncover the actual mechanisms by which TMT dominance and TMT characteristics affect performance, the concept of the "dominant coalition" has persisted.

It was left to Schwenk (1995), and West and Schwenk (1996), to suggest that the empirical link between TMT characteristics and organization performance was equivocal at best. This served further to question the role of the CEO and other TMT members as "exalted" organization leaders. (Harrison and Pelletier, 1997)

The middle management literature is relatively strident in suggesting that TMT members must make the transition from leadership through autocratic direction to leadership through facilitation and collaboration. Pettigrew and Whipp (1991) suggest that top management must build a climate receptive to strategic change in which middle managers are encouraged to provide leadership through the informal strategy making processes. Burgelman (1991), asserts that it is the role of the TMT to blend "classical" strategic planning processes with evolutionary processes that incubate strategic experiments and autonomous initiatives at the operating level. Westley (1990), and Dutton and Ashford (1993, 1997), both identify that the TMT members must be prepared to listen to input and issues from the middle, and show understanding through developing shared responses which incorporate middle management participation.

The changing corporate reality was highlighted in the work of Roberto (2000), whose qualitative study of major strategic decisions revealed that they were generally being made by "specific teams" brought together for the SDM process. These teams included some members of the TMT, but not the same for different decisions, and members from the middle management, professional and operating levels. To be effective in the SDM process TMT members must be able to maintain very good awareness of developments in the internal and external environments. (Papadakis, Lioukas, and Chambers, 1998, Geletkanycz and Hambrick, 1997) The boundary spanning capability, that Floyd and Wooldridge (1997) attribute providing middle managers with strategic influence, also allows them to act as a trusted confidant of the TMT member and SDM team member.

2.93 *Strategy-making and organization performance*

Having identified that TMT characteristics or isolated leadership do not necessarily cause superior performance, it is important to uncover elements in the strategy development and implementation processes that influence performance. Dean and Sharfman (1996), established that decision process did indeed matter. Rajagopalan, Rasheed and Datta (1993), through their integrated framework model (Figure 5), identified the complexity of the SDM processes and potential inter-relationships with performance. They identified environmental, organizational and decision specific factors that significantly influenced the overall strategic process and subsequently impacted organization performance. This complexity and multiplicity of relationships was confirmed by Papdakis, et.al.(1998).However, their finding that hierarchical decentralization enhances organization performance, adds strong support to the view that organization strategy making should be collaborative and shared. (pp.132).

In contrast to broad based, collaborative strategy making, the existence of strategic process dichotomy acts a negative influence on organization performance. Mintzberg (1994, 1998), attributes this to the tendency of TMTs to attempt to separate thinking from acting. Strategy making processes which incorporate a "hand-off" of the wisdom of the managerial elite do no produce the flexibility and commitment necessary to cope with emergent strategic circumstances. Khatri (1994), offered empirical proof that the strategy dichotomy results in reduced organization performance. Evidence that integrating the two major elements of the strategic process results in major process, content and results benefits is provided by Feurer, Chaharbagni and Wargin (1995), in their review of the strategic process at Hewlett-Packard.

Lack of both operating and middle level involvement in the organization's strategy making activity also creates a weakness with respect the development and promoting of those issues and ideas which constitute emergent strategy.(Mintzberg, 1990) First, it is the middle that is the source of symptoms of strategic dissonance. In their review of the need for positive conflict and debate amongst the TMT, Eisenhardt, Kahway, and Bourgeois (1997), identify that the diversity and breadth of thinking that emerge from challenging interactions can

result in higher performance. As noted already in this section (Simon, 1993) middle managers are a logical partner in this process. The necessity for strategic dissonance as an antecedent to strategic renewal in the organization was clearly demonstrated at Intel and reported by Burgelman and Grove (1996). Both Burgelman (1991), and Pettigrew and Whipp (1991), suggest that it is the opportunity for middle managers to lead the development and acceptance of new strategic initiatives, that creates the strategic tension that leads to TMT re-examination of organization directions.

The processes and potential performance outcomes of strategy making collaboration between the TMT and other organization actors, in particular middle management, is epitomized in the work of Hart (1992). Two significant generic propositions emerge from his work. First, collaboration between the TMT and others does enhance the quality of the strategy and results in higher performance. Secondly the nature of that collaboration, particularly the degree of input afforded others, does affect organization performance.

2.94 *Strategy Implementation*

Strategy implementation in the literature can be characterized as raising problematic challenges. Questions such as, "How is implementation effectiveness being assessed?" (Dean and Sharfman, 1996) ; "Is the TMT committed to a role in implementation?" (Hrebiniak, 1992) and "What tactics should the TMT and other actors adopt for implementing strategy?" (Nutt, 1995) occupy the literature. Some, such as Smith and Kofron (1996) and Pettigrew (1992) suggest that there is a gap or "black hole" in the strategy research and literature, reflecting a lack of awareness and knowledge with respect to what actually constitutes effective implementation and who is involved. Both emphatically assert that theory that seeks to directly link TMT characteristics, or TMT influence over strategy formulation, to implementation effectiveness and organization performance needs revisiting. Framing his integrated model of strategy making, Hart (1992), suggests the presence of "implementation problems" as one of the top three SDM related issues in the literature, is reason to examine the extent and type of involvement of other organizational members in the strategy making process.

Based on research in 50 companies, Nutt (1989), found that top managers appeared to take implementation short cuts to minimize their involvement. This

was often the cause of failure of the strategy. In contrast, success was achieved when both top managers and other key stakeholders, including middle managers, increased their level of involvement substantially. Hambrick and Cannella (1989), also reinforce the need for TMT members to be active participants in implementation. However, they also highlight two other key aspects of implementation. First is the need to involve the implementers in developing the strategy and action plans flowing from it. Secondly, they must be prepared to act as "champions", communicating and creating alignment across levels and externally. TMT failure to communicate effectively, is quoted by Hamel and Prahalad (1996:163), as the reason that middle managers are unable to sort out strategic priorities, and are often blamed for strategic failure. In their integrated SDM model, Rajagopalan, et. al.(1993), identify that middle management involvement in strategy formulation appears to build commitment, implementation effectiveness and improved performance.

Nutt's comprehensive body of research into strategy implementation (1993,1995 for example), reveals that while there are tactics that provide both top managers and others a reasonable chance of success, TMT members have a tendency to select approaches that do not have a solid track record. They appear to be driven by their implementation preferences rather than selecting appropriate situational or contingent responses. As a result their ability to engage other stakeholders successfully is minimized and implementation effectiveness and organization performance reduced.

Overall, the implementation literature reviewed supports two generic concepts. TMT members must take their implementation responsibilities seriously and the chances of successful implementation are greatly increased when the middle managers and the operating level are involved in both strategy formulation and implementation.

2.95 *Middle Management in the Strategic Process*

The review of literature across a broad spectrum of the Strategic Management Process has confirmed that interest in, and focus on, the strategic roles of middle managers is much more than a recent research phenomena. Starting with the seminal work of Bower (1970), which demonstrated that divisional and SBU general managers (middle managers) performed a pivotal role between the

corporate organization and those charged with implementing strategy, a stream of relevant studies established a pathway to the current rich middle management literature.

Of particular significance is the fact that middle managers have been confirmed as playing key positive roles at all stages of the strategic process in organizations. Kanter (1982), identified that because they are in touch with all facets of the organization they are able to act as highly effective change agents. Van Cauwenburgh and Cool (1982), suggested they were the most important actors in respect to strategy formulation. The role of the middle in surfacing and championing autonomous initiatives was highlighted in Burgelman's (1994) work. Synthesizing much of the conceptual and theoretical framework research that had preceded them, Floyd and Wooldridge (1992A), proposed a four-element model that provides the focus of major replication this researcher undertook. The model elements, Championing Alternatives, Synthesizing Information, Facilitating Adaptability and Implementing Deliberate Strategy, confirm that middle managers are indeed involved and wielding positive influence across the total strategic process.

One of the most critical roles that middle managers perform is that of pivotal facilitating link between the TMT and the operating level. Nonaka (1988) emphasized that this role was much more than a two-way communication conduit. His "middle-up-down management" concept identified how the middle was able to create information, manage communication flows and act as integrators. Bartlett and Ghoshal (1993) suggested that middle managers acted as horizontal information brokers and integrators between the top and operating levels of the organization. Their position between the top's strategic intent and operating realities is, according to Floyd and Wooldridge (2000), the source of middle management's strategic influence and power. In order to perform this pivotal role effectively, middle managers must develop a wide range of competencies to be able to relate to both the strategic aspirations of top managers and understand the technical needs of the operating level.(Floyd and Lane, 2000)

While middle management does have a major part in strategy implementation, (Nutt, 1993) it is through their ability to participate in and influence strategy development that they appear able to have the greatest effect on organization performance. The work of Hart and collaborators (1991,1992,1994),

demonstrated how collaboration between the top and other actors in strategy making brought about improved performance. In this respect, the pivotal linking role of the middle provides leadership in the strategy-making process. Replication of Hart and Banbury's (1994) study is the second major element of this researcher's work.

2.10 Chapter Summary

The review of research literature, presented in this chapter, in respect to Strategic Decision -Making confirms that SDM is a complex activity requiring integration of many facets. Secondly, the review identifies that TMT members are major players in most aspects of the strategic management process.

However, the literature also reveals that the effectiveness of many aspects of the strategic management process, particularly strategy formulation, strategic decision making and strategy implementation, are enhanced when middle managers play an active role. It appears that opportunities for strategic renewal and organization performance maximization are enhanced when the middle managers facilitate collaboration between the operating, middle and top levels of the organization. Lastly, the literature review reported in this chapter, suggests that the strategy making modes present in an organization will reflect the strategic relationships between the TMT, middle management and others, and determine the effectiveness of strategy implementation and subsequent organization performance.

3. Structuring the Research Hypotheses

3.1 Introduction

This chapter will build upon the review of the literature presented in the foregoing chapter. Through the development of a research model and hypotheses, the evidence identified with respect to the strategic roles of middle managers, their interaction with the organization's strategic management process and the Top Management Team, will be integrated.

The final research model will draw upon prior conceptual frameworks, identified in the literature, and the research questions that emerge from the literature review and critique. This will permit the specification of a set of detailed hypotheses that will allow the potential impact of these roles and interactions on organization performance to be researched and defined.

3.2 Conceptual Framework for Research

The research, reviewed in the preceding chapter, not only places middle managers as key actors in the strategic process but also supports three general premises. First, active involvement by the "middle" in both strategy development and implementation positively reinforces performance.(Floyd and Wooldridge, 1992,1996,2000) Secondly, balanced ongoing interaction between top management and middle management enhances organization performance. (Burgelman, 1983, Dutton and Ashford, 1993, Hart and Banbury, 1994) Lastly, in respect to strategic communication within the organization, the middle manager plays a pivotal role facilitating interaction between the top and operating levels of the organization and focusing effort towards effective implementation.(Van Cauwenbergh and Cool,1982, Nonaka, 1988, Floyd and Wooldridge, 1996)

These premises were represented in Figures 1. and 2. that characterize influence and communication through the Strategic Management Process, and the relationships that link middle managers to the top and operating levels of the organization. Both of these models challenge the "classical' view of the Strategic Management Process (Ansoff, 1965, Andrews, 1971) which saw middle managers purely as recipients of deliberate strategy, directing the operating level to initiate

action plans which successfully implement this strategy. Figure 16 portrays the classical approach to strategic management.

Figure 16. (per Ansoff, 1965, Andrews, 1971, Mintzberg 1993)

"Classical" View of the Strategic Management Process
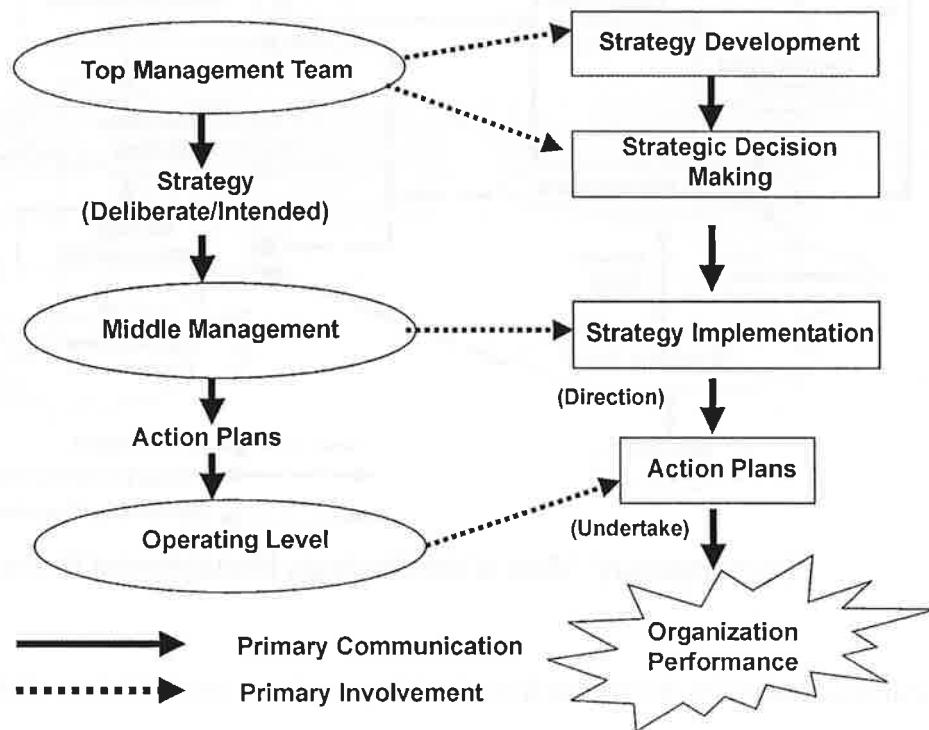
This research assumes that middle managers are fully engaged members of the strategic management process and that their actions and behaviours can have a highly significant impact on organization performance. This is reflected in Figure 17 that represents the Contemporary View.

3.3 Research Questions

Although the body of research, cited previously, unequivocally establishes middle managers as key actors in the Strategic Management Process, there is some ambivalence about their behaviours and impact. Do they help or hinder the process?(Guth and MacMillan, 1986) Can they initiate action themselves or must they have a top management sponsor or mentor?(Burgelman 1983, Burgelman and Grove 1996) What influence do they wield over shaping/ developing strategy?(Schilit and Paine,1987) Is their greatest impact caused by their supervisory actions in directing the "operators"? (Hrebiniak,1992)

Figure 17. (per Nonaka, 1988, Van Cauwenbergh and Cool, 1982, Mintzberg, Ahlstrand and Lampel, 1988:176-229)
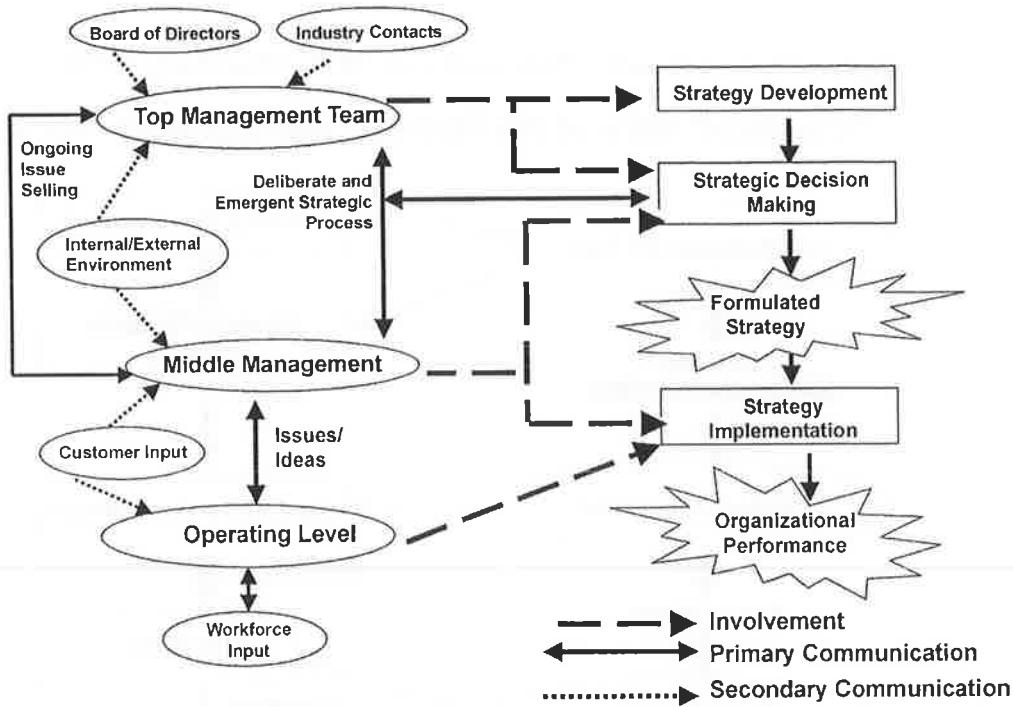
"Contemporary" View of the Strategic Management Process

Put fundamentally, the research methodology seeks to establish just what middle managers actually do in an organization's strategic management process and what impact this has on performance. Secondly, the research will show how the interaction between top managers and others, primarily middle managers, effects the strategic process and impacts organization performance.

The following questions guided the development of a Research Model and the Research Hypotheses:

1. What roles do middle managers play in the strategic management process?

2. To what extent do the roles that middle managers play in the strategic management process impact organization performance?

   Specifically:

   (a) What is the effect of middle management involvement in strategy formulation on organization performance?

   (b) What is the effect of middle management involvement in strategy implementation on organization performance?

3. How does the nature of the interactions between the top management team and other levels in the organization, primarily middle managers, affect the formulation and implementation of strategy and subsequently impact organization performance?

In particular:

What are the effects on performance when strategy formulation, strategic decision making and strategy implementation occur from either (i) a "top down" orientation, (ii) a "bottom up" orientation or (iii) are characterized by a collaborative relationship between top management teams and middle managers?

3.4 Research Model

The challenge in developing the Research Model lay in uncovering theoretical frameworks that reflected the breadth of elements included in the research questions above and yet allowed the key processes to be investigated in an integrated and focused manner. In order to develop an effective and complete research model, and to subsequently operationalize this model, it was necessary to draw on theory development and previous research across a broad spectrum. The model needed to integrate perspectives from the bodies of knowledge that exist on the role of the top management team, strategy development and the strategic decision process, strategy implementation and middle managers strategic roles and impact.

Over fifty relevant research pieces have been referenced which focus specifically on the role of middle managers in the strategy process. A similar number of studies incorporate a significant discussion of mid-level strategic behaviour. Many support theoretical constructs through empirical research. (See for example Thakur, 1998) Yet, attempting to integrate these into one model is made difficult by the use of many different frameworks, particularly in earlier models. This was noted previously in respect to the evolution of integrative models of the strategic decision process (Dean and Sharfman,1996, Hart, 1992, for example).

The search for contributing elements to my research model focused on two parameters. First that the research, while relatively recent, would be based on a

comprehensive review of contributing research literature which provided solid theoretical underpinnings. (Remenyi, Williams, et.al ,1998:75/81, Leedy,1989:58) Secondly, the operationalization of the research work would reflect rigorous methodology and validation of results.

Two existing and / or ongoing pieces of research satisfied these parameters. In respect to the strategic roles of middle managers and their impact on organization performance, the work of Wooldridge and Floyd (Wooldridge and Floyd 1990, Floyd and Wooldridge, 1992A, 1992B, 1994, 1996,2000) has been a major contributor to this field. Similarly, Hart and collaborators,(Hart, 1991, 1992,Hart and Banbury, 1994, Hart and Quinn, 1993, Dess, Lumpkin and Covin,1997) through work done on identifying the organizational modes of strategy making, provided a sound framework for studying the strategic relationships between top management, other organization actors, particularly middle managers, and their impact on organization performance.

The Research Model, Figure 18, reflects a combination and integration of the concepts reflected in the work of the two groups of researchers. Specifically, it builds on the four strategic roles of middle managers defined by Wooldridge and Floyd, *Synthesizing Information, Championing Alternatives, Facilitating Adaptability, Implementing Deliberate Strategy* and the five strategy modes (styles) outlined by Hart. *Command, Symbolic, Rational, Transactive, Generative.*

Both conceptual frameworks have been strongly validated by empirical research. A key aspect of this research will be first to replicate, and hopefully confirm the validity of these frameworks in a different population. Secondly, however, the degree to which the two concepts are complementary, reinforce each other and / or are additive in respect to their impact on organization performance will also be investigated within the bounds of the research model and design. A third, minor element of the research, will focus on implementation effectiveness and will provide an indicator of the degree to which successful strategy execution is perceived to affect organization performance. (Miller, Susan, 1997)

Figure 18.

Research Model
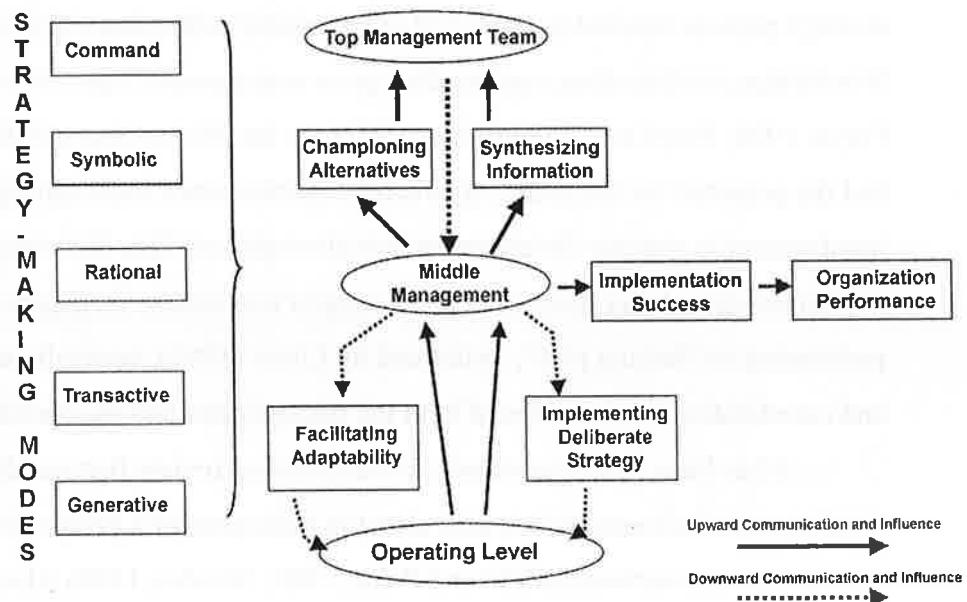
Note: One or more strategy styles may be active and will affect the relationships, communication and influence patterns between top management, middle management and the operating level.

3.5 Research Hypotheses

As noted above, the research is primarily; (i) Attempting to identify the roles that middle managers play in the strategic process and the impact that these roles have on organization performance. And; (ii) The strategy modes or styles that characterize relationships between top managers and others, primarily middle managers, and their impact on performance.

The literature, summarized comprehensively in Table 3 "Middle Management Roles in the Strategic Management Process and Table 4 "Middle Management Roles: Research Highlights", provides extensive under-pinning to both areas of investigation. However, as noted above, it pointed towards the two recent collections of work done by Floyd and Wooldridge and Hart et.al. Both had used a comprehensive review of the literature to establish on the one hand a conceptual framework reflecting middle managers strategic roles, and on the other develop an integrated model of strategy making modes by drawing on the strategic decision making research.

By deciding to utilize these models and concepts as the foundation for this research, the theory from which they are derived will become the prime force shaping hypotheses that will be tested in this research.

3.51 *Middle Management Strategic Roles.*

Wooldridge and Floyd, established that middle management involvement in the strategy process resulted in improved organization performance.(Floyd and Wooldridge,1992A) Also, confounding prior management logic (Wooldridge and Floyd, 1990, Floyd and Wooldridge,1996) they established that middle managers had the potential for impacting organization performance more through their involvement in strategy development than through activities directing strategy implementation. Later, they went on to suggest that middle managers were performing as "linking pins", as defined by Likert (1961), vertically integrating and coordinating the activities of both top management and the operating level.

It has been noted previously in the literature review that middle managers wield upward influence which may alter top management's perspective and actions on strategic alternatives.(Schilit and Paine, 1987, Westley,1990) Also, that their downward influence will affect how operating level actors perceive the organization strategy and subsequently implement it.(Burgelman, 1983). It is accepted that strategic management processes must balance the pursuit of new ideas and change with the need to focus direction and integrate action.(Hambrick and Canella, 1989)

As discussed in the literature review section on middle management strategic roles, Floyd and Wooldridge built upon these premises and proposed a typology of strategic roles for middle managers. Figure 12 demonstrates the relationships between the four roles, upward and downward influence and the need for integration and diversity.

Championing Strategic Alternatives. Floyd and Wooldridge (1996: 42-43) suggest that middle managers are uniquely positioned in the organization between strategy and operations. This allows them to bring innovative proposals to top management. Alternatively, they can screen and nurture ideas until they believe they are ready to take to top management. Specifically defined in their typology, championing alternatives is "the persistent and persuasive communication of strategic options to upper management" (Floyd & Wooldridge 1992:155)

Synthesizing Information. Defined in the typology as "the interpretation and evaluation of information" (pp.155), the function allows the middle manager to act as a gatekeeper in the communication channels from the operating level to the top

of the organization. Literature review discussion of the role of middle managers has already shown how they can affect the way that top management perceives issues. (Dutton and Ashford, 1993) Also, through appropriate framing of ideas and communication they can often ensure that their own agendas are promoted. (Dutton,et.al.2001)

Facilitating Adaptability. While some studies have suggested middle managers resist or distort strategic change (Guth and MacMillan, 1986), there is significant evidence to imply that they actually facilitate flexibility and as a result stimulate organization changes that challenge established norms and behaviour. (Burgelman and Grove,1996) In so doing they may encourage the evolution of emergent strategy and modification of deliberate strategy. Within the typology, facilitating adaptability is defined as "fostering flexible organization arrangements". (pp.155)

Implementing Deliberate Strategy. This is the strategic role that middle managers are generally perceived as having the greatest part to play in. However, it is much more than receiving the strategy from top management and directing operating level action to execute it. The middle manager must engage in a complex set of actions involving organization structures, staff, strategy modification, action planning, resource allocation and information exchange. Often they must do this in the absence of a clear understanding or explanation of top management's strategic intent. (Floyd and Wooldridge 1996:45). Ideally, they will be able to do this in a manner that integrates top management's strategic directions with the operating level actions. Subsequently, implementing deliberate strategy is defined as "managerial interventions that align organizational action with strategic intentions". (Floyd and Wooldridge 1992:155)

If one combines the findings from Floyd and Wooldridge's 1990 study, with the implied strategic impact of each of the roles defined above, the following hypotheses with respect to middle management's strategic roles can be postulated.

> **H1. Middle management involvement in the strategic management process through the active championing of strategic alternatives will have a positive impact on organization performance.**

- ➢ **H2. Middle management involvement in the strategic management process by synthesizing information (for top management) will have a positive impact on organization performance.**

- ➢ **H3. Middle management involvement in the strategic management process by facilitating adaptability will have a positive impact on organization performance.**

- ➢ **H4. Middle management involvement in the strategic management process through implementing deliberate strategy will have a positive impact on organization performance.**

And

- ➢ **H5. The combined impact on organization performance of middle management roles of strategic involvement which feature "upward influence", that is championing alternatives and synthesizing information, will be greater than the combined impact of those roles which feature "downward influence", that is facilitating adaptability and implementing deliberate strategy.**

Hypotheses #1-5 are deduced from the work of Floyd and Wooldridge (1990,1992A, 1997 and 2000)

3.52 *Strategy Making Styles / Modes*

From the discussion of the Strategic Decision Making processes, in the literature review, it is apparent that a number of researchers have attempted to structure integrated models which seek to synthesize the elements from a number of studies and propose a "simplified" framework to guide future research. (See for example Papadakis, Lioukas and Chambers, 1998:121).

The emphasis of this research is on identifying the relationships that exist between top management and other organization actors, particularly middle management, and how this affects strategy-making style and, in turn, impacts

organization performance. The research of Stuart Hart and his collaborators is particularly relevant.

The integrative framework for strategy making processes, reflected in Figure 11, was derived from three fundamental parameters. The concept that strategy-making processes emanated from two "dimensions", one being top management intentionality and the other organization actor autonomy was the basis for Hart's earlier work. (Hart, 1991). The blending of top management leadership and direction with the freedom and opportunity of other organization actors to influence strategy was the foundation for the outlining of five "modes". The level of interaction, or lack thereof, between top managers and other actors subsequently helped to identify what influenced strategy making in the organization.

All five modes of strategy making may have an impact on organization performance. However, Hart proposed (Hart 1991,1992) and later supported empirically in work with Banbury,(Hart and Banbury 1994) that modes featuring a blend of top management and other actor involvement and influence (Symbolic, Rational, Transactive) would result in higher levels of performance than those in which it was absent. (Command, Generative) Also, firms able to develop flexibility in using and combining strategy styles would generally have higher performance than those that could not. In the later work, Hart and Banbury identified that, based on their research data, firms able to utilize all five modes had the greatest impact on performance.

The foregoing supports the following hypotheses;

➢ **H6. Strategy making processes that are characterized as "command" mode will have less of an impact on organization performance than the "symbolic", "rational", or "transactive" modes.**

➢ **H7. Strategy making processes that are characterized as "generative" will have less of an impact on organization performance than the "symbolic", "rational", or "transactive" modes.**

➢ **H8. Strategy making processes that are characterized as "symbolic" will have a highly positive impact on organization performance.**

> ➤ **H9. Strategy making processes that are characterized as "rational" will have a highly positive impact on organization performance.**

> ➤ **H10. Strategy making processes that are characterized as "transactive" will have a highly positive impact on organization performance.**

> ➤ **H11.Organizations able to utilize flexibly all strategy making modes will demonstrate higher levels of organization performance than those using a limited number of styles.**

Hypotheses #6-11 are derived from Hart (1991,1992) and Hart and Banbury(1994)

3.53 *Strategy-Making Modes, Middle Management Strategy Roles and Organization Performance.*

Much of the literature, and research reported in it, used to support and develop the concepts and theories postulated by both Floyd and Wooldridge, and Hart is the same or points in a similar direction. Hart, while developing the integrating framework that gave rise to his strategy styles, drew upon the work of Mintzberg and Waters (1985), Guth and MacMillan (1986), Nonaka (1988), and Burgleman (1991), amongst others. As shown in Table 3 and the discussion thereof, these authors also provide the underpinning to theory development that identifies the strategic roles of middle managers and its subsequent impact on organization performance.

All four roles, identified by Floyd and Wooldridge, feature either collaboration with top management, interaction with the operating level of the organization, providing a link between the top management and the operating level, or a combination of two or three of these elements. Logic would suggest that middle management behaviour in any of the four strategy roles would be a contributor to the functioning of the three "interactive" modes defined by Hart, symbolic, rational and transactive.

The nature of strategy modes functioning in an organization would be expected to dictate the strategy roles undertaken by middle managers. The leader led, top-down motivational orientation of the symbolic mode suggests a

requirement amongst middle managers to be able to deliberately implement strategy. While the expectation that middle and operating levels will effectively implement formal strategy still exists, in the rationale mode there is much greater opportunity for input. Thus middle management's ability to synthesize information for top management should increase. As the most fluid and interactive strategy mode, the transactive orientation requires both championing of alternatives to top management and facilitating of adaptability amongst other levels of the organization.

Although one would expect the empirical analysis of the research data to reveal a correlation between the strength of a particular strategy mode and the level at which individual middle managers strategic roles were at play, the relationships are likely to be subtle and complex. For example, although the transactive mode will feature high levels of championing alternatives and facilitating adaptability it will also need both synthesizing information and implementing deliberate strategy in order to bring about effective action and enhanced organization performance. The following hypotheses will guide the investigation of the relationships that exist between the presence of the five strategy modes in an organization and the ability of middle managers to utilize the four strategic roles.

> -H 12 The predominant strategy modes functioning in an organization will be a reflection of the degree to which its middle managers can utilize particular strategic roles.

> -H 12A. When the "symbolic" mode is predominant, the implementing deliberate strategy strategic role will be most prevalent amongst an organization's middle managers.

> -H 12B. When the "rational mode" is predominant, the role of synthesizing information for top management will be most prevalent amongst an organization's middle managers.

> -H 12C. When the "transactive" mode is predominant, both the championing alternatives and facilitating adaptability strategic roles will be most prevalent amongst an organization's middle managers.

> -H 12D. When the "symbolic", "rational" and "transactive" modes are all strong in an organization, all four strategic roles of middle managers will be prevalent in an organization.

> -H 12E. The existence of the "command" or "generative modes" will not influence the level at which middle managers strategic roles are undertaken in an organization.

Note: *The structuring of hypotheses #1-12 assumed that the models of middle management strategic roles and strategy making modes, developed by Floyd and Wooldridge and Hart and Banbury would replicate substantially. In the event that a modified structure evolved, adjustment of these hypotheses might be necessary.*

While the foregoing will provide us a measure / indicator of the degree to which direct middle management involvement with top management occurs within particular strategy modes, it does not necessarily lead us towards an understanding of under which conditions the greatest organization performance is achieved. Drawing upon the results of both Floyd and Wooldridge, and Hart, it can be deduced that when an organization is capable of using all strategy modes and its middle managers have the capability to exercise strategic roles featuring championing of alternatives and synthesizing information, it would be expected to achieve superior performance.

However, two of the strategy modes do not depend on an interactive or collaborative relationship existing between middle managers and top management. By testing the following hypotheses, data gathering and analysis will attempt to determine if (i) flexibility of strategy modes is the over-riding cause of superior organization performance, or (ii) a blend of strategy modes and middle management strategic roles result in superior performance. In particular, do organizations predominantly using symbolic, rational, and transactive modes, in which middle managers are able to exercise championing alternatives and synthesizing information strategic roles, obtain superior performance? Alternatively, (iii) does the existence of an organization environment in which middle managers are able to actively influence the strategic process, through the use of all upward and downward strategic roles, stimulate the development of multiple strategy modes and thus cause superior organization performance?

-H 13. Capability to use all five strategy-making modes will be the strongest determinant of an organization's ability to achieve superior performance.

-H 14. Organizations utilizing the "symbolic', "rational" and "transactive" strategy making modes in which middle managers are able to strongly utilize the championing alternatives and synthesizing information strategic roles will achieve superior organization performance.

-H 15. Organizations where middle managers are able to effectively utilize all four strategic roles will develop the capability to flexibly utilize all of the strategy modes and thus achieve superior performance.

Hypothesis 13 is based on Hart and Banbury(1994). Hypothesis 14 draws upon Hart(1992) and Floyd and Wooldridge (1992A). Hypothesis 15 reflects Floyd and Wooldridge (1992A, 1996 and 2000)

There is no doubt that the prior empirical work supports the contention that middle managers utilizing any of the four strategy roles in organizations in which multiple strategy modes are at play can enhance organization performance. While this research will first seek to replicate these results, as discussed below, it will also attempt to establish the relationships that exist, if any, between the relative strengths of the strategy roles, strategy modes utilized by the organization, and organization performance. It is hoped that by modeling the effects of each of the nine major constructs on organization performance it will be possible to determine whether there are complementary, enhancing or additive impacts of the strategy roles and modes on performance.

3.54 *Implementation Success and Organization Performance.*
As outlined in the Literature Review, much of the empirical work that evolved from Hambrick and Mason's Upper Echelons' Theory (Miller, Burke and Glick,1998) sought to establish causal relationships between TMT characteristics, TMT processes or relationships and Organization Performance. While some did advance the existence and impact of intervening variables such as managerial discretion and environmental turbulence (Haleblian and Finkelstein,1993), and attempt to identify the effect of contingent variables such as firm size and industry environment (Boeker,1997), studies generally attempted to correlate directly one or more TMT or SDM related variable / construct with organization performance.

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Processes that brought strategic ideas to the top, communicated strategic intent to the organization, modified deliberate strategy, operationalized strategies and resulted in implementation success received scant attention. (Pettigrew, 1992.)

It was also noted how later studies challenged the validity of these results (West and Schwenk, 1996) and supported the streams of research that gave rise to the integrated models of strategic decision making and the concepts of middle management involvement and collaboration between the top and other organization actors.

Fundamental to this approach is the notion that the behaviour of various organization actors, in response to deliberate or emergent strategy, results in effective implementation processes / activities and subsequent implementation success. It is the collective impact of these implementation successes which results in positive organization performance. Susan Miller,(1997) notes that the tendency to measure success at the corporate level often masks indicators of implementation success. The use of financial or market indicators alone may not provide the best measures of effectiveness.

In order to provide an indicator of implementation success that those who were involved in formulating strategic options, strategic decision making and strategy implementation could relate to, Miller proposed a three-faceted definition of implementation success. (pp.583).Her dependent variables, which measured success were Completion, Achievement and Acceptability. She defined them as follows:

Completion: The degree to which every thing intended to be done, is done, within the expected time period.

Achievement: The degree to which what was done performs as intended.

Acceptability: The degree to which the method of implementation and outcomes are satisfactory to those involved in, or affected by, implementation.

In her own work, Miller utilized scaled reporting of each variable and summed them to produce an overall relative ranking of implementation success for major strategic initiatives in different settings.(pp.594) As such, they provided a proxy for strategic performance of the organization. If one accepts that those involved in the strategic processes are those with the best perception of strategy

implementation success, then it would be reasonable to assert that the level of involvement and influence in the strategic process would be correlated with a summated measure of implementation success and it, in turn, would be correlated with organization performance.

-H 16. The degree to which middle managers are involved in and influence the organization's strategic processes will positively influence the level of implementation success as measured by a summation of the level of completion, achievement and acceptability of strategy implementation.

-H 17. The level of strategy implementation success will be directly related to the overall level of organization performance.

Both hypotheses #16 and #17 are based on Miller (1997)

3.6 Chapter Summary

The chapter focused initially on the three premises of middle management strategic activity that provide a context for the research. Active involvement in both strategy formulation and implementation, ongoing balanced interaction between the top and middle management, and a pivotal role facilitating interaction between the top and operating levels.

Three research questions, focusing on the role that middle mangers play in the strategic management process, how this impacts organization performance, and how interaction between top management and others affects development and implementation of strategy and organization performance, were outlined. This provided the basis for structuring a research model that integrated the concepts related to middle management strategic roles and strategy-making modes.

Five groups of hypotheses were postulated. The first, related to middle management strategic roles with five hypotheses, a second addressing strategy modes and performance with six, a twelfth hypothesis linking strategy modes with strategic roles was sub-divided into five secondary hypotheses. Three hypotheses were structured to test the apparent relationships between modes, strategic roles and performance, Lastly, two hypotheses were developed to explore the

relationships between measures of strategic influence, implementation effectiveness and organization performance.

4. Research Methodology

4.1 Introduction

After outlining the overall research philosophy guiding this work, this chapter will discuss elements of the comprehensive research design that framed this study.

This will include selection and operationalization of the variables to be used in the research. Questionnaire design and the contributions of proven variables, constructs and instruments are reviewed. The significance of replication to research effectiveness is also raised.

Sampling procedures and data collection methods are outlined before finally the methods used to analyze data are reviewed. The value of "within method" triangulation and qualitative confirmation of quantitative results are discussed.

4.2 Research Philosophy

This work seeks to establish causal relationships between the activities of middle managers and top managers and organization performance. The processes by which strategy formulation / making, strategy implementation and strategic communication occur are of significant interest. However, a primary focus of the research are the "inputs" that directly or indirectly effect the defined "output", organization performance. As the variables that define these inputs and output are generally quantifiable, this research has an implicit positivistic orientation.

The positivist philosophy is further enhanced by the decision, discussed below, to attempt to replicate portions of two comprehensive studies. Established theory, tested hypotheses, operationalized constructs and generalizable samples are all characteristics of the foundation works. Their positivistic orientation clearly sets the tone for this research.

As Easterby-Smith et.al. (1991:23) point out, there are a number of key propositions to consider when adopting a positivistic orientation to research.

1. The observer (researcher) is independent of what is being observed.

2. Research decisions are value free. That is, only objective criteria determine what is to be studied and how it is to be studied.(versus human interest).

3. The research aims to identify causal explanations and fundamental laws.

4. Hypotheses are formulated and used to determine what observations will demonstrate their truth or falsity.(Hypothetico-deductive)

5. Concepts / constructs should be operationalized in a way which enables the facts to be measured quantifiably.

6. Problems are better understood if they are reduced to the simplest elements. (reductionism)

7. Samples of sufficient size should be selected to allow the results to be generalized.

8. Cross sectional analysis allows variations across samples to be properly identified.

The literature review has already identified that to clearly establish a causal relationship between activities of middle managers and /or top managers and organization performance is challenging. Observer independence and rationality are fundamental. Focused hypotheses that support the pursuit of a causal explanation are a key foundation of the research. Quantifiable constructs that succeed in measuring the facts in a straightforward manner provide the basis for effective analysis. Valid sample size supports generalization of the results. (See for example Scandura and Williams , 2000, adaptation of Cook and Campbell,1976 and Rajagopalan, Rasheed and Datta,1993:374-379)

While the foregoing strongly supports a positivistic approach to the research, methodological authors caution against the adoption of an absolute orientation. Drawing upon the work of Karl Popper, Remenyi et.al. (1998 : 33) suggest that positivism is not an approach "that will lead to interesting or profound insights into complex problems especially in the field of business and management science". Noting that positivism tends to lead to a reductionist approach to specification and researching of causal relationships, they also assert that positivism tends to bring about simplification of the real world environment in which the variables under review exist.(pp.35 /36)

The literature review pointed clearly towards the application of quantitative methods and models to confirm and bring further clarity to the relationships between middle managers' strategic roles, top managers' strategic behaviour, and

organization performance. (Floyd and Wooldridge,1990,1992,1997, Hart, 1991, Hart and Banbury, 1994) However, it also outlined the complexity of the organizational, environmental, individual and group forces that influence the shaping and execution of strategy.(See for example Dean and Sharfman,1996:391) This research has focused on the two major elements of the strategic management process, the roles played by top managers and middle managers, and the strategy-making modes resulting from interaction between top management, middle managers and others, and their impact on organization performance. Yet, this represents a small part of all the forces impacting the development and implementation of strategy, and subsequent organization performance.

Quantitative approaches will drive this research. However, the environmental "real world" complexity will be acknowledged through focus group validation of models and questionnaires, "in method triangulation" (Jick, 1979) and qualitative confirmation of quantitative data.

4.3 Research Design

Easterby-Smith et.al.(1991:21) suggest that research design is "more than simply methods by which data is collected and analyzed. It is the overall configuration of a piece of research: what kind of evidence is gathered from where, and how such evidence is interpreted in order to provide good answers to the basic research question."

The overall purpose of this research is to clarify the strategic roles of middle managers, identify how these roles impact organization performance, and to examine how collaboration between top managers and middle managers in the strategic management process impacts organization performance.

Although this research initiative is built around the use of a quantitative, analytical questionnaire, the research design outlined in Figure 19 attempts to go beyond simply gathering data and running that data through an analytical engine.

Figure 19.

Research Design
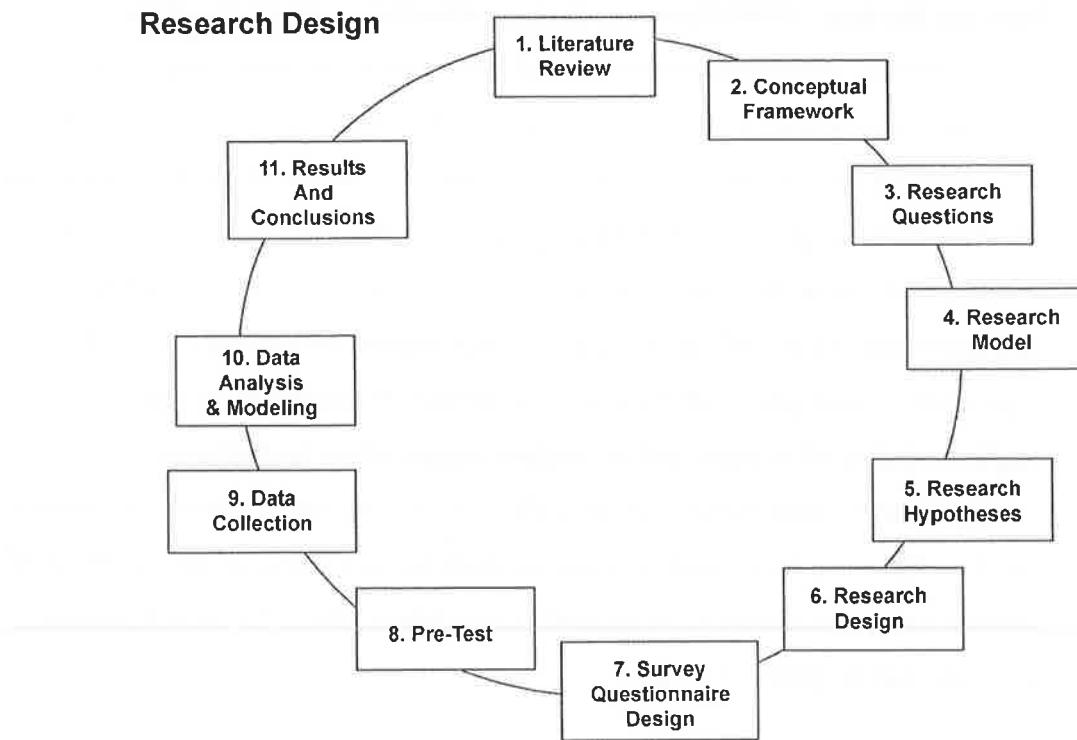
The research questions, model and hypotheses were grounded in an extensive literature review. Well-developed and proven explanatory theories were identified that could help respond to the majority of the issues raised in the research questions. Pre-survey focus groups helped to confirm /modify both the preliminary conceptual models that framed the research model and the relevance / applicability of the questionnaire items.

As will be discussed in detail in the following section, the questionnaire design was 90% derived from two proven instruments. The conceptual constructs had been confirmed through highly valid factor analysis and their impact on organization performance was clearly proven. The opportunity to attempt to replicate the results of the previous research, as part of the data analysis, should provide a sound platform from which to extend these theories.(Hubbard, Vetter and Little,1998)

Data collection, while built around the questionnaire, attempted to allow broad sampling to replicate previous research as well as incorporating top management perspectives and two organizations cases (plus an additional qualitative case). Although the total sample is of moderate size, 132 complete

responses, the combined effect of replication and in-method triangulation. (Jick, 1979.) holds the potential for productive data analysis.

Multivariate correlation, exploratory and confirmatory factor analysis, and structured equation modeling were used to attempt to first replicate the results of the previous research and then to extend the research to address all of the hypotheses identified previously.

4.4 Questionnaire Design

Design of the survey questionnaire resulted from a research process that was initially based on iterative progressive exploration of the literature. In respect to both the strategic roles of middle managers and strategy making processes, this process uncovered a range of concepts, indicators and predictive variables which might have allowed the relationships outlined in the research questions to have been investigated. However, despite these concepts and variables having been derived from sound empirical research, integrating them into a valid survey instrument would have been challenging. Particularly "early" models were based on distinctly different frameworks. As discussed previously in the literature review, significant research effort was required before integrated models of the strategic decision process emerged.(Hart,1991, Floyd and Wooldridge 2000)

4.41 *Selection and operationalization of variables.*

Over-riding the questionnaire design was academic advice and direction which suggests that where possible new instruments should be structured from previously tested instruments, questions and scales. (Churchill, 1979 and Hair,et.al.,1998). Also, to select and use previous items, focused on the research questions, which have been rigorously tested and validated.

As noted above two research approaches were identified where the above parameters held true, and where the original questionnaires had drawn upon much of the previous history in the field. These were the work of Wooldridge and Floyd, in respect to the strategic roles of middle managers and their impact on organization performance, and Hart and collaborators, through their work to identify the modes of strategy making and show how top managers relate to other

organization actors, particularly middle managers, and subsequently impact organization performance.

The questionnaire draws specifically from the following articles and studies / concepts reported in them:

[I] Floyd, S.W. and B. Wooldridge (1992), "Middle management involvement in strategy and its association with strategic type: A research note", *Strategic Management Journal,* 13, pp.153-167

This article provides the source of the 16 items, at the beginning of the questionnaire, which identify the strategic roles played by middle managers. Based on research work that was begun in 1990, this article provides validation of the 16 items ability to accurately identify an individual's participation in the four strategic roles that Floyd and Wooldridge have modeled for middle managers. Tables two and three on pages 160 and 161 provide results of a factor analysis and factor loading that demonstrates the 16 items are highly valid predictors of the four strategic styles. (See Part 1 of Survey Questionnaire, Appendix AA)

(The questions included in the survey are based on the actual questions used by the authors in their major research work during the period 1989 to 1992. Dr. Bill Wooldridge supplied these directly.)

[I I] Wooldridge, B. and S.W. Floyd (1990), " The strategy process, middle management involvement, and organizational performance." *Strategic Management Journal,* **11***,* pp.231-241.
[I I I] Floyd, S.W. and B. Wooldridge (1997), " Middle management's strategic influence and organizational performance.", *Journal of Management Studies,* **34,** pp.465-485.

In addition to supporting the concepts utilized above, these two articles provided one of the bases for the method utilized to measure organization performance. In both studies the authors draw upon theoretical foundation's provided by Dess and Robinson (1984) and Venkatraman and Ramanujam (1986)(1987) and utilize a

combination of subjective and objective measures to provide a full representation of organization performance. This prior work had shown that subjective measures, in the absence of easily obtained or understood objective measures, provide a good and valid proxy to assess organization performance.

The measures utilized in the final section of the questionnaire are derived from the 1997 work. Not only do they provide a somewhat broader perspective, but, as reported on page 476, component factor analysis identified that the six items could be summed to create an overall performance measure that had a very high validity. [Alpha = .93]

Serious consideration was given to using the measures identified in both of Hart's studies as they also drew upon the same theoretical framework. However, it was felt that the measures of Quality and Social Responsiveness might confuse and/or distract respondents to the questionnaire. Nonetheless, the measures are remarkably similar in their focus.

[IV] Hart, S.L. (1991), "Intentionality and autonomy in strategy-making processes: Modes, archetypes, and firm performance.", *Advances in Strategic Management*, **7**, pp.97-127.

[V] Hart, S and C. Banbury, (1994), "How strategy-making processes can make a difference.", *Strategic Management Journal,* **15,** pp.251-269

Part two of the questionnaire is derived primarily from the work reported in the second study undertaken by Hart and Banbury. The questions are modified from those included in the work's appendix. [Page 269] They have been refocused in some cases, to reflect a more generic orientation similar to that utilized by Hart in his original work in 1991, as shown in the latter's appendix. [Pp. 122 and 123] The validity of the 17 items was proven by the use of Principal Components Factor Analysis. Pp. 258, 259 and 260 discuss the validation and Table 3 outlines the results. These identified that the 17 items are strongly validated as a means to determine which of the five strategy modes are present in an organization.(See Part 11 of Survey Questionnaire, Appendix AA)

[VI] Miller, S (1997), "Implementing strategic decisions: Four key success factors.", *Organization Studies,* **18,** pp.577-602.

Implementation Effectiveness is assessed in the third section of the questionnaire utilizing a set of concepts and definitions developed by Miller and reported in her 1997 article. Inclusion of the three items is intended to provide a qualitative assessment that may provides clues to how the effectiveness of strategy implementation is actually assessed in the organization. Correlation and/or consistency between these measures of implementation effectiveness and organization performance will provide an indicator of the degree to which successful strategy execution is perceived to affect organization performance.

[VII] Dess, G.G.& Robinson, R.B.(1984) "Managing organizational performance in the absence of objective measures: The case of the privately held firm and conglomerate business unit." *Strategic Management Journal*, **5,** pp.265-273.

[VIII] Venkatraman, N. & Ramanujam, V. (1986) "Measurement of Business Performance in Strategy Research: A Comparison of Approaches." *The Academy of Management Review,* **11,** pp. 801-814

[IX] Venkatraman, N. & Ramanujam, V. (1987) "Measurement of Business Economic Performance: An Examination of Method Convergence." *Journal of Management,* **13,** pp.109-122.

These are the three "classic" articles that support the concept of utilizing subjective measures of key organization performance measures. Both Floyd and Wooldridge, and Hart use these sources to support their approaches to performance measurement.

As with all the data gathered in the questionnaire, the performance data is self-reported and potentially suffers from individual reporting bias. However, the works cited above have shown that subjective reporting of organization performance is very consistent with the "actual" formal documentation of this data. In fact, subjective evaluation tends to add reliability and validity to the formal data. (Dess and Robinson, 1984; Venkatraman and Ramanujam 1986,1987) Miller and Cardinal(1994) even propose that self-reported performance data may be more accurate than formal measurement.

4.42 *Focus group*

By April 2000, a rough format for the questionnaire had evolved which encompassed all of the elements above. Two groups of my association peers, consisting of 7 and 8 individuals respectively, agreed to meet with me "for about two hours over coffee" to review my research project, its conceptual orientation and my questionnaire. Although all focus group members identified themselves as "middle managers", at least three different levels were represented.

The conceptual discussions provided a broad perspective on what middle managers actually did strategically, and on what they should do. They agreed, for example, that the Floyd and Wooldridge (1996) model represented in Figure 12, was a good framework, but were unsure that Calgary based middle managers wielded much upward influence. However, they felt that research into their strategic roles was long overdue and supported the project strongly.

In order to minimize time commitment and get serious feedback, groups were split with one half critically completing Part 1 and the other half, Part 11 of the questionnaire. Individuals were then invited to complete the rest of the questionnaire. As the only significant feedback related to grammar, questionnaire structure, and time of completion, 9 questionnaires from the focus group were incorporated into the final sample.

4.43 *Questionnaire Structure*

As discussed above, the resulting instrument was divided into three major sections. The first, Strategic Work Roles reproduced the indicators used by Floyd and Wooldridge to identify and measure the four strategic roles of middle managers. Two five point scales, one measuring the frequency of involvement in the strategic indicator and the second recording perceptions of the degree of influence that this activity had on the organization's strategy, were used for these sixteen indicators.

In order to be able to replicate the previous research and be able to compare the results, the numeric scales used in the prior research were used throughout the questionnaire. (Hair 1998).

It should be noted that Floyd and Wooldridge's original survey design scattered the indicators related to the four factors / four constructs of the model of middle management strategic roles in a random pattern. This was preserved in Part I of the questionnaire.

Part II, Organization Approaches to Strategy-Making, reflects the work of Stuart Hart and collaborators. Respondents are asked to utilize a seven-point scale to indicate the degree to which a strategic statement reflects the situation in their organization. Placement of the indicator statements is randomized to prevent association with the five factors / strategy modes.

In the third section of the questionnaire respondents were asked to provide their individual assessment of the state of strategy implementation success, over the last three years, and overall organization performance over the same time frame. Implementation success was rated on seven-point scales that measured the degree of completion, achievement and acceptability. (Miller 1997) Organization Performance was measured by having respondents rate the level at which six indicators of performance had been achieved on a seven-point scale. These were derived from Floyd and Wooldridge's 1997 work, and can be summated to produce an overall measure of organization performance.

Researchers have recognized there is lag of up to five years before the results of a strategic process / initiative are evident.(Miller 1997) Combined with the immediacy effect this sometimes confounds responses to questions of how well the organization has implemented strategy or is performing. The three year time horizon, attempts to balance these factors.

The resulting questionnaire had 42 items. This raised some concerns about the time to complete and the receptivity of respondents. Although all the items are scaled, there was the possibility that some individuals might skim through without paying attention to specific elements.

In order to address this concern, five members of the original focus group were asked to complete the instrument under controlled circumstances. Completion time ranged from 24 minutes to 41minutes, with the average being just under 30 minutes.While this is at the outer limit of what other researchers recommend, (Czaja and Blair,1996) the fact that all test respondents found the questionnaire straightforward and easy to complete supported proceeding without sacrificing the detail in the instrument.

To allow top managers the opportunity to input their views, and provide "in-method" triangulation within the research sample, a second version of the questionnaire was prepared. While the contextual orientation differed, as this

questionnaire asked the top managers to assess the roles and strategic influence of their middle management teams, the integrity of all indicators was maintained. This permitted the inputs from both middle managers and top managers to be part of one integrated sample.

Input from the top, into a primarily, mid-level perspective has two benefits. First, it will flag any possible distortions that may result from common biases of those at the middle. Secondly, because most top managers have spent a number of years working at middle management levels, and usually have a group of subordinates at that level, their responses are both knowledgeable and sensitive to the concerns of the middle.

Both versions of the questionnaire are found in Appendix A.

The research was launched with hard copy versions of the questionnaire. This was logical for the two organizations that agreed to provide "case examples".(see "Sample Selection" below) However, as over 40% of the anticipated random convenience sample and close to 50% of the refined sample were "on-line" addresses, preparation of a web –based version of the instrument was warranted.

With the support of the ITS group at the Haskayne School of Business, University of Calgary, interactive, web-based versions of both questionnaires were prepared. The "point and click" capability reduced the completion time by about a third. In the latter stages of developing the sample, the web-site became the primary means of response.

4.44 *Replication: Logic and Value to the Research.*

In one of his seminal works on the application of triangulation to empirical research, Jick notes that, " replication has been largely absent from most organizational research, but it is usually considered to be a necessary step in scientific progress." (1979:609). In a similar vein, a much more recent work focusing on the relatively infrequent use of replication in empirical research, (Hubbard, Vetter and Little, 1998), re-asserts that replicability plays a fundamental role in the research process. Without it, there is a risk of "bad results" being perpetuated in the literature and disseminated in the academic learning process.

Further, replications with extension, increase the potential for generalizability and also provide the opportunity to apply the previously developed concepts and theories to a broader context.

Hubbard et.al (1998) define replication as a "substantial duplication" of previously published empirical work focused on determining whether the initial results are reproducible. The research questionnaire preserved the original integrity of both Floyd and Wooldridge and Hart's work, in Part I and II respectively. Whether the application constitutes pure replication can be argued.
The sample, as reviewed below, is similar to that probed by Floyd and Wooldridge(1992A). It is, however, smaller (132 vs. 259 respondents) and represents more firms (40 vs.25), in less sectors.(15 vs.20) The Floyd and Wooldridge sample has insurance and banking over-represented. This researcher's sample was biased towards energy related companies. However, comparison of sources and data gathering approaches suggests that both samples had a relatively similar base.

In contrast, comparison with Hart and Banbury's(1994) sample has sufficient dissonance to constitute "extension to a different population". They sampled broadly across a region and directed their invitation to participate at CEOs. In the 720 responses they received, it is likely that all were prepared by members of the top management team. All major sectors were represented. Significantly, the researchers chose to select out, on the basis of product dominance, 285 respondents who formed their analysis sample. While the two samples are addressing the same context, collaborative strategy making, one might expect that role and situational influences could affect the way that they respond to the items measuring variables.

Also, their two instruments have been integrated into one, to support research objectives greater than the sum of those pursued in the two separate studies. These items indicate that this research features "replication with extension". That is, by definition (Hubbard et.al.1998), modifying aspects of the research design to extend it into different organizations, populations or situations. In fact, as shown in hypotheses 12-15, this research is attempting to (i) use this dual replication to be able to outline concepts and theories which emerge from applying both Floyd and Wooldridge's and Hart's models in similar organizations

and (ii) subsequently determine the conditions leading to superior organization performance.

Eisenhardt (1989) suggested that despite replication's value in helping shape hypotheses during case study research, replication's value and limits were essentially in theory testing research not in theory building. However, this research will attempt to both test the existing theories and uncover relationships that may exist between them.

Schwab(1999), responding to those who argue that a replication should be "pure", reproducing exactly the circumstances of the original study, suggests "This view misses the point that a replication always differs from a prior study........More important, it is desirable that replications differ, because the differences provide information about the generalizability of findings.." (pp.296)

4.5 Data Collection

The major objectives of this research relate to the strategic roles of middle managers and their interaction with top managers in strategy-making processes. Therefore, efforts were made to assemble a sample in which the majority of respondents were middle mangers or mid-level leaders who were likely to be actively involved in their organization's strategic processes. In order to ensure that a top management perspective was reflected in the sample, a small number of key leaders, from organizations with established strategic processes, were encouraged to respond to the instrument. Also, with the intent of validating both models at the organization level, an attempt was made to encourage a few to provide quantitative and / or qualitative cases reflecting input from both levels of management. The foregoing three elements are discussed in more detail below, along with processes used to secure the sample and the potential of this sampling approach to provide the benefits of triangulation to the sample and results validity.

4.51 *Defining "Middle Managers"*

In order to be able to target a potential sample, it was first necessary to define who fell within the boundaries of "middle management". This was a challenging task as it is clear from current research and the reality of middle managers roles that a simple, straightforward definition of "middle management" is not possible.

While past definitions, derived from Likert's "linking pin" concepts of organization structure and process (1961), could establish fairly precise parameters for the middle managers role, such clarity is not evident today. The concept of the middle manager's role "as one who links the activities of vertically related groups and is responsible for at least sub-functional workflow but not the workflow of the firm as a whole", proposed by the Aston group (Pugh, Hickson, Hinings, and Turner) in 1967, may still be partially valid but does not fully reflect the emerging role of the manager in the middle. Although such definitions made comparison within and across organizations relatively easy, Thakur [1998:733] notes that "in practice, the definition varies with the market value of the company, the number of people employed and the prevailing structural arrangements of the industry leaders."

This is apparent in that in a multidivisional organization it is not unusual for a general manager to be responsible for budgets in excess of $100 million and staff groups of 500 or more. Yet, definitions above place these individuals as middle managers. [Interestingly, this is how Bower viewed them in his 1970 book.] Alternately, it is not unusual today to have mid-level professionals who are responsible for projects or research that may have significant organizational impact, yet these individuals have no direct supervisory responsibility. Previous definitions would have ruled these individuals out of any consideration as a strategic middle manager. Yet they clearly are.

Dutton and Ashford, in their 1993 groundbreaking study of issue selling, accepted elements of the previous definitions when they identified that middle managers operated in the "intermediate level" of the corporate hierarchy and generally were two to three levels below the CEO. This was a view supported by a Wooldridge and Floyd (1990) in their earlier studies. They advanced the fundamental notion that middle managers are managers who supervise supervisors, and in turn are supervised by others.

It was left to Bartlett and Ghoshal [1993] to identify and characterize the evolving nature of the middle management role in organizations. Through application of, and assessment of the relevance of Chandler's (1962) strategic typology work, Bower's (1970) resource based and capability theories of the firm, and Cyert and March's decision-making theory (1962) to the management and

strategic processes of ABB, their research reveals how much the role of middle managers has grown since Likert defined their "linking pin" role.

They identified that middle managers played key roles in the entrepreneurial processes of the firm, those processes that integrate skills, knowledge and resources, and organization renewal processes. Far from being bit players, this study provided one of the most profound acknowledgments that middle managers performed a broad array of critical roles in the organization. The later work of Wooldridge and Floyd [1996], referenced above, confirmed that the multifaceted behavior of middle managers contributed significantly to the development and implementation of organization strategy.

Wooldridge and Floyd had suggested in 1992 that the coordinating role, where middle managers mediate, negotiate, and interpret connections between the organizations institutions [strategic] and technical [operational] levels, provided them significantly greater organization influence than the traditional supervisory perception of their role.

They further developed this when their 1996 book unveiled the notion that middle managers were operating in a new context. In this new context the strategic middle manager, or more properly a strategic manager in the middle, was defined as "any individual who is regularly involved in, or interfaces with, the organization's operations and has some access to upper management". (xi) Specifically, the authors suggested that the distinguishing function of a middle manager is his / her role in aligning the organization's goals and strategies with its operating level activity. Also, to highlight the fact that a strategic middle manager is no longer restricted by traditional hierarchical concepts, the two authors stress that boundary-spanning middle managers promote integration, coordination and innovation across borders both within and between organizations.

Wooldridge and Floyd have carried this perspective into their latest publication [2000:xvi] where they assert that "the information flows and patterns of social influence that transform ideas and initiatives into new capabilities have their nexus at the middle levels of the management hierarchy." Or, as they put it more succinctly, middle management is "where the action is" in a capability based view of strategy process.

Given the foregoing discussion of who middle managers are, it was decided to take a relative open and flexible approach to defining "middle managers" for the

purpose of the research sample. In fact, respondents were encouraged to self-select themselves. The only general direction provided was that "top management" was generally the top two levels of the organization. This is consistent with the guidance provided by Wiersema and Bantel,1992, discussed in the literature review. At their option, respondents could provide information with respect to how many levels existed between the CEO and their position, their upward and downward reporting relationships, and their functional roles and relationships. A synthesis of this input is included in the "Sample Summary" below.

4.52 *Developing a random and / or convenience sample.*

Theoretically, the total population from which one might have obtained a sample would, at the very least, have included all corporate middle managers in North America and probably most of Western Europe. Under-lying literature and research covers this geographical domain.

The challenge is to isolate a sample that will act as a reasonable proxy for the theoretical total population. By virtue of the structure of its corporate economy, Calgary provides a very good measure of specifically Western Canada, a reasonable reflection of Canada and a strong indicator of related US. business. Thus it was decided that Calgary based individuals would be the sample's prime target. (Although the respondents' profile has Calgary as prominent, other Canadian, US. and international locations were represented.)

The help of three professional organizations was solicited, to build a "target population". The Ivey Business School Alumni Association (University of Western Ontario), CMA Alberta (Certified Management Accountants) and the Calgary Branch of the Strategic Leadership Forum (SLF) agreed to assist. These organizations all had memberships that were active senior professionals, middle managers and some top managers. Interest in management issues and personal growth was expected to translate into reasonable response rates.

Address lists, featuring both postal and electronic addresses were developed from data shared. It should be noted that the majority of entries on these lists came from data provided by the SLF, including members, meeting and conference attendees. Possible impacts on sample validity and response bias are discussed below.

Additional input was sought from participants in two evening MBA classes in Strategic Management that the researcher taught during the sampling period, and

from participants in an executive development program that the researcher directed during this time. This is consistent with sampling techniques used by other researchers including Wooldridge and Floyd (1992A:157)

Note that in respect to the "random" character of the sample, this was achieved by inviting all of the proxy population to participate in the survey and allowing the sporadic nature of the responses to provide a random distribution. This follows from the advice of Easterby-Smith et.al who suggest that when the sample population is relatively small (less than 500) the questionnaire should be distributed to all members.(1991:122)

4.53 *Top managers*

As Hart had focused his sample at the top, and Floyd and Wooldridge had sought to gain a senior level perspective during their research, a deliberate attempt was made to secure top management input into the sample. As can be seen from the survey copies in Appendix A, top managers responded to essentially the same questions as middle managers. In Part I, they are asked to evaluate what strategic behaviours their middle managers exhibit. Prior research has demonstrated that such input acts as a valid representation of the similar input from middle managers. Thus top managers input can be incorporated into the composite sample.

While the total top management sample was not large enough for a separate analysis, the sample was tested to confirm that it sat within the scope of the overall sample. Discussion below will indicate that while there were differences in emphasis, which might be expected, they did not diverge from the results of the broad sample in most cases.

4.54 *Organization case studies*

Despite empirical validation, many researchers are left wondering whether theory is in fact validated in practice. (Pettigrew, 1992) To address this issue, this researcher sought to first identify a group of organizations whose perceived and real performance was viewed as very good or excellent. Then, by undertaking both quantitative (the survey) and qualitative (interviews with strategic leaders and top management) approaches to ascertain whether the internal processes and results were consistent with the general theory.

Eight organizations were originally approached. Five showed preliminary interest in participating. After discussion, three organizations provided varying levels of access.

Enbridge Inc. provided a complete sample of both middle and senior managers, and input from senior managers with respect to the strategic management process. Nexen Inc provided a partial sample, with good input from middle managers. Suncor Energy Inc., while not able to undertake a formal survey, provided broad data with respect to their strategic management process. Details of the organizations and their strategic processes are included in Appendix…

4.55 *Electronic versus hard-copy memos and questionnaires*

As noted above the original distribution of the survey instrument was slightly more heavily weighted towards regular mail and "hard copy". This method was the source of the greatest number of initial responses. However, successive follow-ups gradually evolved to an electronic only response option. As a result, 66 % of the "random" sample (or 41% of the total sample) resulted from direct input to the survey web-site. Informal feedback from respondents indicated that they found the web format more "user-friendly", quicker, and easier to follow. (Web format is included in Appendix BB)

At issue is whether data generated on-line is equivalent to data drawn from paper and pen instruments. While little research has been done in the management area, related fields provide positive guidance. King & Miles (1995) asserted that measurement equivalence was not affected by method of test administration. In a 2001 article focusing on the type of scale used, on-line, Arnau, Thompson & Cook found that the response format, sliding scale or radio button, did not significantly alter the results. In this research, the Likert type scale of the hard copy was simplified with numeric radio buttons on the web format. Arnau et.al suggest that this will not affect the validity of the data gathered.

4.56 *Triangulation*

Jick (1979) asserts that triangulation allows organizational researchers to 'improve the accuracy of their judgements by collecting different kinds of data bearing on the same phenomenon" (1979:602).

The most commonly used forms of triangulation in research methodology are those that feature the use of different methods, because " the use of a variety of methods to examine a topic might result in a more robust and generalizable set of findings.(higher external validity)"(Scandura & Williams, 2000:1250) To the extent that this research study uses a limited amount of qualitative input, the cross method approach enhances external validity.

However, the predominant use of a quantitative survey across differing reflections of the same population provides the opportunity for "within-method" triangulation. The multiple perspectives act as a crosscheck of the internal consistency and reliability of the data and the theory it supports.(Jick, 1979) The limitations of the use of a single method are, none-the-less, significant. Jick, quoting Denzin, acknowledges that variations on a common method will not create distinctive streams of data. (1979:603) Therefore, it may not uncover the unique variance that a multi-method triangulation can. While not totally ruling out the value of quantitative / qualitative method combinations, Easterby-Smith et.al imply that there are significant risks in mixing research paradigms and related methods. "The positivist perspective which seeks a single, objective and stable truth is not compatible with the social constructionist view of reality being flexible, fluid and continually renegotiated." (1991:133)

Although this research utilizes a limited degree of triangulation, coupled with comprehensive replication discussed above, internal and external validity, construct validity and analytical conclusion validity are high. (See Scandura & Williams, 2000: 1252-1253)

4.6 Research Sample

Establishing the sample was a challenge. Despite the positive response of the focus group to both the questionnaire and the research project, identifying and "connecting" with potential survey respondents who were as enthusiastic took patience and effort. As the "Sample Timeline" below demonstrates, it was almost a year after testing the draft questionnaire with the focus group that the target sample had been identified and the survey was launched formally. (Two groups of MBA evening students had voluntarily, in the Spring of 2000, and again in 2001, both participated and solicited participation in their organizations. This further

reinforced the focus group input that the questionnaire was well focused and easy to respond to. The MBA program participant's experience was one of the impetus for the preparation of a web-based questionnaire.)

Although the sources of information were credible, managerial mobility and corporate changes, such as mergers, resulted in only 420 of the initial 600 questionnaires sent out going to valid mail or E-mail addresses. This "purified" mail list was the core of the second and third follow-up mailings, three and four months after the initial mailing.

Throughout this period, this researcher maintained a relatively high profile in the associations that had supported the initiative, "promoting" the research and broadly encouraging participation. This appeared to act as a stimulus to those who "had meant to send it in", but did not bias the representative nature of the sample.

Although the core of the sample had been assembled by November 30th, 2001, 113 good quality responses, a post New Year effort was made to broaden the sample slightly, adding more " random / convenient " input and widening the organization base. During this period, members of an executive management program at the University of Calgary were offered the opportunity to voluntarily participate.

When data collection ceased on March 30th 2002. There were 132 usable responses. Only two responses were rejected. One because the second part of the questionnaire had not been completed, and one because of editorializing of the questions.

SAMPLE TIMELINE

Associations agree to support research	February/March 2000
Initial contact with leading companies	March 2000
Meetings with prospective companies	April 2000- April 2001
Attending association meetings	April 2000-September 2001
Focus Groups review questionnaire	April 2000
MBA students volunteer	May/June 2000
Initial mailing/e-mailing	June 2001
Rationalizing the sample	July/August 2001
Second mailing/e-mailing	September 2001
e-mail only third follow up	October 1st 2001
Target mail follow up	October 1st 2001
Final follow up	January –March 2002
Executive Management program input	February-March 2002
Sample Complete	March 30 2002

Only seven responses had missing data. Two were corrected using imputed values. For the other five, only seven variables in total were missing. SPSS, E-M (Expectation –Maximization) algorithm was applied, which undertakes multiple iterations of maximum likelihood estimation. This showed that the sample mean and the estimated mean were essentially the same, so mean substitution was used throughout the analysis for the missing values.

Research Sample Statistics

Overall Response Rate:

Total number of "Invited" Participants:	521
Number of useable responses:	132
Overall response rate:	25.3%

Sample Breakdown Details:

Total Sample:	132
• Middle Managers (Random)	68
• Middle Managers (Cases)	42
• Top management(Random/Targeted)	14
• Top Managers (Cases)	8
Number of Organizations represented	40
Industries / Sectors	15
Organization Sizes	3 – 55,000 employees $250K - $ 21B

Characteristics of Middle Managers in sample:

Number of levels below CEO: Mean; 3.1 Standard deviation; 1.8 Range; 1-9 This suggests that the majority of respondents were one to five levels below the CEO.

Number of subordinates: Mean 28; Standard Deviation 17; Range; 1- 450

This appears to be a reflection of the diversity of the companies in the sample.

4.7 Data analysis methodology

All of the data gathered through the questionnaires was entered into the SPSS data editor. Questions that represented variables utilized by either Floyd and Wooldridge, or Hart and Banbury, were identified / coded in a manner which related to their placement in the factors / constructs of the models in the previous research. (For example: Question 4a in Part 1, "Search for new opportunities and bring them to the attention of higher level managers.", loaded on the Championing Alternatives factor in Floyd and Wooldridge's (1992A:161) study. It is coded as V4ACA to reflect this.) This allowed comparison of this researcher's results with the original research and permit differences with the original models to be highlighted.

Before the data was manipulated, a complete and thorough check of the data was undertaken. Only one significant data entry was missed, and it revealed itself as an "outlier" in "Descriptives" output of data used in one regression analysis, and was corrected. Based on indicators such as the Kaiser- Meyer-Olkin Measure of Sampling Adequacy (MSA) associated with factor analysis (0.80 for the Roles model), partial regression plots, and comparison of means, (Hair et. al., 1998) the sample overall appears to be a good one. A few of the variables in Part 11 are skewed. However, as will be discussed in the Results and Analysis chapter, this is probably more related to response and situational issues, than to sample inadequacy.

The data was entered in such a way to permit separation of the various categories identified in the sample statistics above. Elements of the sample, representing "random / convenience", "cases", middle and top management, and "hard copy" or electronic responses were given separate identification. This permitted segments of the data to be assessed independently. Descriptive data indicates that there are not major differences in and between sample elements. The segments are too small to allow individual analysis, but all of the descriptive data shows that each segment falls within the range of the overall sample.

4.71 Replication

This was the first analysis activity undertaken. In both the model replications, the search for a model ignored the existence of the previous research solutions until a basic structure had been revealed. (See Hair, 1998:103-105) The factor analysis followed a progression in which first an un-rotated and unspecified extraction was undertaken. Based on the percentage of variance suggested by this extraction, extractions of factors plus or minus 2 of the anticipated number of factors were modeled and evaluated. Emerging "fit' was refined using first orthogonal and then, if appropriate, oblique rotations. Finally, a "best fit" factor model was selected, run and analyzed with respect to the theoretical and conceptual models. Comparison with the results of the previous research was undertaken to evaluate the replication and generalizability of the models.

The failure of one of the two models to replicate precisely entailed further literature review, follow up analysis and correspondence with the original researchers. This researcher postulated a modified model in respect to Strategy Making Modes, which required a modification of the originally stated hypotheses. Both the modified model and hypotheses are reviewed in the Results and Analysis Chapter that follows.

4.72 Test Hypotheses

A series of correlation and regression analyses were undertaken to test relationships postulated in the hypotheses above, or modification thereof. In particular, a number of extracted constructs were related to overall organization performance and / or performance related variables which contribute to it.

Throughout, utilizing the practices adopted by Floyd and Wooldridge (1992a and 1997) and recommended by Hair et.al.(1998), constructs were measured using summated average (*Upward and Downward Influence)* and summated weighted average scales. (*Four Middle Management Strategic Roles and five Strategy-making Modes)* It must be acknowledged that there is some debate as to whether factor scores, which reflect all variables loading on a factor, or summated scales are the best choice for measuring a construct. The summated scale considers only those variables with high loading. As such, Hair (1998:120) suggests that they represent a compromise between surrogate variables and factor scores." If generalizability or transferability is desired, then summated scales or

surrogate variables are more appropriate. If the summated scale is a well constructed, valid, and reliable..it is probably the best alternative."

4.73 Relationships between the Constructs.

These were probed by examining the results of the correlations and regressions identified above and by conducting confirmatory factor analysis and "total model testing" in AMOS.(Version 4.0)

4.8 Chapter Summary

The chapter began by confirming that a positivistic orientation to the research had been adopted.

Around a model of the research design process, all major elements of the research process were reviewed. Questionnaire design, with a key focus on operationalization of variables, questionnaire structure, and the logic of replication, was covered comprehensively. Data collection, including sample definition and location was reviewed. Finally, a summary of data analysis techniques was provided.

5. Results and Analysis

5.1 Introduction

This chapter presents the results of all analyses that were undertaken on the data generated from this research. First, a comprehensive review is presented of the work done to replicate both models that underpin this study. Following modification of the original hypotheses, necessitated by a revised strategy making modes model, the impact of the two models on organization performance is discussed. The relationships first between the roles and modes and then between these two sets of constructs and organization performance are explored. The review of data analysis concludes with an investigation of the relationships between middle management strategic influence, implementation effectiveness and organization performance.

Following a summary of key information uncovered while pursuing the qualitative cases, a comprehensive review of the impact of the results and analysis on the degree to which hypotheses are supported, or not, concludes the chapter.

5.2 Replications

While analyzing the results of the factor analyses of both models, the following provided guidance. Hair (1998:112) suggests that for a sample of 130, any variable loading on a factor at a level of 0.48 or above is significant at the 0.05 level or better. (This assumes no significant cross loading.) Alternately, per Kim and Mueller (1978), any variable that loads at levels of 0.30 or above on two or more factors is "cross loading" and should be removed from the factor model. Calculating Cronbach alphas will assess the reliability of the factor model, and of the variables loading on each factor. Hair (1998:118) suggests that 0.70 should be the target for a factor with three or more variables loading, but identifies that alphas at 0.60 or lower might be acceptable for factors with only two variables.

5.21 *Middle Management Strategic Roles*

Factor Analysis of the data generated from Part I of the survey questionnaire appears to provide solid confirmation of the strategic roles model proposed by Floyd and Wooldridge.(1992A). Both the unspecified analysis and a plot of Eigenvalues pointed towards a four-factor solution. (Figure 20) An orthogonal

rotation, utilizing Varimax with Kaiser Normalization, produced a clearly specified model that loaded all 16 variables in the model, (Figure 21) and accounted for almost 60% of the variance in the model (Figure 22)

Most significant is the fact that two variables, whose behaviour in the original research was viewed by Floyd and Wooldridge (1992A:157) as counter to the theoretical logic, responded exactly as in the original research. " Encouraging informal discussion and information sharing among subordinates." Item 12 and variable V12AFA loaded strongly on Implementing Deliberate Strategy rather than Facilitating Adaptability. Similarly, "Gather and communicate information demonstrating the feasibility of new programs to managers above them." Item 1 and variable V1ASI loaded heavily on Championing Alternatives versus the anticipated Synthesizing Information. It should be noted that the original researchers suggest that these loadings " seemed theoretically appropriate". The relationships between the strategic roles, discussed previously, also add credence to these placements.

Figure 20. Initial unspecified factor determination: "Middle management strategic roles"

Scree Plot
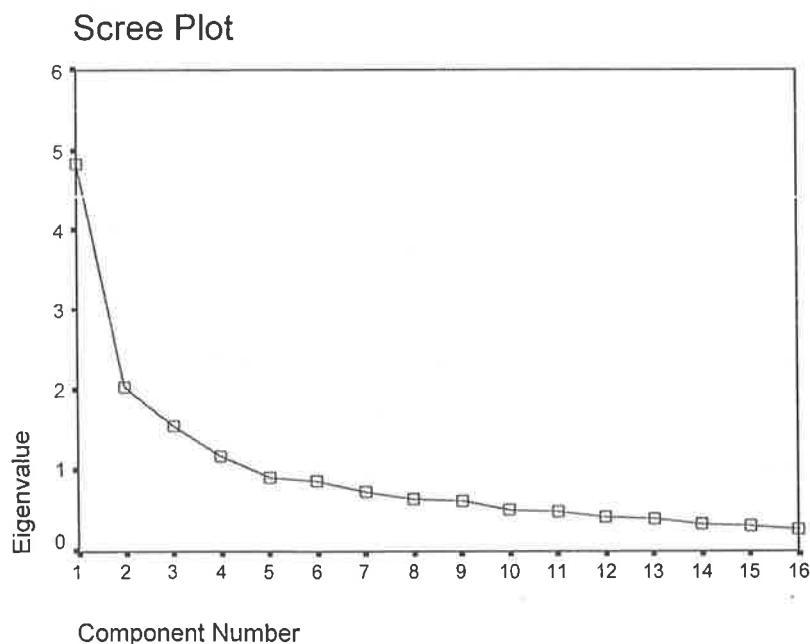
Figure 21. Final Factor determination: Middle Management Strategic Roles

Rotated Component Matrix[a]

	Component			
	1	2	3	4
V1ASI	-2.17E-02	.822	-3.45E-02	9.083E-02
V2ACA	.128	.784	.149	6.349E-02
V3ACA	.350	.477	.363	.244
V4ACA	.134	.588	.162	.123
V5ASI	.225	.143	-.134	.819
V6AIDS	.706	7.998E-02	6.455E-02	.177
V7AFA	.118	.221	.751	9.078E-02
V8AIDS	.793	.258	6.925E-02	2.921E-02
V9ACA	.111	.770	.188	8.750E-03
V10AFA	.138	.349	.647	7.128E-02
V11ASI	-4.94E-02	.114	.218	.790
V12AFA	.610	.127	.167	.205
V13AIDS	.743	1.104E-02	.255	2.097E-02
V14AFA	.327	4.325E-02	.503	5.316E-02
V15AIDS	.741	3.572E-02	5.389E-02	-.148
V16AFA	4.955E-02	2.170E-02	.828	-5.93E-02

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Figure 22. Total variance explained by factors; Middle Management Strategic Roles

Total Variance Explained

	Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %
1	2.965	18.529	18.529
2	2.755	17.218	35.746
3	2.308	14.424	50.170
4	1.498	9.363	59.533

Extraction Method: Principal Component Analysis.

The full extent of the replication and the comparison between the results obtained by Floyd and Wooldridge with those of this researcher are demonstrated in Table 6. "Middle Management Strategic Roles" It reveals the common variables loading on the four factors, the comparative reliabilities (alphas) of each factor. Although

the two models identified differently, with Championing Alternatives being the predominate factor in Floyd and Wooldridge's research. (Eigenvalue 4.52, accounting for 28% of the variance) and Implementing Deliberate Strategy being identified first in this researcher's work, (Eigenvalue 4.9, accounting for 18.5 % of the variance) they are remarkably similar models.

A fundamental conclusion can be drawn from Table 6. That is, for the sample taken by this researcher, the four strategic roles of middle managers proposed by Floyd and Wooldridge (1992A) are perceived to exist by the managers in this study. Also, the variables that support the role constructs are highly consistent with the original research. Coupled with the excellent to acceptable levels of reliability, it would be easy to conclude that this research not only confirms the original four-factor model but also suggests that the model is broadly generalizable. While the results of this replication do appear to add an additional element of support to the external validity of this model, it must be viewed within the context of the sample, its situational circumstances and the replication methodology. These are discussed in more detail below.

5.22 Strategy Making Modes

All iterations of the factor analysis, conducted on the data which corresponded to the seventeen variables used by Hart and Banbury (1994) to support their strategy making modes model, failed to produce a replicate in which all five modes as previously defined emerged. As can been seen in Figure 23 three distinct trends emerged from the data analysis. One variable V17CO was strongly separated and distinct from other variables. Two strongly defined factors emerged, one based on variables defined by Hart (1991, 1992) as " transactive" and the other based on variables identified as "rational". However, in both cases variables drawn from other modes are playing a significant role in completing the "new' factors. Lastly, cross loading was evident in a few variables with two exhibiting such a level they were deemed not to provide valid indication to, or support of, specific factors. Utilizing the guidance of Kim and Mueller (1978) and Hair et.al.(1998:113) variables V22SY and V31RA were eliminated from the factor structure. (Scores from the structure matrix exceeded 0.45 on three separate factors for both variables)

Table 6. Middle Management Strategic Roles Factor Analysis
(Factor Loadings: Floyd and Wooldridge compared to Bowd)

Items	Variable codes	Championing Factor 1 F&W	LB	Implementing Factor 2 F&W	LB	Facilitating Factor 3 F&W	LB	Synthesizing Factor 4 F&W	LB
Championing alternatives									
Justify and define new programs	V2ACA	0.86*	0.78*	0.09	0.13	0.07	0.15	0.10	0.06
Evaluate the merits of new proposals	V3ACA	0.60*	0.48*	0.25	0.35	0.11	0.36	0.15	0.24
Search for new opportunities	V4ACA	0.58*	0.59*	0.25	0.13	0.21	0.16	0.17	0.12
Propose programs or projects to higher level managers	V9ACA	0.70*	0.77*	0.12	0.11	0.25	0.19	0.10	0.09
Facilitating adaptability									
Encourage informal discussion and information sharing	V12AFA	0.19	0.13	0.65*	0.61*	0.00	0.17	0.11	0.21
Relax regulations to get new projects started	V14AFA	-0.10	0.04	0.09	0.33	0.70*	0.50*	0.03	0.05
"Buy time" for experimental programs	VV7AFA	0.23	0.22	0.12	0.12	0.59*	0.75*	0.05	0.09
Locate and provide resources for trial projects	V10AFA	0.26	0.35	0.07	0.14	0.63*	0.65*	0.09	0.07
Provide a safe haven for experimental programs	V16AFA	0.03	0.05	0.08	0.02	0.81*	0.83*	-0.06	-0.06
Synthesizing information									
Gather information on the feasibility of new programs	V1ASI	0.84*	0.82*	0.13	-0.02	0.02	-0.03	0.06	0.09
Communicate the activities of competitors, suppliers etc	V11ASI	0.13	0.11	0.15	-0.04	0.04	0.22	0.85*	0.8*
Assess changes in the external environment	V5ASI	0.22	0.14	0.11	0.23	0.04	-0.13	0.83*	0.82*
Implementing deliberate strategy									
Monitor activities to support top management objectives	V13AIDS	0.00	0.01	0.77*	0.74*	-0.01	0.23	-0.02	0.02
Translate goals into action plans	V8AIDS	0.20	0.26	0.58*	0.79*	0.14	0.06	0.22	0.02
Translate goals into individual objectives	V15AIDS	0.11	0.03	0.66*	0.74*	0.14	0.05	0.22	-0.15
Sell top management initiatives to subordinates	V6AIDS	0.16	0.07	0.59*	0.71*	0.03	0.06	0.00	0.18
Eigenvalue		4.52	2.00	1.74	4.9	1.51	1.6	1.15	1.3
Variance(%)		28.2	17.2	10.8	18.5	9.4	14.4	7.2	9.4
Alpha		0.82	0.79	0.70	0.77	0.66	0.72	0.70	0.58

Figure 23. Pattern and structure matrices for strategy modes factor analysis.

Pattern Matrix[a]

	Component				
	1	2	3	4	5
V17CO	1.965E-02	.159	-.102	.851	5.352E-02
V18RA	2.678E-02	3.080E-02	-.888	6.242E-02	1.901E-02
V19TR	.528	-.190	-.253	6.343E-02	-.105
V20GE	.216	6.824E-03	.132	.114	-.781
V21GE	-3.91E-02	9.041E-02	-1.23E-02	-.153	-.939
V22SY	.217	-6.91E-02	-.232	.153	-.297
V23RA	.112	2.120E-02	-.897	-.206	.207
V24GE	.892	.233	1.739E-02	-.173	9.213E-02
V25TR	.828	-.108	2.905E-02	6.491E-03	-9.78E-02
V26CO	-2.00E-02	.686	-.207	-4.18E-02	-.256
V27SY	.510	.179	-.186	.256	-1.94E-02
V28SY	2.918E-02	2.579E-02	-.504	.144	-.313
V29TR	.605	-.235	-1.62E-02	.215	-.212
V30TR	2.465E-02	-.200	-.520	8.817E-02	-.204
V31RA	.293	.424	-.342	-.265	-.170
V32CO	8.525E-03	.770	.165	.256	9.922E-02
V33RA	-8.32E-03	.110	-.686	.246	-3.00E-02

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 14 iterations.

Structure Matrix

	Component				
	1	2	3	4	5
V17CO	.173	.208	-.245	.867	-.137
V18RA	.454	.146	-.907	.203	-.324
V19TR	.688	-.108	-.530	.184	-.449
V20GE	.522	6.832E-03	-.271	.257	-.850
V21GE	.380	7.225E-02	-.319	9.160E-03	-.898
V22SY	.477	-1.73E-02	-.458	.267	-.506
V23RA	.421	.136	-.846	-8.56E-02	-.131
V24GE	.840	.307	-.377	-6.26E-02	-.273
V25TR	.849	-3.58E-02	-.389	.126	-.465
V26CO	.253	.705	-.368	5.928E-02	-.307
V27SY	.659	.260	-.499	.364	-.360
V28SY	.433	9.319E-02	-.656	.281	-.532
V29TR	.716	-.171	-.386	.326	-.531
V30TR	.359	-.132	-.595	.200	-.420
V31RA	.537	.481	-.554	-.126	-.376
V32CO	-9.15E-03	.762	6.114E-02	.245	.119
V33RA	.376	.203	-.745	.362	-.315

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

To achieve separation and clear definition of the factors in the model that this researcher is proposing, two steps were taken. Because there is evidence of significant correlation between the factors, and according to Hair et.al (1998:113) "it becomes more difficult to distinguish which variable loads uniquely on each factor", the factor pattern matrix was used to identify a distinct factor structure. (This was undertaken on an oblique rotation, using Oblim software, which extracted five factors. Other iterations and plot mapping had shown this to be the best to obtain a reasonable degree of factor specification and model clarity. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy for this analysis was 0.864, and the Chi-Square /df. Ratio was approximately 7:1 at a fully significant level. Both reflect a sound treatment of the data.) The five-factor model accounts for almost 67% of the model variance. (Figure 24 below)

Figure 24. Variance in LB final factor model; strategy modes.

Total Variance Explained

| Component | Initial Eigenvalues | | | Rotation |
	Total	% of Variance	Cumulative %	Total
1	6.421	37.773	37.773	5.185
2	1.627	9.573	47.346	5.101
3	1.296	7.626	54.972	4.042
4	1.097	6.452	61.424	1.837
5	.923	5.427	66.850	1.671
6	.869	5.111	71.962	
7	.795	4.677	76.639	
8	.700	4.121	80.759	
9	.554	3.259	84.018	
10	.528	3.108	87.126	
11	.460	2.704	89.831	
12	.371	2.185	92.015	
13	.350	2.059	94.074	
14	.304	1.787	95.861	
15	.287	1.690	97.551	
16	.262	1.540	99.090	
17	.155	.910	100.000	

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

After drawing out an apparent factor structure and model, the variables loading on each factor were examined for conceptual and operational fit. That is, did they belong together and strengthen the overall factor construct? Specifically,

did items positioned in a particular factor by Hart and Banbury (1994), appear to be consistent with and supportive of the "new" factors identified by this researcher. Table 7. Identifies the final factor structure adopted by this researcher and Table 8 the original model derived by Hart and Banbury (1994).

Table 7. VARIABLES LOADING ON FACTORS (LB model)

Factor 1   Participative / Aligned Mode : *Alpha 0.83*

H & B	? #	Variable Description
TR	3	Strategy is iterative, involving mangers, staff and executives, ongoing dialogue
GE	8	Employees understand what needs to be accomplished
TR	9	Business planning is ongoing, involving all
SY	11	CEO sets personal example how staff expected to behave
TR	13	Most people have input into decisions that affect them

Factor 2   Command Mode : *Alpha 0.44*

CO	10	CEO determines vision
C0	16	CEO sets strategy

Factor 3   Rational Mode : *Alpha 0.83*

RA	2	Written strategic plan each year
RA	7	Strategic planning is a formal procedure done in regular cycle
SY	12	TMT committed to targets and communicate them across organization
TR	14	Company adapts strategy based on market feedback
RA	17	Formal analysis of environment and competitors is basis of strategic plan

Factor 4   Autocratic Mode

CO	1	CEO determines & executes the strategy based on analysis of business situation

Factor 5   Generative Mode : *Alpha 0.78*

GE	4	Most people willing to take risks
GE	5	People encouraged to experiment

In respect to this researcher's Factor 1., the overall focus is on the role of broad employee involvement and an employee-centered view of strategy development. Both "interloper" variables do reinforce this perspective, although item #11 has a slightly directive tone. It would seem that when a CEO is stressing employee participation in the strategic process and setting an example, he / she is not perceived to be controlling the actions of others.

Factor #2 appears enigmatic. The two variables that constitute it, V26C0 and V32CO, load strongly on the factor at a level exceeding 0.70. Variable

mapping shows that they are closely associated and at distance from other variables. Yet the alpha value of 0.44 suggests that the factor is only marginally reliable. Hart and Banbury's (1994) Command mode also included the V17CO variable that assumed a separate identity in this research. It would appear that the distortion effect of responses to this variable may have mitigated the strength and validity of responses to the other Command variables.

Factor 3. Focuses on a rational / logical strategic process with a strategic plan as its output. All of the variables loading on this factor can trace their roots to this process. The variable loadings from the pattern matrix in Figure 23 show that this factor was strongly defined.

Although reduced to two identifying variables, the Generative Mode in this researcher's model is still distinctive and reliable. However, the Command Mode that is also reduced to two variables is not a reliable factor. As noted above, this can be traced to the behaviour of the V17CO variable that this researcher identified as an Autocratic Mode. This issue will be discussed further in the analysis below.

Table 8. Hart and Banbury (1994) Strategy-making Modes

Items Loading on Factors

Modes	Alpha	Items
Command	0.67	CEO sets strategy
		CEO determines vision
		CEO makes & executes strategy
Symbolic	0.70	Challenge our people
		20 year corporate dream
		Personal example
Rational	0.76	Written strategic plan
		Formal procedure
		Written mission statement
		Formal analysis
Transactive	0.70	Strategy is iterative
		Ongoing planning involving all
		People have input
		Market feedback
Generative	0.61	People willing to risk
		Experiments encouraged
		Employees understand

As Table 8 above shows, the five factors deduced by Hart and Banbury were all reasonably distinct and reliable. "Command" mode being CEO driven, while the "Symbolic" mode implied TMT leadership. "Rational", as identified in the literature discussions, tends towards the classical view of strategic planning but is significantly inclusive. "Transactive" and "Generative" are both less structured, having balanced input and predominantly "other than the TMT" input respectively.

The structure outlined by this researcher does reflect the conceptual framework and incorporates many of the constructs and variables that were evident in the original research. However, the differences are significant enough to require an exploration / discussion of the possible causes of the failure to perfectly replicate the original work.

Prior to this, a brief overview of confirmatory factor analysis, that was undertaken using structured equation modeling, is provided.

5.23 *Confirmatory Factor Analysis of Replicated Models*

Utilizing graphical structured equation modeling, based on AMOS 4.0 software, both models derived through SPSS factor analysis and interpretation were subjected to confirmatory factor analysis. The intent was to see if the models derived from the previous analysis were sound and "fitted" the data, and to identify possible correlations between constructs and variables.(This was intended to help explain "overlap" between factors and to predict the impact of the factor constructs on performance variables, as discussed below.)

For each factor model, a path diagram was constructed which mirrored the relationships between the factor constructs identified through SPSS analysis and the variables that loaded significantly on each factor. In addition, the path diagram was specified in such a way as to provide correlations between the constructs. Figure 25 reproduces the basic path diagram used to confirm the factor model derived for Middle Management Strategic Roles.

Both models were activated using the AMOS 4 engine and by loading the research data file that included all the sample data that was used in the SPSS analysis.

Figures 26 and 27 are a graphical representation of the output from these analyses, based on standardized estimates. Figures 28 and 29 are the factor scores based on these analyses, extracted from the complete results derived from analysis of each model. In both cases, the factor structures derived from SPSS and subsequent interpretation, were shown to be a reasonable fit to the data. Variables loading on each factor were consistent with factor scores obtained in the AMOS calculations, and the explanatory capability of variables to each factor was also good.

Figure 25. Middle Management Strategic Roles Confirmatory Factor Analysis: SEM Path Diagram
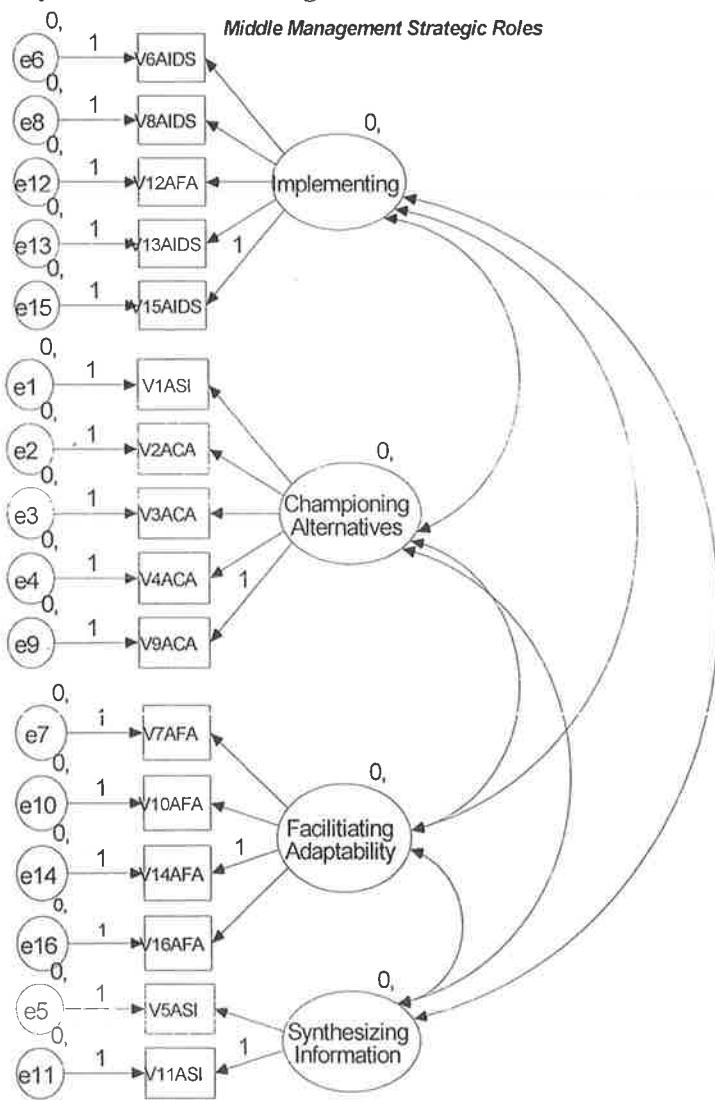
All SEM models generated in this analysis were assessed for fit and validity. It cannot, and perhaps should not be expected that the structure of a model will provide a perfect representation of the relationships between variables and constructs. However, measures of fit and validity do allow the researcher to

determine if the directions and weighting calculated in the model provide information that is valuable in supporting, or not, the hypotheses. Arbuckle and Wothke (1999) and Kelloway (1998) provided the guidance to this researcher's identifcation of key measures, generated through the AMOS engine, that would allow the output from the model to be evaluated for fit and validity.

Figure 26 Middle Management Strategic Roles Confirmatory Factor Analysis
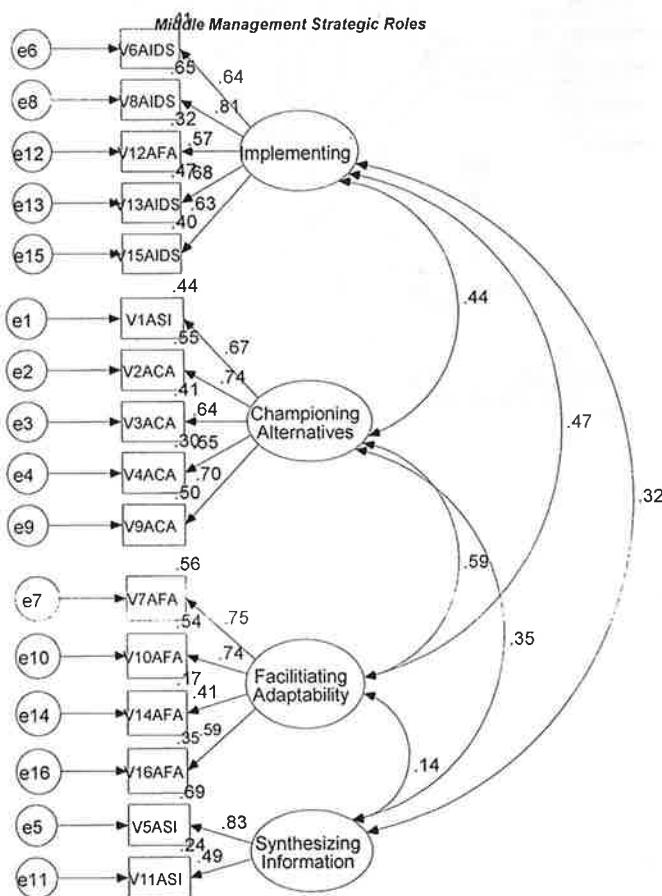
The following measures of fit were identifed for each model. CMIN / DF, the minimum discrepancy of the sample divided by the degrees of freedom. PCLOSE which provides a test of "close fit". (As opposed to the exact fit implied by the P value).CFI and NFI, the comparative and normed fit index respectively. RMSEA, the root mean square error of approximation, valuable in assessing the fit of complex models.

Figure 27 Strategy Making Modes CFA

Strategy Making Modes CFA
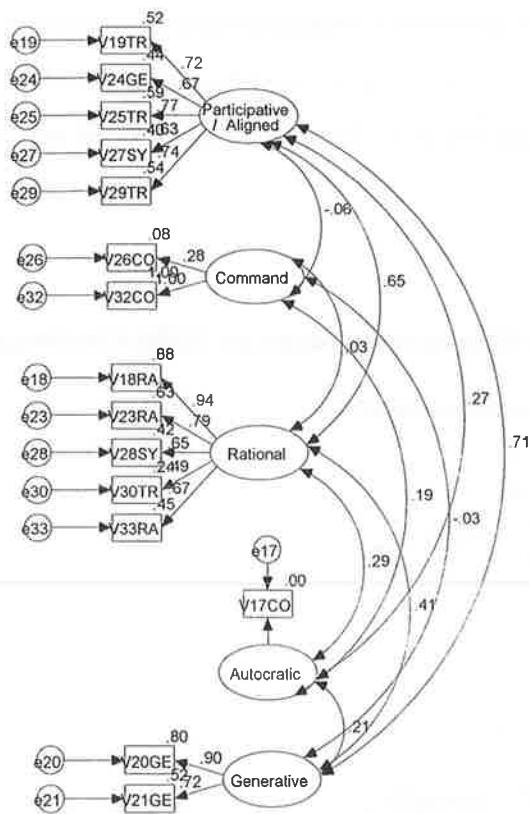
Figure 28. Factor Score Weights Middle Management Strategic Roles

	V16AFA	V5ASI	V11ASI	V7AFA	V10AFA	V14AFA	V1ASI
Facilitiat	**0.08071**	-0.00770	-0.00199	**0.14972**	**0.13281**	**0.04240**	**0.01929**
Championin	0.01802	0.02875	0.00741	0.03343	0.02965	0.00947	0.16545
Implementi	0.01071	0.02151	0.00554	0.01987	0.01763	0.00563	0.01025
Synthesizi	-0.00368	**0.33623**	**0.08666**	-0.00682	-0.00605	-0.00193	0.01468

	V2ACA	V3ACA	V4ACA	V9ACA	V6AIDS	V8AIDS	V12AFA
Facilitiat	0.02363	0.01480	0.01122	0.02017	0.00803	0.01614	0.00653
Championin	**0.20262**	**0.12694**	**0.09623**	**0.17299**	0.00718	0.01443	0.00584
Implementi	0.01256	0.00787	0.00596	0.01072	**0.11957**	**0.24028**	**0.09720**
Synthesizi	0.01798	0.01127	0.00854	0.01535	0.00769	0.01546	0.00625

	V13AIDS	V15AIDS
Facilitiat	0.00948	0.00762
Championin	0.00848	0.00682
Implementi	**0.14117**	**0.11351**
Synthesizi	0.00908	0.00730

Figure 29. Factor Score Weights Strategy-making Modes

	V20GE	V21GE	V17CO	V18RA	V23RA	V28SY	V30TR
Rational	0.002	0.001	0.014	**0.402**	**0.101**	**0.058**	**0.040**
Command	0.000	0.000	0.000	0.000	-0.000	-0.000	0.000
Participa	0.089	0.029	0.016	0.064	0.016	0.009	0.006
Generativ	**0.475**	**0.157**	0.011	0.003	0.001	0.000	0.000

	V33RA	V26CO	V32CO	V19TR	V24GE	V25TR	V27SY
Rational	**0.064**	-0.000	0.003	0.013	0.011	0.016	0.009
Command	0.000	0.000	1.000	-0.000	0.000	0.000	-0.000
Participa	0.010	0.000	-0.015	**0.140**	**0.115**	**0.170**	**0.096**
Generativ	0.000	0.000	-0.002	0.030	0.025	0.037	0.021

	V29TR
Rational	0.014
Command	0.000
Participa	**0.154**
Generativ	0.033

Note: To test the CFA model for Strategy-making Modes, it was necessary to set variances for VCO17 and V26CO to 0.

Figure 30. Covariances and correlations for Middle Management Roles factors

Covariances: Estimate   S.E.   C.R.

	Estimate	S.E.	C.R.
Synthesizing_Informa <> Implementing	0.082	0.045	1.814
Implementing <> Facilitiating_Adapta	0.097	0.034	2.829
Implementing <> Championing_Alternat	0.139	0.041	3.359
Championing_Alte <> Facilitiating_Ad	0.118	0.037	3.164
Synthesizing_Inf <> Championing_Alte	0.088	0.046	1.904
Synthesizing_Inf <> Facilitiating_Ad	0.022	0.022	1.012

Correlations: Estimate

	Estimate
Synthesizing_Informa <> Implementing	0.315
Implementing <> Facilitiating_Adapta	0.465
Implementing <> Championing_Alternat	0.441
Championing_Alte <> Facilitiating_Ad	0.586
Synthesizing_Inf <> Championing_Alte	0.351
Synthesizing_Inf <> Facilitiating_Ad	0.136

Figure 31. Covariances and Correlations for Strategy Modes Factors

Covariances: Estimate   S.E.   C.R.

	Estimate	S.E.	C.R.
Generative <> Participative_/ Align	0.775	0.172	4.519
Participative_/ Aligned <> Rational	0.689	0.151	4.580
Participative_/ Aligned <-> Command	-0.094	0.159	-0.596
Generative <--------------> Rational	0.440	0.132	3.328
Command <------------------> Rational	0.052	0.148	0.352
Generative <---------------> Command	-0.052	0.160	-0.325
Autocratic <> Participative_/ Align	0.379	0.143	2.653
Autocratic <------------> Generative	0.303	0.144	2.104
Autocratic <--------------> Rational	0.407	0.138	2.951
Autocratic <---------------> Command	0.423	0.193	2.188

Correlations: Estimate

	Estimate
Generative <> Participative_/ Align	0.708
Participative_/ Aligned <> Rational	0.651
Participative_/ Aligned <-> Command	-0.057
Generative <--------------> Rational	0.411
Command <------------------> Rational	0.032
Generative <---------------> Command	-0.031
Autocratic <> Participative_/ Align	0.267
Autocratic <------------> Generative	0.211
Autocratic <--------------> Rational	0.293
Autocratic <---------------> Command	0.195

For the confirmatory factor analysis on the Middle Management Strategic Roles model CMIN / DF was 1.66, PCLOSE 0.04, CFI 0.99, NFI 0.98, and RMSEA

0.07. The Strategy Making Modes model c.f.a. produced results of CMIN / DF 2.4, PCLOSE 0.00, CFI 0.98, NFI 0.97 and RMSEA 0.10. With the exception of the RMSEA value on the strategy making modes model, which is marginal, these values are viewed as acceptable or good by the authors above.

Combined with the factor scores, this suggests that the factor solutions derived from prior analysis are a good indicator of reality in respect to the data sample developed in this research.

Also valuable in understanding the relationships of the factor constructs with each other, and in respect to their impact on the performance variables (see below), is the evidence provided by the c.f.a. modelling of significantly high correlations between certain factors. Figures 30 and 31 demonstrate this output reflected in the path diagrams above (Figure 26 and 27). They will be reviewed in respect to both the replication results and the hypotheses demonstrating impacts on performance.

Note that the graphical and text output sampled in this discussion is generated by each application reviewed in this chapter. Complete text and graphical output can be found in Appendix C.

5.24 *Analysis of the Replications*

5.241 *Middle Management Strategic Roles*

As noted previously, the bulk of the information generated in this study and analysis appears to strongly support the four factor / roles model outlined in the work of Floyd and Wooldridge (1992A). Not only did this researcher's SPSS based factor analysis identify a factor solution remarkably close to the original work, the AMOS based confirmatory factor analysis resulted in as clean a solution that identified the four constructs as distinct factors with relatively strong loading variables.

This study succeeded in sampling a broad-based group, primarily middle managers, drawn from a relatively diverse group of organizations. Also, the sample statistics point towards a sound and apparently unbiased response to the questionnaire items pertaining to this model. While a few variables exhibit relatively high skew, most are close to normal distributions. Overall, one might conclude that this research has proven the validity of the Middle Management

Strategic Roles Model and that it also adds to the generalizability of the concepts and theory that support it.

However, a few minor cautions are in order. Schwab (1999) raises the concern that human subjects often respond to instruments in a manner that they think is appropriate or have tendency to describe the world as they want it to be versus what it actually is. The "random" portion of the sample drew upon groups that might have been viewed as predisposed to a positive view of the potential strategic behaviour of middle managers. Also, the response rate, although moderate, did exceed that which is normally expected from a non-conditioned mail survey. Because of this, it is possible that response bias may have tilted the model definition. This concern is mitigated, however, by the fact that respondents had no prior knowledge of the model they were confirming, and for most items there was a response distribution across at least three scale items.

Schwab's (1999) view of replication notwithstanding (see below), every effort was taken to ensure that the methodology utilized in the original research was repeated. Item structure and content, and overall instrument design were mirrored in this study's questionnaire. Of course, the composite nature of this research may have influenced responses by affecting the contextual and situational perspective of the respondents. While this may have been a major contributor to defining a different strategy making modes model, analysis of the data in respect to the middle management strategic roles model suggests such affects were minimized. In addition to the relatively normal distribution of the responses noted above, levels of multicollinearity amongst the variables are not excessive, recognizing that those loading on each factor are expected to be correlated with each other. (See Hair et.al.(1998 :99) for a discussion of the impacts of multicollinearity on factor analysis).

Taking account of the foregoing cautions, **it is reasonable to assert that the four strategic roles theorized by Floyd and Wooldridge (1992A), are an accurate reflection of the key strategic behaviours of middle managers.**

5.242 *Strategy-Making Modes.*

Contrasted with the very good replication of the middle management strategic roles model, an initial scan of the SPSS factor analysis of the strategy making modes data left this researcher with concerns that either his methodology or data analysis

were seriously flawed. However, after multiple iterations and use of both multiple orthogonal and oblique analysis methods, the modified model that emerged appeared to have a solid foundation. The factor model for strategy making modes is not as strong, in respect to factor loading, or as clean, in respect to overlapping variables / constructs and multiple loading variables, as the original research. However, as shown through the AMOS based confirmatory factor analysis, the model derived by this researcher is relatively robust.

Figure 32, graphically representing the relationships of the respective factor derived, strategy making modes constructs that emerged from the original research and this researcher's work portrays two key points. One, there are significant differences in the models. This is particularly so with the "outlying" factor / variable "Autocratic" and the strength and blending of the " Rational" and Participative / Aligned constructs. However, secondly there is still a great deal of similarity in the models. The spectrum of relationships between TMT members and other organization actors, still reflect the logic advanced by Hart and Banbury (1994). Four of the five constructs that emerged from this researcher's work, compare closely with the original structure. It would appear that Hart and Banbury's research provides a sound underpinning and conceptual framework for understanding the strategy making dynamic. (Hart, 1991, 1992, Hart and Banbury 1994)

The critical question is then, "What possible reasons caused the strategy making modes model not to replicate?" The following proposes four possible answers, two methodological and two conceptual / theoretical.

The first element that must be reviewed is the questionnaire. It's structure and the way that the items are worded are a possible source of distortion and / or biased response. The fact that V17CO is based on the first item in the composite questionnaire related to the strategy making modes model, may have contributed to its strong, separate identification in the factor model. The item, "The CEO of our company determines and executes the strategy based on analysis of the business situation" reflects a strong directive stance from the corporate leader. The reaction to this item may have been strengthened because respondents had spent the first half of the survey looking at the world from a middle management viewpoint. This may have also contributed to respondents "bending " their scaled responses to

Figure 32 STRATEGY MAKING MODES RELATIONSHIPS

A graphical representation of the definition of factors in the original research and this research.

Hart & Banbury

Les Bowd

Strategy-making Modes
A = Autocratic   C = Command
S = Symbolic   R = Rational
T = Transactive   G = Generative
P/A = Participative / Aligned
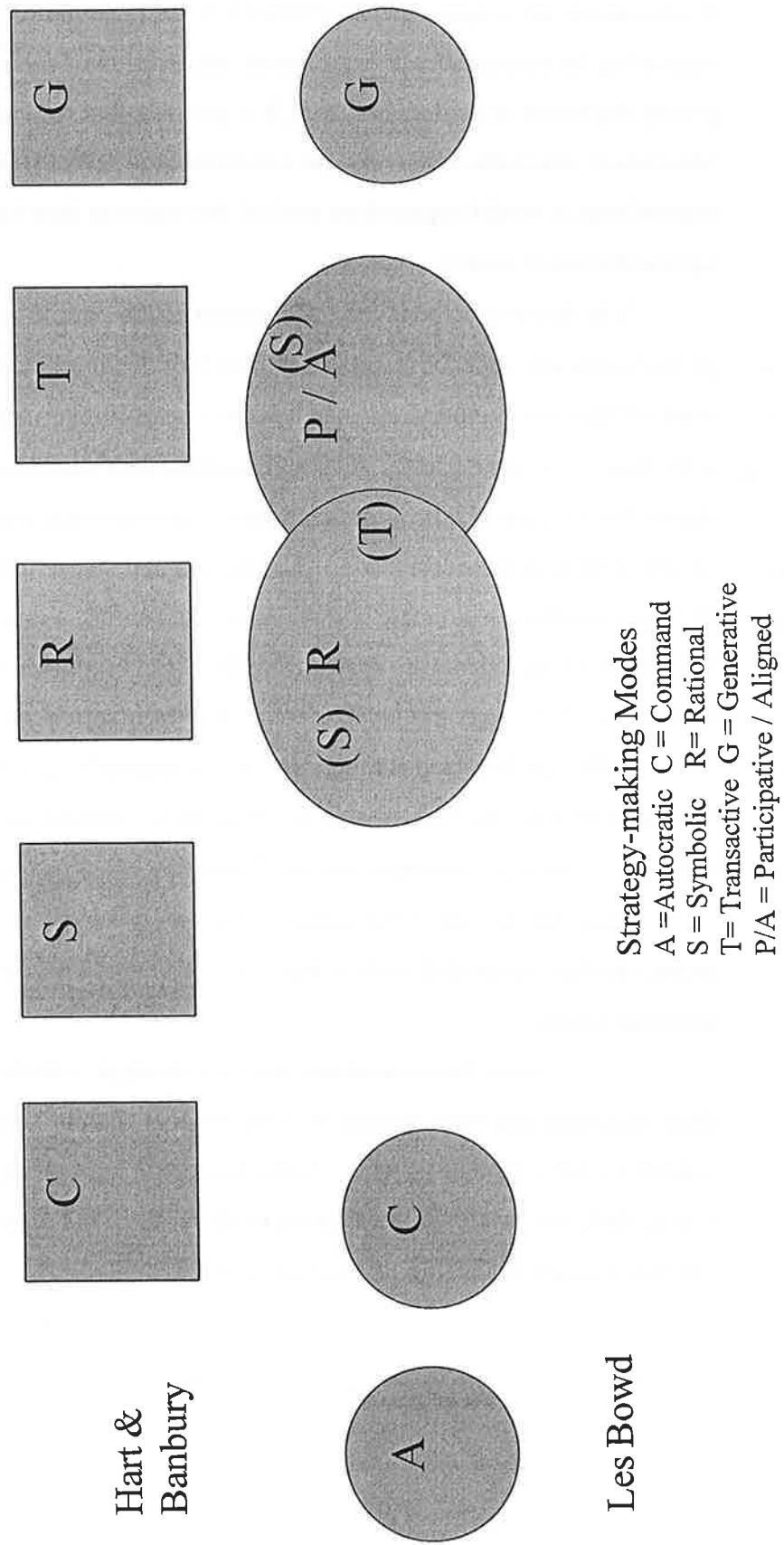
make them "fit' with the answers they perceived themselves as having given in Part I.

However, the descriptive data on strategy modes variables. (Figure 33) show that responses were relatively balanced across variables. Also, there appears to be virtually no correlation between V17CO and the other "Command" variables that loaded in the original model. (V26CO, V32CO, Items 10 and 16, Part II), supporting its separate treatment. Overall, this portion of the sample does exhibit a greater degree of skew than in Part I.. It is possible that respondents effectively "shortened" the scale. But, based on a number of informal follow-ups with respondents, it would appear they marked the scales as they believed was a fair representation of reality.

It is the environment and composition of the sample that may have had a greater influence over the responses to Part II of the questionnaire. A review of the work of Hart and Banbury, assisted by direct input from Stuart Hart, (E-mail correspondence, June / July 2002), revealed that their direct sample was primarily drawn from the top levels of organizations as surveys were mailed to and followed up with CEOs or their designates. Thus the original research sample reflected a TMT perspective on strategic collaboration. In contrast, a majority of this researcher's respondents are drawn from the ranks of middle managers and could be expected to bring a mid level orientation to their survey responses.

Although Hart and Banbury (1994: 257) initially developed a very broad sample from a diverse industry background, they refined their data set to those companies that had "dominant product" orientation.(260). They did this to avoid confounding the data with "mixed respondents". It is reasonable to suggest that by doing this they succeeded in deriving a very well specified model that may be situation specific.

How the respondents perceive strategic collaboration may affect their responses and subsequently how the strategy making modes are defined. Taking a TMT orientation, in an organization with tight strategic focus, one would expect that they would define a distinct role for the CEO / leader (Command) and identify a major leadership role for themselves (Symbolic).

Figure 33. Strategy making modes variable descriptive statistics and V17CO correlations

Descriptive Statistics

	Mean	Std. Deviation[a]	Analysis N[a]	Missing N
V17CO	5.27	1.37	132	0
V18RA	5.61	1.60	132	0
V19TR	4.79	1.47	132	1
V20GE	3.89	1.47	132	0
V21GE	4.17	1.47	132	0
V22SY	4.67	1.29	132	0
V23RA	5.41	1.72	132	0
V24GE	4.64	1.40	132	1
V25TR	4.58	1.50	132	0
V26CO	5.09	1.53	132	0
V27SY	5.38	1.48	132	0
V28SY	4.98	1.56	132	0
V29TR	4.24	1.41	132	1
V30TR	4.95	1.30	132	0
V31RA	5.18	1.86	132	0
V32CO	4.83	1.60	132	0
V33RA	4.75	1.51	132	2

a. For each variable, missing values are replaced with the variable mean.

Correlations to variable V17CO

	V17CO
V17CO	1.000
V18RA	.288
V19TR	.227
V20GE	.213
V21GE	.079
V22SY	.161
V23RA	.090
V24GE	.081
V25TR	.141
V26CO	.200
V27SY	.320
V28SY	.221
V29TR	.195
V30TR	.167
V31RA	.131
V32CO	.195
V33RA	.321

The top directed, Rational process matches their perception of senior management reality. Shared collaboration with other organization actors (Transactive) is

consistent with the need to surface and develop new strategic directions and acknowledges others may have better information than the TMT on certain issues. That other organization actors develop and implement strategy on their own is known but probably viewed as "organization anarchy". (Generative)

While many of the respondents to this researcher's study came from organizations with similar leadership profiles as those in the Hart and Banbury (1994) research, the results imply a different orientation to similar items. (See discussion below re. corporate leadership in case organizations)

Looking up, middle managers appear to see two distinct roles for the CEO. Total control with little room for input (Autocratic) or strong leadership "from the front"(Command). When it comes to involvement and collaboration with the top, middle managers appear to accept participation at a variety of levels across the strategy-making spectrum. That the Symbolic mode got absorbed into others is probably a reflection of middle management interest first in involvement and less with leadership. The structure of the modified model indicates that the distinctions were blurred across all three of the original three collaborative modes. Formality, order and the origins of strategic initiative appear to have been the primary contributors to establishing the two major constructs that emerged. The literature has shown that middle managers have a strong desire to be involved in the strategic process (Westley, 1990, Dutton and Ashford, 1993, Burgelman and Grove, 1996). The strategy-making modes' analysis, discussed above, indicates that they are willing to participate and collaborate across a broad spectrum of approaches to shared development. It is possible that in responding to certain items, such as #13 "Most people in this company have input into decisions that affect them", middle manager respondents do not necessarily differentiate between perceived or real alignment / participation. Supporting the prospect of a situational, "flexible" model, the results indicate that middle managers look at the strategic process in their organizations from a perspective that does not necessarily match that of the top.

That the results of the strategy making modes analysis should not be surprising and are probably highly valid, is supported by a comprehensive study undertaken by Dess, Lumpkin and Covin (1997). In attempting to define entrepreneurial strategy making, they began with the premises advanced by Hart(1992) including the five-construct model, and use a modified version of

Hart's original questionnaire to gather data. However, their methodology and underlying logic pre-supposes a situational outcome. They suggest that entrepreneurial strategy making will combine the features of both the command and generative modes. The sample selected was deliberately narrow, reflecting environments in which entrepreneurial activity could be expected to drive the organization. Modifications to Hart's 1991 instrument, although minor and quite subtle, none-the-less encouraged entrepreneurial orientation with phrases like "dynamic and entrepreneurial" and "more innovative approaches or products".(pp.685) The "intuitively appealing", four factor model that emerged from their work did support the existence of a distinctive entrepreneurial strategy making mode, yet maintained many of the conceptual elements of Hart's model. Although not fully proven, the authors proposed that the effectiveness of the entrepreneurial mode was dependent on its existence as a separate construct and the environment / strategy context in which evolved. That is, the mode will be distinct and strong in situations that support and utilize it.

It is important to observe that the work of Dess, Lumpkin and Covin was very rigorous and in no way manipulative. The factor / construct model they derived was sound and justifiable. Yet their result diverges from Hart's model to a degree sufficient to support a model which aligns with the needs of a particular strategic situation and the actors involved. This provides further evidence to the proposition that the Hart and Banbury model is conceptually very sound, but not necessarily generalizable across different strategic situations.

Schwab (1999:296) provides an apt conclusion to this discussion when he admonishes researchers not to expect that studies will replicate identically. He suggests that differences should not only be expected, but that they may also contribute to building bridges to prior research and bringing about cumulative knowledge.

5.3 Modified Hypotheses

The acceptance of the modified strategy making modes model requires an adjustment of some of the originally stated hypotheses, in order to reflect the new construct structures and implicit conceptual framework. Hypotheses 1-5 remain unchanged, as they relate solely to the middle management strategic roles model.

Hypotheses 6-11 are now replaced by new hypotheses 6-10, as the Symbolic mode was eliminated from the model.

> **H6. Strategy making processes that are characterized as "autocratic" or "command" modes will have less of an impact on organization performance than the "rational" or "participative / aligned" modes.**

> **H7. Strategy making processes that are characterized as "generative" will have less of an impact on organization performance than the "rational" or "participative / aligned" modes**

> **H8. Strategy making processes that are characterized as "rational" will have a highly positive impact on organization performance.**

> **H9. Strategy making processes that are characterized as "participative / aligned" will have a highly positive impact on organization performance.**

> **H10. Organizations able to utilize flexibly all strategy making modes will demonstrate higher levels of organization performance than those using a limited number of modes.**

Hypothesis 12 and its sub elements also require modification.

> **-H 11 The predominant strategy modes functioning in an organization will be a reflection of the degree to which its' middle managers can utilize particular strategic roles.**

> **-H 11A. When the "rational" mode is predominant, the implementing deliberate strategy strategic role will be most prevalent amongst an organization's middle managers with the role of synthesizing information for top management as strong back up.**

➤ -H 11B. When the "participative / aligned" mode is predominant, both the championing alternatives and facilitating adaptability strategic roles will be most prevalent amongst an organization's middle managers.

➤ -H 11C. When both the "rational" and "participative / aligned" modes are strong in an organization, all four strategic roles of middle managers will be prevalent in an organization.

➤ -H 11D. The existence of the "autocratic" "command" or "generative" modes will not influence the level at which middle managers strategic roles are undertaken in an organization.

The remaining hypotheses are also modified or re-numbered as follows.

-H 12. Capability to use all five strategy-making modes will be the strongest determinant of an organization's ability to achieve superior performance.

-H 13. Organizations utilizing the "rational" and "participative / aligned" strategy making modes, in which middle managers are able to strongly utilize the championing alternatives and synthesizing information strategic roles, will achieve superior organization performance.

-H 14. Organizations where middle managers are able to effectively utilize all four strategic roles will develop the capability to flexibly utilize all of the strategy modes and thus achieve superior performance.

-H 15. The degree to which middle managers are involved in and influence the organization's strategic processes will positively influence the level of implementation success as measured by a summation of the level of completion, achievement and acceptability of strategy implementation.

-H 16. The level of strategy implementation success will be directly related to the overall level of organization performance.

5.4 The Impact of Middle Management Strategic Roles and Strategy Making Modes on Organization Performance.

This section summarizes the results of a series of correlation and regression analysis undertaken using SPSS, and "confirmatory" structured equation modeling undertaken using AMOS 4.0. In the first stage, the derived factor constructs were correlated with the performance indicators and summated overall organization performance measure.(The validity of this measure is highlighted below.) In the second stage, the constructs were regressed against the overall performance measure. In the case of the middle management model, the derived summated constructs, upward and downward influence were added to the correlation matrix and regressed separately against the overall performance measure. As a third stage, SEM models were constructed and calculated. They identified the contribution of the model constructs on performance and also the level of correlation between the constructs.

5.41 *Middle Management Strategic Roles.*

Table 9, summarizes the results of SPSS analysis defining correlations between performance indicators, strategic roles and upward / downward influence. Figure 34. highlights the regression analysis of the four strategic roles on overall performance, and Figure 35 summarizes the regression of upward / downward influence on performance.

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Table 9. Correlations between performance indicators, middle management strategic roles and upward / downward influence.

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1.Goal achievement												
2.Competitive Position	.68**											
3. Return on Assets	.61**	.62**										
4. Operational Efficiency	.55**	.66**	.66**									
5. Financial Performance	.59**	.67**	.81**	.70**								
6. Growth Rate	.47**	.57**	.52**	.45**	.58**							
7. Overall Operating Performance (summated)	.79**	.85**	.86**	.81**	.89**	.75**						
8. Championing Alternatives	.16	.09	.04	.07	.09	.02	.08					
9.Synthesizing Information	.14	.24**	.20*	.17	.30**	.13	.24**	.30**				
10. Facilitating Adaptability	.04	.01	-.08	-.06	-.02	-.07	-.06	.43**	.15			
11. Implementing Deliberate Strategy	.11	.04	-.01	.04	.03	.00	.03	.37**	.24**	.49**		
12. Upward Influence	.37**	.42**	.28**	.29**	.26**	.23**	.37**	.55**	.44**	.40**	.31**	
13. Downward Influence	.24**	.17	.23*	.24**	.24**	.09	.23*	.34**	.11	.55**	.49**	.57**

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Figure 34. Middle Management Strategic Roles and Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.261[a]	.068	.039	1.0489

a. Predictors: (Constant), Implementing Deliberate Strategy, Synthesizing Information, Championing Alternatives, Facilitating Adaptability

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part
1	(Constant)	4.138	.689		6.008	.000			
	Championing Alternatives	.140	.269	.052	.518	.605	.078	.046	.044
	Synthesizing Information	.398	.152	.237	2.610	.010	.239	.226	.224
	Facilitating Adaptability	-.285	.245	-.120	-1.163	.247	-.055	-.103	-.100
	Implementing Deliberate Strategy	3.909E-02	.240	.017	.163	.871	.033	.014	.014

a. Dependent Variable: Overall operating performance (summated)

Figure 35. Upward and Downward Influence on Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.360[a]	.129	.116	1.0059

a. Predictors: (Constant), DOWNINFL, UPWRDINF

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.169	.473		6.694	.000
	UPWRDINF	.556	.163	.340	3.412	.001
	DOWNINFL	5.047E-02	.157	.032	.321	.749

a. Dependent Variable: OPERFSUM

Overall, the four middle management strategic roles do not appear to correlate with the performance indicators directly to a significant extent. In fact, it is only "Synthesizing Information" that correlates significantly with three of the

performance indicators and the overall performance measure. This is contrasted, in Table 9, with the moderate or strong correlations between the four strategic roles.

The regression analysis modeled in figure 34, reinforces this conclusion. There is an extremely weak relationship identified and the only significant contributor is the "Synthesizing Information" variable. Perhaps the most significant finding to emerge from Table 9 is the level of correlation between the two influence constructs and the performance indicators. Upward influence, in particular, has moderate or strong correlation with all performance indicators, the four strategic roles and downward influence. While still only a soft relationship, the influence constructs have a stronger relationship with performance than the individual strategic roles. Note that this regression shows that it is Upward Influence that has the significant impact on performance.

These results are consistent with the prior work and analysis of Floyd and Wooldridge. In 1992A: 163 they identified little or no correlation between the four strategic roles and overall performance, which in this case was financial performance. Yet their 1990 work clearly established that upwardly influencing strategic behaviour had a distinct positive impact on organization performance indicators such as ROA, growth, efficiency and overall performance.(1990:236). It is interesting to note that the two strategic characteristics that had the greatest correlations were "generating options" and "evaluating options". These were the precursor of the Synthesizing Information role that emerged from their later work.

It may seem difficult to comprehend that these relatively strong strategic roles do not have a direct influence on performance. This is, however, consistent with most of the prior research that has established their theoretical validity. As noted in prior discussion, Floyd and Wooldridge (1996) assert that there are complex inter-relationships between the role constructs. (Figures 12,13 and 14 provide graphical representations of these.) Much of the prior research has demonstrated that middle managers seek opportunities to be involved in the strategic process and to influence the development of the strategy. (Burgelman 1993, Westley, 1990, Thakur, 1998). It may not be as critical that their efforts directly impact performance, rather that they are able to influence strategic direction.

The SEM relating strategic roles to performance, provided consistent observations and results with the foregoing discussion. Figure 36 shows that there

Figure 36. Middle Management Strategic Roles to Performance
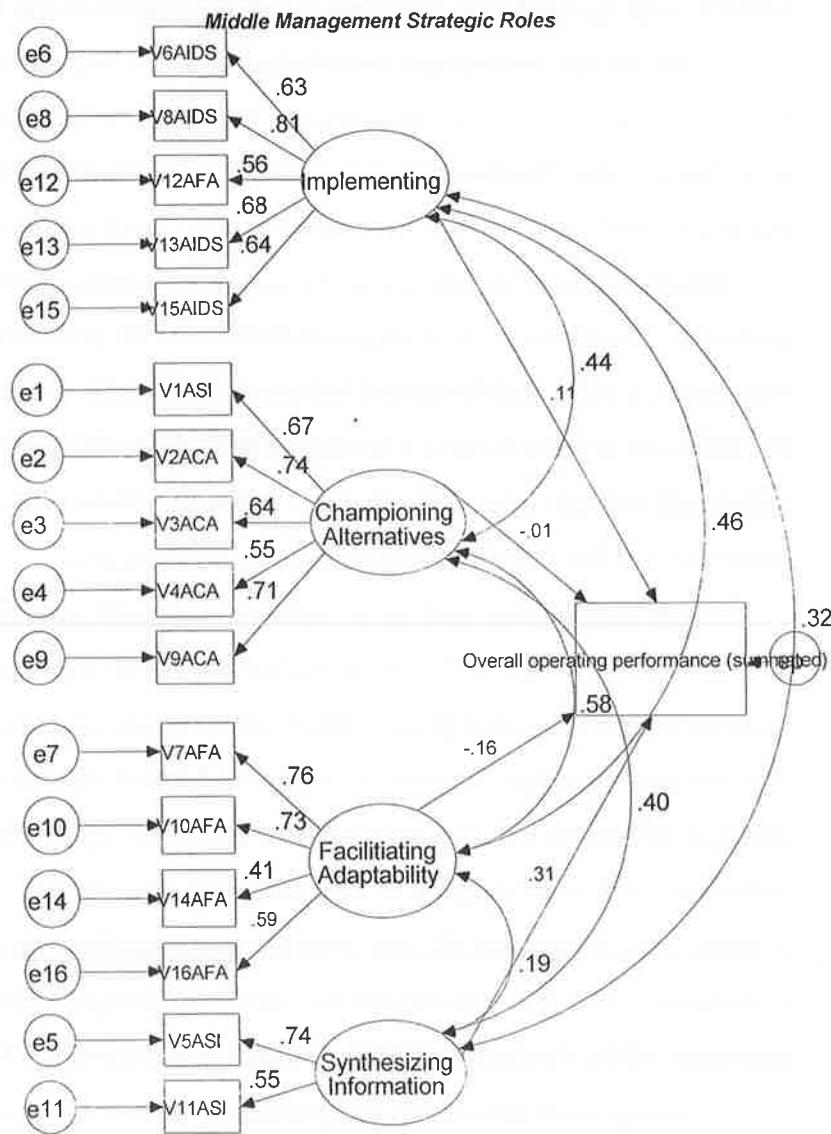
are no positive relationships between Facilitating Adaptability, Championing Alternatives and Performance. The relationship between Implementing Deliberate Strategy and Performance is very weak. Only Synthesizing Information exhibits a definite relationship. In contrast, the model does support the strength of relationships between the constructs.

5.42 Strategy Making Modes

Table 10 details the correlations between strategy making modes constructs and performance indicators. Figure 37 presents the results of the regression analysis of the constructs on the overall performance measure and Figure 38 summarizes the SEM of these relationships. In contrast to the results obtained from the Middle

Table 10. Correlations between performance indicators and strategy making modes

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Goal achievement											
2. Competitive Position	.68**										
3. Return on Assets	.61**	.62**									
4. Operational Efficiency	.55**	.66**	.66**								
5. Financial Performance	.59**	.67**	.81**	.70**							
6. Growth Rate	.47**	.57**	.52**	.45**	.58**						
7. Overall Operating Performance (summated)	.79**	.85**	.86**	.81**	.89**	.75**					
8. Participative Aligned	.57**	.57**	.61**	.55**	.59**	.52**	.69**				
9. Command	.22*	.15	.07	.07	.04	.16	.14	.17			
10. Rational	.63**	.52**	.58**	.57**	.54**	.52**	.68**	.60**	.23**		
11. Autocratic	.25**	.24**	.21*	.20*	.26**	.14	.25**	.22*	.25**	.28**	
12. Generative	.42**	.47**	.33**	.29**	.39**	.44**	.47**	.55**	.12	.38**	.16

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

Figure 37. Strategy Making Modes to Performance Regression

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.754[a]	.568	.551	.7165

a. Predictors: (Constant), Generative, Command, Autocratic, Rational, Participative / Aligned

b. Dependent Variable: Overall operating performance (summated)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.206	.384		3.138	.002
	Participative / Aligned	.485	.101	.378	4.826	.000
	Command	-4.37E-02	.071	-.038	-.613	.541
	Rational	.472	.086	.403	5.514	.000
	Autocratic	3.667E-02	.056	.041	.657	.513
	Generative	9.620E-02	.064	.105	1.506	.135

a. Dependent Variable: Overall operating performance (summated)

Management Strategic Roles model, the Strategy Making Modes model has a very strong overall relationship with Organization Performance. In respect to the correlations in Table 10, the Participative / Aligned and Rational modes have strong correlations with all the performance indicators, while the Generative mode has good correlation. Although much weaker, the Autocratic construct also has significant correlations with six indicators. Only the Command mode appears to have very little relationship to performance.

Regression analysis suggests a slightly different balance to these relationships. The rational and participative / aligned modes are significantly and strongly related to performance in a regression model that supports the view that the collaborative / participative modes of strategy making are capable of having a profound impact on organization performance. The SEM graphically represented in figure 38 supports this position. Regression weights for both the Participative / Aligned Mode (0.47, standardized) and Rational (0.34) identifies them as the major

Figure 38. Strategy Making Modes to Organization Performance

Strategy Making Modes CFA
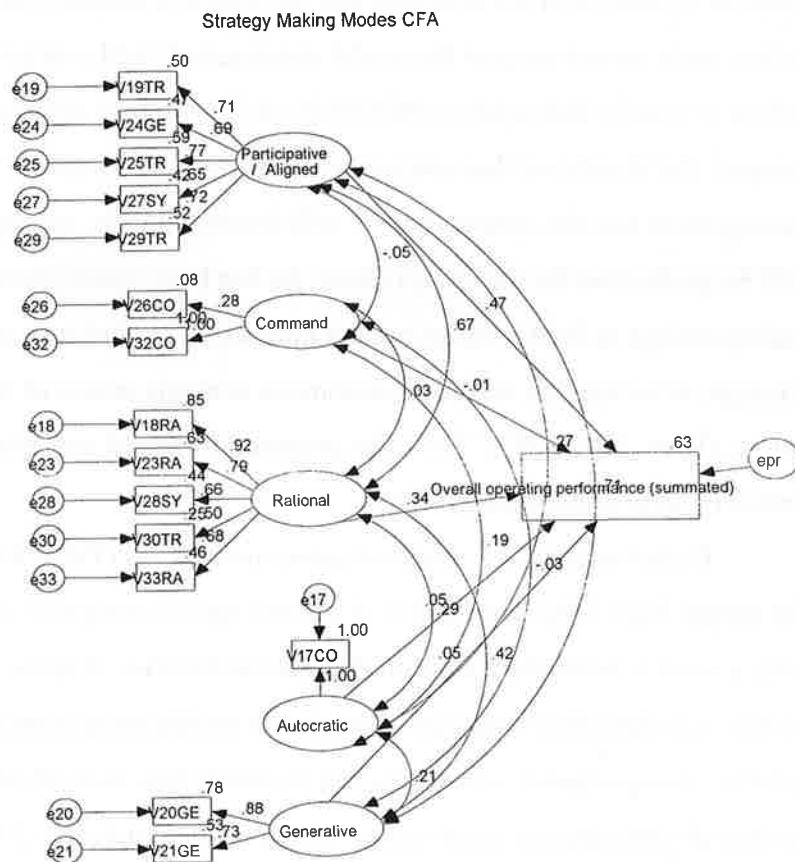
contributors to a relationship that explains 63% of the variance in dependent variable, organization performance summated. Although this analysis suggests that the other three modes make no or minimal direct contribution to organization performance, correlations from both SPSS and AMOS SEM support the view that to a significant extent the Generative mode, and to a much weaker extent the Autocratic mode are able to influence performance outcomes through their relationships with other modes. Only the behaviour of the Command mode runs counter to Hart and Banbury's (1994:261) assertion that all five modes can combine to bring about high performance. In both models / methods the Command mode has a negative or no impact on performance and there is only low correlation with other modes.

5.5 Relationships between the Middle Management Strategic Roles and Strategy Making Modes

Intuitive extension of the concepts and theories that shaped both models replicated in this study would suggest the model constructs should reinforce each other. The ability of middle managers to effectively utilize the four strategic roles should enhance the likelihood that strategic collaboration between the TMT, middle management and the operating level will develop timely, appropriate strategy that will be productive for the organization. As has been noted previously, the underpinnings to Hart's model are the interaction and balance of top management's strategic intentionality and the autonomous strategic action of other organization actors. (Hart, 1991,1992). The roles proposed by Floyd and Wooldridge (1992A) certainly address both dimensions.

Unfortunately, the results of prior correlations (Table 9 and Figure 36), and the output from SPSS correlation of the two sets of constructs suggest that there is only a weak relationship between the roles and modes. (Figure 39). Also, analysis to date has identified scenarios in which the middle management strategic roles exist as strong separate constructs, but in which their individual, direct contribution to overall performance is not strong. Floyd and Wooldridge (1996) have postulated that the relationships between the strategic roles are interactive, complex and supportive. They have also acknowledged that it is not possible to assert whether there is a direct relationship between middle management involvement and performance. (Wooldridge and Floyd, 1990:238)

This researcher's sample and data analysis has shown, upward influence was predominant and did exhibit a relationship with a majority of the performance indicators. None-the-less, Floyd and Wooldridge's (1997: 469) admonition that "one should not expect a simple relationship between more overall upward influence and higher firm performance" provides a signal as to why the strategic roles that underlie middle management strategic involvement and influence may not exhibit clean inter-relationships with strategy making modes. Hart (1992:344-345), identifies that existence of "independent" strategy making modes does not in and of itself predict individual firm performance either. Rather, it is the firm's ability to blend strategic capabilities at the operating, middle and top levels of the

Figure 39. Correlations between Middle Management Strategic Roles and Strategy Making Modes

Correlations

		Championing Alternatives	Synthesizing Information	Facilitating Adaptability	Implementing Deliberate Strategy	Participative / Aligned	Command	Rational	Autocratic	Generative
Championing Alternatives	Pearson Correlation	1.000	.303**	.430**	.371**	.165	-.136	.135	.043	.165
	Sig. (2-tailed)		.000	.000	.000	.064	.125	.129	.627	.061
	N	129	129	128	129	127	129	127	129	129
Synthesizing Information	Pearson Correlation	.303**	1.000	.146	.236**	.173	-.071	.077	.001	.078
	Sig. (2-tailed)	.000		.097	.007	.051	.419	.387	.991	.377
	N	129	131	130	131	128	131	129	131	131
Facilitating Adaptability	Pearson Correlation	.430**	.146	1.000	.490**	.099	-.199*	-.045	-.080	.016
	Sig. (2-tailed)	.000	.097		.000	.269	.023	.614	.364	.860
	N	128	130	130	130	127	130	128	130	130
Implementing Deliberate Strategy	Pearson Correlation	.371**	.236**	.490**	1.000	.057	.023	.155	.019	.121
	Sig. (2-tailed)	.000	.007	.000		.523	.790	.079	.829	.169
	N	129	131	130	131	128	131	129	131	131
Participative / Aligned	Pearson Correlation	.165	.173	.099	.057	1.000	.165	.597**	.221*	.546**
	Sig. (2-tailed)	.064	.051	.269	.523		.061	.000	.012	.000
	N	127	128	127	128	129	129	127	129	129
Command	Pearson Correlation	-.136	-.071	-.199*	.023	.165	1.000	.234**	.246**	.121
	Sig. (2-tailed)	.125	.419	.023	.790	.061		.007	.004	.169
	N	129	131	130	131	129	132	130	132	132
Rational	Pearson Correlation	.135	.077	-.045	.155	.597**	.234**	1.000	.283**	.379**
	Sig. (2-tailed)	.129	.387	.614	.079	.000	.007		.001	.000
	N	127	129	128	129	127	130	130	130	130
Autocratic	Pearson Correlation	.043	.001	-.080	.019	.221*	.246**	.283**	1.000	.159
	Sig. (2-tailed)	.627	.991	.364	.829	.012	.004	.001		.069
	N	129	131	130	131	129	132	130	132	132
Generative	Pearson Correlation	.165	.078	.016	.121	.546**	.121	.379**	.159	1.000
	Sig. (2-tailed)	.061	.377	.860	.169	.000	.169	.000	.069	
	N	129	131	130	131	129	132	130	132	132

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

organization into an appropriate combination of strategy making modes required for their strategic context. He asserts that "the greater the firm's strategy making capability within each mode, and the greater the number of strategy making modes it combines, the higher its performance." Although the analysis in respect to strategy making modes did show that the Rational and the Participative / Aligned modes had a strong relationship with overall performance, those strategic roles that would be expected to support them did not significantly correlate with them. (Synthesizing Information, Implementing Deliberate Strategy and possibly Facilitating Adaptability to the Rationale mode, with Championing Alternatives, Synthesizing Information and possibly Facilitating Adaptability to the Participative / Aligned mode.)

A simple response would be to conclude that middle management strategic roles have little or no effect on performance. However, the wealth of theory development and qualitative research that has been referenced in this work clearly points to a different end. The pivotal role of the middle manager in linking top and operating levels (Van Cauwenbergh and Cool, 1982.Nonaka, 1988, Bartlett and Ghoshal, 1993 Floyd and Wooldridge 2000), the effort that is made to influence top management and the development of strategy through use of the Championing

Alternatives and Synthesizing Information strategic roles, (Dutton and Ashford,1993, Burgelman, 1991, Thakur 1998), and the acknowledged ability of middle managers to act as a conduit through which critical strategic knowledge, capability and information is funneled (Nonaka,1991, Barney, 1991, Dutton and Ashford et.al, 2001, Liedtka, 2000) all point to the strategic value of middle management strategic roles.

Given that these roles have a major impact on strategy development and formulation, it is reasonable to propose that they must be part of the strategic process that is at work between top, middle and other organization actors during strategy making. However, the relationships between roles, processes, actors and outcomes do not appear to be simple ones.

In the next section, the results of number of SEM model calculations are summarized. These were undertaken to provide support or clarification to previously discussed analysis as well as to attempt to identify possible interactions between or associations with strategic roles and strategy making modes.

5.6 Exploring the relationships between strategic roles, strategy making modes and organization performance through SEM modeling.

Both the regression analysis (Figure 37) and the SEM (Figure 38), relating the strategy making modes model to overall performance, identified a very strong overall relationship with an r^2 of 0.57 and 63% of the variance in overall performance explained by the model.

In order to see if the two models co-existed or reinforced each other, hypothesis 13 was first tested in a SEM model. The prior regression and SEM has shown that the rational and participative / aligned modes are the largest and most significant contributors to organization performance. Championing Alternatives and Synthesizing Information are the strategic roles which give middle managers upward influence, and foundation theory suggests they should contribute to the success of both strategy modes.

Figure 40 summarizes the graphical output from this analysis. While the two strategic roles are positively related to the two strategy making modes the

relationship is very weak. It does confirm that the Synthesizing Information

strategic role is positively related directly with performance to a moderate level,

Figure 40   Testing hypotheses 13
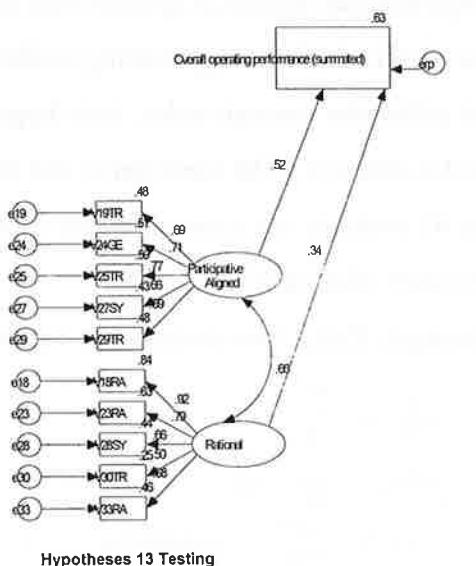
Hypotheses 13 Testing
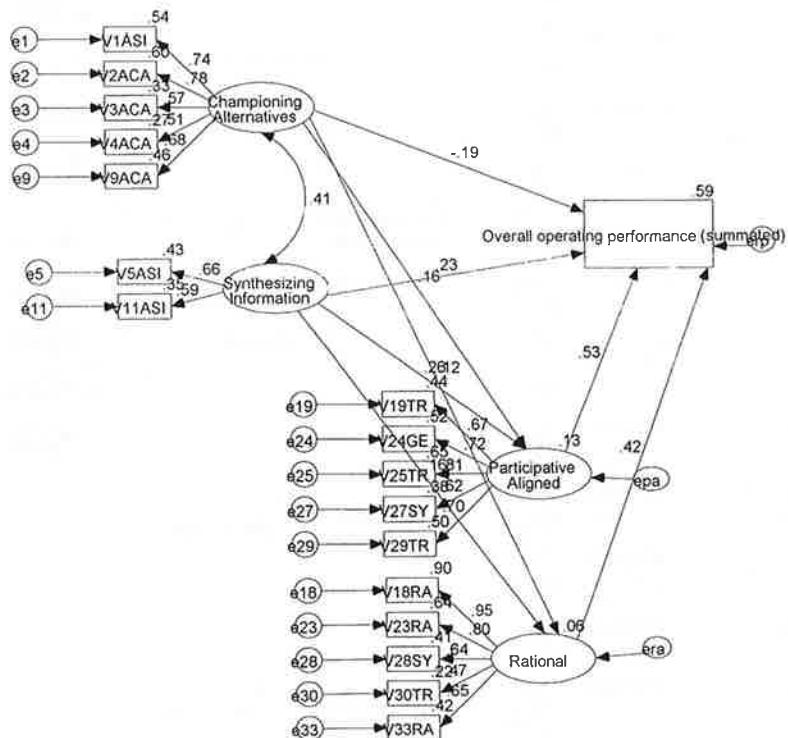
but as shown by the "base-line" model the contribution of the two strategy making modes alone exceeds that of the roles / modes model. This suggests that although there is a small positive relationship between the two roles and the two modes, it is the existence of the strategy making modes, rational and participative / aligned, as separate constructs that is the greatest determinant of high performance.

This result challenges the view that middle management 's capability to exercise the four strategic roles is a determinant of the existence of strategy making modes in an organization. Rather, it appears that the capability of an organization to sustain some or all of the strategy making modes will allow middle management to develop and utilize the strategic roles. Sub- hypotheses 11A-11D explore this relationship and a series of SEM were run to test if this reverse causality was present. Figure 41 presents one example of the models that were run to test the four groups of postulated relationships.

Figure 41. Strategic Roles Associated with Strategy Making Modes
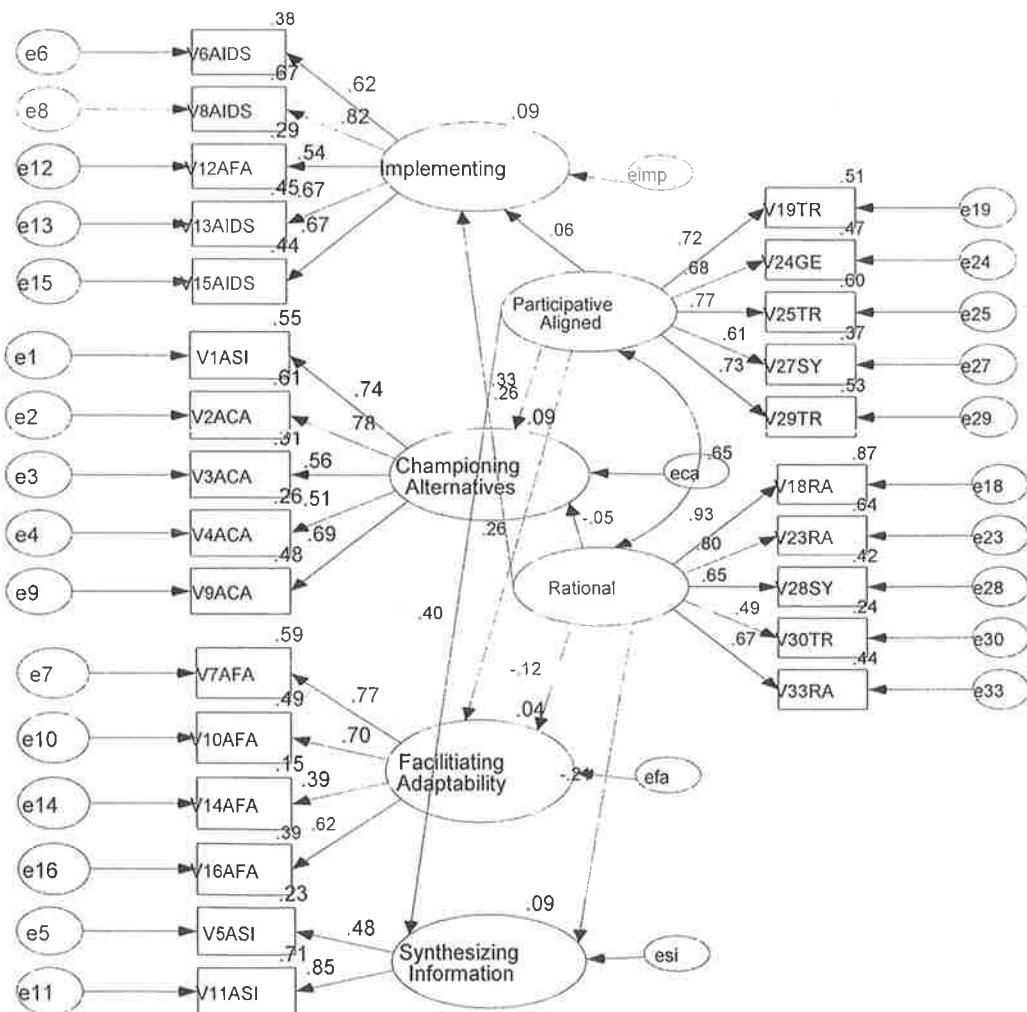
The results of these models demonstrates, that depending on the strength and existence of particular strategic modes, one can expect certain strategic roles to be practiced by middle managers. The model in Figure 41 above tended to reflect the results that emerged from the SPSS correlations and regressions discussed above. (Table 10 and Figure 37).

Based on this SEM model, and subsequent models that isolated the two strategy making mode constructs, it can be concluded that all four middle management strategic roles are present when the rational and participative / aligned modes are strong. In this case it appears that the participative / aligned mode relates very strongly to Synthesizing Information (SI) and moderately to both Championing Alternatives (CA) and Facilitating Adaptability.(FA) The rational mode has a moderately strong relationship with Implementing Deliberate Strategy (IDS) and very little with any other. When the model is tested to attempt to isolate the impact of each mode as a "predominant" style, the participative / aligned mode relates to all four strategic styles but only moderate / weak, whereas the rational mode continues to relate to IDS strongly and weakly to all others. One immediate conclusion emerged from this modeling, that was reinforced as the complexity of the modeling increased, was that the existence of more strategy modes together in the strategic process was likely to increase the likelihood that middle managers possessed and used a complete repertoire of strategic roles. The very high levels of correlation between most of the modes indicates that they are likely to be supportive and reinforcing to each other, and thus permit middle managers to utilize the full range of strategic roles while participating in strategy making in the organization.

When the generative mode is added to the model above, it creates an "unbalanced model", which none-the less suggests that there is no discernable relationship between this mode and all four strategic roles. However, a strong correlation between the three modes does exist. (The "unbalanced model" is maintained in the Appendix to demonstrate the strength of the correlations between the strategy modes. The standardized regression weights with respect to relationships between the roles and modes are way in excess of one, and thus suggest an invalid relationship. However, it appears the distortion has its roots in the correlation between the Generative mode and the two strong modes.)

The final composite model, exploring links between all five strategy making modes and the four middle management strategic styles demonstrates what happens when the inter-correlation effects between the three major strategy mode constructs impact relationships with the strategic roles. The participative / aligned mode continues strong relationships with S.I. and F.A. and has a weak relationship with C.A.. The rational mode appears to have very strong relationships with F.A., C.A., I.D.S. and moderately strong with S.I.. The generative mode has moderately positive relationships with F.A., C.A., and I.D.S.. Only the autocratic and command modes have little or no relationship linkages with the strategic roles.

This latter conclusion does fit with the conceptual framework underling the modes. Both the command and autocratic modes imply high degrees of direction and control from primarily the CEO. There is little expectation of, or opportunity for collaborative strategy making. While it is possible for middle managers to facilitate and champion strategic processes in the operating or lower management levels (per Burgelman and Grove ,1996 , Thakur, 1998), if leadership tends towards autocratic it is unlikely that they will be able to practice them to influence corporate strategy making.

While the results of the SEM modeling do appear to provide some clarity to the relationships that exist between the strategy making modes and middle management strategic roles there are a couple of cautions that are in order. This researcher, recognizing that there was no evidence of correlations and relationships flowing from the strategic roles to the strategy making modes, chose to reverse the causality and investigate whether existence of modes stimulated the presence and use of strategic roles. This assumes that the relationship is a direct one and that there are no intermediate relationships or processes at work. It has been noted previously how the actual functioning of the constructs in both models, in relation to the strategic management process, is quite complex and inter-related.

The second caution relates to the use of SEM for interpreting complex inter-relationships. While the fit indices for all the models appear quite satisfactory, the variations in each construct and the complexity of iterations in the model (particularly the 4 by 5 roles to modes SEM) would suggest that the analysis can be used with confidence to provide sound direction but not absolute rigour.

5.7. Influence, Implementation Effectiveness and Organization Performance.

As noted during the literature review and discussion that shaped the survey questionnaire, implementation effectiveness was identified as a key step and measure between strategy formulation and decision making, and organization performance indicators. (Dean and Sharfman, 1996, Susan Miller, 1997) Miller's three indicators of implementation effectiveness were used to assess whether the degree to which middle managers perceived that they could influence the strategic process was related to their assessment of the degree of implementation success in their organizations. (Hypothesis 15) Thereafter, this measure was tested to see if it was a good predictor of overall organization performance. (Hypothesis 16)

Initially the two influence constructs were correlated with the three indicators of implementation effectiveness. Figure 42 provides the results of this analysis.

Figure 42 Correlations between Implementation Effectiveness indicators and Upward / Downward Influence.

Correlations

		Completion	Achievement	Acceptability	Upward Influence	Downward influence
Completion	Pearson Correlation	1.000	.598**	.616**	.399**	.245**
	Sig. (2-tailed)	.	.000	.000	.000	.005
	N	132	132	131	129	129
Achievement	Pearson Correlation	.598**	1.000	.711**	.360**	.285**
	Sig. (2-tailed)	.000	.	.000	.000	.001
	N	132	132	131	129	129
Acceptability	Pearson Correlation	.616**	.711**	1.000	.331**	.280**
	Sig. (2-tailed)	.000	.000	.	.000	.001
	N	131	131	131	128	129
Upward Influence	Pearson Correlation	.399**	.360**	.331**	1.000	.573**
	Sig. (2-tailed)	.000	.000	.000	.	.000
	N	129	129	128	129	127
Downward influence	Pearson Correlation	.245**	.285**	.280**	.573**	1.000
	Sig. (2-tailed)	.005	.001	.001	.000	.
	N	129	129	129	127	129

**. Correlation is significant at the 0.01 level (2-tailed).

The results indicate that both influence directions correlate moderately to all three indicators, with the upward influence having a greater relationship.

The three effectiveness indicators were then analyzed and it was established that one factor could represent them. The resultant factor accounted for

100% of the variance. The two influence factors were then regressed against this factor.

As Figure 43 shows, there is moderate relationship overall, with the Upward Influence being the strongest and most significant predictor of Implementation Effectiveness.

Figure 43. Implementation Effectiveness Factor Regression

Component Matrix[a]

	Component 1
Completion	.839
Achievement	.885
Acceptability	.891

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.442[a]	.196	.183	.9050906

a. Predictors: (Constant), Downward influence, Upward Influence

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.262	.428		-5.288	.000
	Upward Influence	.583	.149	.385	3.915	.000
	Downward influence	.130	.142	.089	.910	.364

a. Dependent Variable: Implementation Effectiveness (factor)

The relationship between the implementation effectiveness factor construct and overall organization performance was then tested. It should be noted that the use of the summated construct for organization performance was validated through the use of factor analysis. As shown below the indicators of performance loaded on one factor that accounted for 100% of the variance. Figure 44 presents the results of the regression between the two factors. There is a very strong and highly significant relationship between implementation effectiveness and organization performance. Given that their has been a significant amount of research which has

validated the use of subjective measures of performance (see for example Venkatraman and Ramanujam, 1986), the recognition that Miller's (1997:583) three implementation effectiveness indicators sum to provide a strong prediction of overall organization performance adds a valuable tool for the strategic process researcher.

Figure 44. Implementation Effectiveness to Organization Performance Regression

Component Matrix^a

	Compone nt
	1
Goal achievement	.800
Competitive position	.851
Return on Assets	.859
Operational efficiency	.816
Financial performance	.890
Growth rate	.726

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.684^a	.468	.464	.7921

a. Predictors: (Constant), Implementation Effectiveness (factor)

5.8 Summary of the Qualitative Cases

The three organizations that agreed to provide qualitative information with respect to their strategic management processes share a number of common elements.

First, they have maintained a record of successful performance over time and are perceived to have developed and executed corporate strategy with a great deal of success. Suncor has grown into the leading company exploiting oil sands in North America. Its Millennium project is a three billion dollar undertaking which will result in the largest oil sands extraction process in the world. Enbridge, from the foundation of a regionally based pipeline company has grown into an

integrated utility with operations across Canada and the US. Nexen Inc has emerged into a major player in international oil exploration. In locations like Yemen, they have succeeded in operating as "good corporate citizens" and being highly profitable.

All three organizations are, or were, lead by charismatic leaders whose personal presence and the organization's image are implicitly linked. Rick George, at Suncor, Charlie Fisher of Nexen, and the now chairman of Enbridge, Brian MacNiel all are strong individuals with powerful reputations in their industries and community. All enjoy very high levels of respect from their employees.

The internal reputation of all three organizations is highly positive. Informal interviews confirmed that the external perception that they possessed positive cultures and were perceived to treat their staff very well, even in difficult situations like downsizing, was correct.

A great deal of effort is directed at ensuring that employees are aligned with the strategy and ongoing communication is directed at providing progress updates. For example, Enbridge provides an employee version of the strategic plan within one month of the leadership team setting the strategy. Suncor uses an employee annual report to let employees know the previous year's results and communicate next year's targets. All three organizations use extensive meetings across the geography of the organization to ensure that employees hear first hand from senior leaders what is contemplated at the corporate level.

Yet, all three organizations have a strategic management process that is described by their own leaders as "Top down and top directed". While particular elements of each company's process differ, overall the strategic planning process in the organizations is characterized as rational / analytical. (see Mintzberg, Ahlstand and Lampel 1998:48-79). The middle and operating levels are asked to provide information and suggestions into the process but in all cases a relatively small group of individuals shapes and confirms with the corporate board a final strategy. (Enbridge, 8 people plus about ten others who provide functional / business input.) The approved strategy flows downward through normal management behaviour and the communication initiatives outlined above. In all three cases it was difficult for this researcher to imagine how middle managers could perceive that they were directly able to influence the corporate strategy or had participated in a collaborative strategy process with senior management.

Remarkably, however, informal discussions and feedback from employees who have participated in MBA and Executive Development programs facilitated by this researcher suggest the contrary. The perception of involvement amongst employees of all three companies is very high, particularly amongst middle managers. Two factors would seem to contribute to this. The high level of relatively open communication about the corporate strategy is clearly a factor. However, it would appear that the scope of responsibility assumed by a typical middle manager in these organizations is such that they do not seemed threatened by the top down direction. In all three cases the level of functional or business responsibility provides a great deal of local autonomy for decision making and action.(Bower, 1970) A Nexen manager in Yemen will make most of the decisions in respect to the development of an offshore oilfield. The specific details of the strategy to take Suncor into the renewable energy field will rest with specialist managers.

This researcher's involvement with all three companies was short and sporadic, however it is likely that the developing and surfacing of autonomous initiatives described by Burgelman (1991) is occurring in all three organizations.

While the size of the samples, gathered from two of the organizations, did not permit separate analysis, their descriptive data indicated that they were quite consistent with the overall sample. That is, the existence of the four middle management strategic roles was acknowledged as well as all strategy making modes. As might be expected, the indicators that reflected CEO or top management involvement in strategy making were slightly more skewed than for the overall sample, but not excessively so.

A few basic observations can be drawn from this summary. First, organizations utilizing a rational strategy making approach with top down direction can develop good strategy and achieve good performance. Secondly, as already noted, perception of involvement and alignment may be just as powerful as actual involvement. Local autonomy may provide a significant degree of strategic influence. Lastly, even in large apparently well structured organizations, research into how the strategic process actually functions would be valuable. (See for example Pettigrew and Whipp, 1993)

5.9. Summary of Results of Hypotheses Testing

In the next section the modified hypotheses are presented and a summary evaluation is included for each hypotheses. These draw upon the results presented in this chapter and relevant literature. Table 11 presents an overview of the support found for each hypothesis.

➤ **H1. Middle management involvement in the strategic management process through the active championing of strategic alternatives will have a positive impact on organization performance.**

   No support was evident for the existence of a direct relationship between the championing alternative role and organization performance. Both SPSS correlation and regression and SEM show virtually no relationship.

   This result appears to be counter-intuitive. The "championing" activity is fundamental to bringing forward autonomous strategic initiatives, (Burgelman, 1991) and to selling issues to top management. (Dutton and Ashford, 1993,1997)However, the literature also shows that the ultimate impact of middle managers on organization performance occurs through and with both top management and the operating level. This is a complex, integrated relationship. (Bartlett and Ghoshal, 1993:38, Simon, 1993:141, Floyd and Wooldridge, 1996:106-107)

➤ **H2. Middle management involvement in the strategic management process by synthesizing information (for top management) will have a positive impact on organization performance.**

   A direct and moderate relationship exists. Confirmed by both SPSS analysis and SEM interpretation.

   Figures 13 and 14 (Floyd and Wooldridge, 1996) highlight the key-integrating role played by the synthesizing information role. In respect to the pivotal / linking position of middle managers in the strategic process (Nonaka, 1988), it is the means by which other elements of the strategic process are accomplished.

➢ **H3.** **Middle management involvement in the strategic management process by facilitating adaptability will have a positive impact on organization performance.**

Not supported. While the literature strongly identifies the critical integrating, stimulating flexibility and moderating role of the middle manager, (Bartlett and Ghoshal, 1993, Papadakis, Lioukas, and Chambers, 1998:132) there is also recognition that it permits other elements of the process to function effectively. For example, Floyd and Wooldridge,(1996:94)suggest it is a key pre-requisite to allow middle managers to champion alternatives.

➢ **H4. Middle management involvement in the strategic management process through implementing deliberate strategy will have a positive impact on organization performance.**

Not supported. The traditional view of the middle manager in the strategic process placed them as "supervisors / directors" of implementation.

Implicitly, this would suggest that this role allowed middle managers their greatest impact on performance. However, the literature does not support such a direct relationship. Wooldridge and Floyd's 1990 work showed that direct involvement in implementation does not directly impact organization performance. Rather, prior involvement in strategy formulation is key to implementation success. (Westley, 1990, Barney,1991)

➢ **H5. The combined impact on organization performance of middle management roles of strategic involvement which feature "upward influence", that is championing alternatives and synthesizing information, will be greater than the combined impact of those roles which feature "downward influence", that is facilitating adaptability and implementing deliberate strategy.**

Moderately strong support was found for this hypothesis. Upward Influence correlated with all indicators of performance at a significant level and was the significant contributor to a moderate relationship with overall organization performance. Although downward influence correlated with five of the seven performance indicators, and was only moderately weaker

than the upward influence construct, it was not a significant contributor to the prediction of overall performance.

Schilit and Paine (1987) identified that middle managers engage in upward influencing activities over relatively long time frames. Both Nonaka (1988) and Burgelman (1994) highlight the critical ability of middle managers to initiate strategic renewal / change because they are able to directly influence the decisions made by top management.

➢ **H6. Strategy making processes that are characterized as "autocratic" or "command" modes will have less of an impact on organization performance than the "rational" or "participative / aligned" modes.**
Strongly supported. Both SPSS and SEM analysis demonstrate that both the command and autocratic modes have significantly lower correlations than the other three modes and do not make a significant contribution to the prediction of overall performance. Note that in the SEM test of this relationship the autocratic mode does contribute to overall performance but at a much lower level than the rational and participative / aligned modes. This result is consistent with the theoretical propositions developed by Hart (1992:340) and follows the stream of logic developed by researchers such as Bourgeois and Brodwin(1984), Thakur(1998) and Mintzberg, Ahlstrand and Lampel, (1998).

➢ **H7. Strategy making processes that are characterized as "generative" will have less of an impact on organization performance than the "rational" or "participative / aligned" modes.**
Supported with some reservations. The generative mode has relatively high correlations with performance indicators, although significantly lower than the other two. However, in the regression model it is not a significant contributor. But, the SEM interpretation, from the "4 X 5" test, suggests that it may make a slightly higher direct contribution to predicting overall performance than the rational mode.

Note that the overall analysis suggests that the generative mode is quite significant to the strategy making process. Hart (1992), Burgelman(1991), and Burgelman and Grove (1996) all acknowledge the need for collaborative

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arrangements which allow strategic innovations to be surfaced from the middle and operating levels to top management. These results would suggest that generative strategy making occurs within a complex set of inter-relationships.

➤ **H8. Strategy making processes that are characterized as "rational" will have a highly positive impact on organization performance.**
<u>Strongly supported</u>. Correlations, regression analysis and SEM all show a strong relationship with performance.

This result is consistent with Hart's (1992) view that the rational strategy- making mode will be one of the most significant predictors of organization performance.

➤ **H9. Strategy making processes that are characterized as "participative / aligned" will have a highly positive impact on organization performance.**
<u>Strongly supported</u>. Correlations, regression analysis and SEM all show a strong relationship with performance.

The support for this hypothesis is founded not only in its consistency with Hart's (1992) and Hart and Banbury's (1994) original work, but in the literature which has pointed towards a balanced collaborative relationship between top management and other organization levels as a means to strategic effectiveness.(Kanter, 1982, Mintzberg and Waters, 1985,Dutton and Ashford et.al. ,1997)

➤ **H10. Organizations able to utilize flexibly all strategy making modes will demonstrate higher levels of organization performance than those using a limited number of modes.**
<u>Moderately supported</u>. Superficially one could conclude from SEM testing that because the two modes, rational and participative / aligned, contribute an explanation of 63% of overall performance and the total modes model only matches it, that organizations only need the two strategy making modes to achieve high performance. However, as Hart (1992) noted, the ability to respond to all strategic situations requires a diverse set of strategy making

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capabilities. Indeed, the level of correlations between strategy making modes suggests that they are supportive of and complementary to each other.

- ➤ **-H 11 The predominant strategy modes functioning in an organization will be a reflection of the degree to which its' middle managers can utilize particular strategic roles.**

  <u>*The correlations necessary to support this view did not exist.*</u> *Rather, by use of SEM modeling it was shown that when particular strategy making modes are present, then certain middle management strategic roles are likely to be stimulated.*

  It is in Hart's(1992) conceptual development that both the suggestion that this hypothesis may be supported, and the possibility that the relationships between strategy making modes and strategic roles were much more complex than in this hypothesis, are postulated. He notes (Hart, 1991:344-345) that other researchers have proposed that an ideal strategy making process features top management vision creation and middle management development and implementation of innovative strategic initiatives to reach it. This approach, characterized as "middle-up-down" (Nonaka, 1988) or the development of "autonomous strategic initiatives" (Burgelman, 1983, 1991) equates to a combination of the symbolic and generative strategy making modes (Hart, 1991) and requires all four middle management strategic roles (Floyd and Wooldridge, 1992A) to be active.

  However, Hart (1991:344 / 346) also acknowledges that just how the modes, and the roles that define them, blend and interact is still open to question and requires further research.

- ➤ **-H 11A. When the "rational" mode is predominant, the implementing deliberate strategy strategic role will be most prevalent amongst an organization's middle managers with the role of synthesizing information for top management as strong back up.**

  <u>*Partially supported. SEM testing supports the premise that a predominant rational strategy mode will be related to the implementing deliberate strategy role.*</u> *However the direct relationship with the synthesizing information role is weak.*

This result is quite consistent with the research into rational / analytical / formal strategic management and strategic planning processes where the expected or accepted role of middle managers is primarily strategy implementation. While information sharing is present, its impact is much less than the implementation role. (See Mintzberg, Alstrand and Lampel, 1998:25-79 for a comprehensive review of relevant literature and research)

➢ **-H 11B. When the "participative / aligned" mode is predominant, both the championing alternatives and facilitating adaptability strategic roles will be most prevalent amongst an organization's middle managers.**
Not adequately supported. SEM identified that when the participative / aligned mode is predominant all four strategic roles are related to it. If one recognizes that this mode is often characterized as the ideal relationship between the three organization levels, then one would expect that middle managers would be able to utilize effectively all four strategic roles in a balanced relationship with top management. (Floyd and Wooldridge, 1992A, 1996)

➢ **-H 11C. When both the "rational" and "participative / aligned" modes are strong in an organization, all four strategic roles of middle managers will be prevalent in an organization.**
Strongly supported. In this situation the implementing deliberate strategy role relates strongly to the rational mode, while the other three strategic roles relate to the participative / aligned mode moderately to strong.

➢ **-H 11D. The existence of the "autocratic" "command" or "generative" modes will not influence the level at which middle managers strategic roles are undertaken in an organization.**
Moderately supported. In all the SEM tests both the autocratic and command modes have no or weak relationships with all strategic roles. However, in a situation where all five strategy-making modes exist the generative mode relates at a moderate level to three strategic roles, facilitating adaptability, championing alternatives and implementing deliberate strategy.

This is consistent with research that suggests that top down driven approaches to strategic process do not stimulate middle management involvement and participation. (Guth and MacMillan,1986, Simon, 1993)

➤ **-H 12. Capability to use all five strategy-making modes will be the strongest determinant of an organization's ability to achieve superior performance.**

The analysis does not support or contradict this position. A strategy modes SEM model featuring all five modes had the greatest relationship to performance, but did not exceed that caused by only two modes, rational and participative / aligned.

This outcome is consistent with the work of Hart and Banbury(1994:261) Their results supported the hypothesis that "the more firms are able to develop strategy making process capability, combining skills in all five modes of strategy-making, the higher the performance". However, as with this researcher's work, they were unable to identify any consistent pattern of relationships with performance that suggested how the modes were inter-related or additive.

➤ **-H 13. Organizations utilizing the "rational" and "participative / aligned" strategy making modes, in which middle managers are able to strongly utilize the championing alternatives and synthesizing information strategic roles, will achieve superior organization performance.**

Partially supported. Both SPSS analysis and SEM identify these the two modes with the strongest significant relationship to overall performance. However, it appears that all four strategic roles may exist when this condition exists.

This hypothesis attempts to combine the strong impact on performance of these two strategy making modes (Hart, 1991) with the positive impact of the two strategic roles that combine to give middle managers upward influence.(Floyd and Wooldridge, 1992A, 1997)However, the result reinforces the position that the interaction between roles (Figure 14, Floyd and Wooldridge 1996) and modes is a complex one.(Hart and Banbury, 1994:265)

➤ -H 14. Organizations where middle managers are able to effectively utilize all four strategic roles will develop the capability to flexibly utilize all of the strategy modes and thus achieve superior performance.
This hypothesis was not supported. Evidence was not found to support the contention that the existence of middle management strategic roles is a determinant of which strategy making modes will function in an organization.

➤ -H 15. The degree to which middle managers are involved in and influence the organization's strategic processes will positively influence the level of implementation success as measured by a summation of the level of completion, achievement and acceptability of strategy implementation.
Moderately supported. Both upward and downward influence are correlated with the implementation effectiveness indicators. However, regression against the summated construct revealed that only upward influence was able to significantly predict implementation effectiveness.
Miller's(1997) effectiveness indicators rely on subjective management judgement for scoring. It is reasonable to propose that the degree to which middle managers perceive that they were able to shape the strategy, as reflected in their upward influence scores, may affect their evaluation of how well the strategy was implemented.(Floyd and Wooldridge, 1997)

➤ -H 16. The level of strategy implementation success will be directly related to the overall level of organization performance.
Strongly supported. A high level of relationship was demonstrated by regressing the summated implementation effectiveness measure against the overall organization performance variable.
Miller (1997: 583) observes that the three indicators that contribute to the implementation effectiveness construct, blend both objective and subjective assessment of outcomes. Dean and Sharfman, (1996) suggest that judging implementation effectiveness usually involves comparing actual and desired outcomes. Given these views, one might expect the research data to support this hypothesis.

Table 11: Summary of Hypotheses Status Emerging from Research Results and Analysis.

#	Statement of Hypothesis	Degree of Support	Significant Observations
1	Middle management involvement in the strategic management process through the active championing of strategic alternatives will have a positive impact on organization performance.	*No support was evident*	Both SPSS correlation and regression and SEM show virtually no relationship between the championing alternative role and organization performance.
2	Middle management involvement in the strategic management process by synthesizing information (for top management) will have a positive impact on organization performance.	A direct and moderate relationship exists.	Confirmed by both SPSS analysis and SEM interpretation.
3	Middle management involvement in the strategic management process by facilitating adaptability will have a positive impact on organization performance.	Not supported.	This is consistent with the literature that suggests that facilitating adaptability supports the functioning of other roles.
4	Middle management involvement in the strategic management process through implementing deliberate strategy will have a positive impact on organization performance.	Not supported.	This is consistent with the view that the traditional role of middle managers as implementers does not impact performance.
5	The combined impact on organization performance of middle management roles of strategic involvement which feature "upward influence", that is championing alternatives and synthesizing information, will be greater than the combined impact of those roles which feature "downward influence", that is facilitating adaptability and implementing deliberate strategy.	Moderately strong support was found	Upward Influence correlated with all indicators of performance at a significant level and was the significant contributor to a moderate relationship with overall organization performance. Although downward influence correlated with five of the seven performance indicators, and was only moderately weaker than the upward influence construct, it was not a significant contributor to the prediction of overall performance.
6	Strategy making processes that are characterized as "autocratic" or "command" modes will have less of an impact on organization performance than the "rational" or "participative / aligned" modes.	Strongly supported	Both SPSS and SEM analysis demonstrate that both the command and autocratic modes have significantly lower correlations than the other three modes and do not make a significant contribution to the prediction of overall performance.
7	Strategy making processes that are characterized as "generative" will have less of an impact on organization performance than the "rational" or "participative / aligned" modes.	Supported with some reservations.	The generative mode has relatively high correlations with performance indicators, although significantly lower than the other two. However, in the regression model it is not a significant contributor. But, the SEM interpretation, from the "4 X 5" test, suggests that it may make a slightly higher direct contribution to predicting overall performance than the rational mode.
8	Strategy making processes that are characterized as "rational" will have a highly positive impact on organization performance.	Strongly supported.	Correlations, regression analysis and SEM all show a strong relationship with performance.
9	Strategy making processes that are characterized as "participative / aligned" will have a highly positive impact on organization performance.	Strongly supported.	Correlations, regression analysis and SEM all show a strong relationship with performance.
10	Organizations able to utilize flexibly all strategy making modes will demonstrate higher levels of organization performance than those using a limited number of modes.	Moderately supported.	Although two modes, rational and participative / aligned, explain 63% of overall performance equal to the total modes model , the ability to respond to all strategic situations requires a diverse set of strategy making capabilities.

Table 11 (continued): Summary of Hypotheses Status Emerging from Research Results and Analysis.

#	Hypothesis	Status	Findings
11	The predominant strategy modes functioning in an organization will be a reflection of the degree to which its' middle managers can utilize particular strategic roles.	The correlations necessary to support this view did not exist.	SEM modeling showed that when particular strategy making modes are present, certain middle management strategic roles are likely to be stimulated.
11A	When the "rational" mode is predominant, the implementing deliberate strategy strategic role will be most prevalent amongst an organization's middle managers with the role of synthesizing information for top management as strong back up.	Partially supported.	SEM testing supports the premise that a predominant rational strategy mode will be related to the implementing deliberate strategy role. However the direct relationship with the synthesizing information role is weak.
11B	When the "participative / aligned" mode is predominant, both the championing alternatives and facilitating adaptability strategic roles will be most prevalent amongst an organization's middle managers.	Not adequately supported	SEM identified that when the participative / aligned mode is predominant all four strategic roles are related to it.
11C	When both the "rational" and "participative / aligned" modes are strong in an organization, all four strategic roles of middle managers will be prevalent in an organization.	Strongly supported.	The implementing deliberate strategy role relates strongly to the rational mode, while the other three strategic roles relate to the participative / aligned mode moderately to strongly.
11D	The existence of the "autocratic" "command" or "generative" modes will not influence the level at which middle managers strategic roles are undertaken in an organization.	Moderately supported.	In all the SEM tests both the autocratic and command modes have no or weak relationships with all strategic roles. However, the generative mode relates at a moderate level to three strategic roles, facilitating adaptability, championing alternatives and implementing deliberate strategy in a total modes model environment.
12	Capability to use all five strategy-making modes will be the strongest determinant of an organization's ability to achieve superior performance.	Not supported or contradicted	A strategy modes SEM model featuring all five modes had the greatest relationship to performance, but did not exceed that caused by only two modes, rational and participative / aligned.
13	Organizations utilizing the "rational" and "participative / aligned" strategy making modes, in which middle managers are able to strongly utilize the championing alternatives and synthesizing information strategic roles, will achieve superior organization performance.	Partially supported.	Both SPSS analysis and SEM identify these the two modes with the strongest significant relationship to overall performance. However, it appears that all four strategic roles may exist when this condition exists.
14	Organizations where middle managers are able to effectively utilize all four strategic roles will develop the capability to flexibly utilize all of the strategy modes and thus achieve superior performance.	Not supported	Evidence was not found to support the contention that the existence of middle management strategic roles is a determinant of which strategy making modes will function in an organization.
15	The degree to which middle managers are involved in and influence the organization's strategic processes will positively influence the level of implementation success as measured by a summation of the level of completion, achievement and acceptability of strategy implementation.	Moderately supported.	Both upward and downward influence are correlated with the implementation effectiveness indicators. However, regression against the summated construct revealed that only upward influence was able to significantly predict implementation effectiveness.
16	The level of strategy implementation success will be directly related to the overall level of organization performance.	Strongly supported	A high level of relationship was demonstrated by regressing the summated implementation effectiveness measure against the overall organization performance variable.

5.10 Chapter Summary

Initial analysis confirmed a very good replication of Floyd and Wooldridge's (1992A) Middle Management Strategic Roles model, and required modification of Hart and Banbury's (1994) Strategy Making Modes model. While the strategic roles model had little direct impact on overall organization performance, that of the strategy making modes model was substantial. However, middle management upward influence did have a significant relationship with performance. There were also significant relationships between influence and implementation effectiveness, and implementation effectiveness and overall performance.

A review of the qualitative cases reinforced the fact that effective rational strategy making is consistent with high performance. Also, that the perception of involvement may be as important as actual involvement.

The chapter concluded with a summary identifying the status of each hypothesis following this analysis.

6. Conclusions

Following an overview of the key results and conclusions relative to the research questions and hypotheses that shaped this research, at the beginning of this chapter, the major contributions of this work are identified. Study limitations are highlighted before the opportunities for future research are discussed drawing upon prior and recent research. A discussion of the practical significance of this research to middle and top management is presented before the chapter concludes with a brief reflection on the "journey" experienced by this researcher.

6.1 Research results

Based on the literature review, three research questions were outlined which guided this work. (Chapter 3:128-129)

1. What roles do middle managers play in the strategic management process?

2. To what extent do the roles that middle managers play in the strategic management process impact organization performance?

3. How does the nature of the interactions between the top management team and other levels in the organization, primarily middle managers, effect the formulation and implementation of strategy and subsequently impact organization performance?

They directed inquiry that sought to identify what roles that middle managers played in the strategic management process, and how these roles impacted organization performance. The second major thrust sought to identify the nature of strategic collaboration between top management, middle management and other organization actors and how that impacted organization performance.

Simply stated, the results of this research show that middle managers do indeed matter in the strategic management process. They play significant and well defined roles in the strategic process, wield strategic influence that effects performance and through collaborative strategy making with top management and operating levels can have a major impact on overall organization performance.

6.11 *Middle Management Strategic Roles*

The replication of Floyd and Wooldridge's (1992A), four-construct model, allowed firm conclusions to be drawn. First, middle managers have distinctive and significant roles in the strategic management process. They reinforce the concept that emerged from the literature review that middle managers occupy a pivotal position in the strategic process.(see for example Nonaka, 1988, Bartlett and Ghoshal, 1993) They act as a conduit for information and ideas from the operating level to the TMT and vice versa (Synthesizing Information, Facilitating Adaptability)., Autonomous strategic initiatives (Burgelman ,1991) are bought to light and promoted to the TMT (Championing Alternatives). Lastly, strategic direction is provided to the operating level so that implementation can be effective. (Implementing Deliberate Strategy, Facilitating Adaptability.)

The robust nature of the replication further permits an observation that this model may be generalizable to other populations. At the least, it does provide a sound conceptual framework around which to identify and measure the strategic activity of middle managers.

6.12 *Impact of Middle Management Strategic Roles on Performance*

The failure to identify a strong relationship between some or all of the four role constructs on performance was disappointing, but not unexpected. As noted before, both theory and middle management response suggests that it is the ability to influence the shaping and implementation of strategy that is key to the pivotal role noted above. Also, it is clear that the manner in which middle management's strategic behaviour impacts the strategic management process in an organization is complex. Whether through issue selling (Dutton & Ashford et.al 2000), surfacing divergent strategic initiatives (Burgelman & Grove, 1996) or day-to-day integration (Thakur, 1998) the processes by which middle managers ultimately impact organization performance involve complex interactions with other strategic actors, both internal and external to the organization. The scope of this research did not allow the longitudinal qualitative and quantitative research that is needed to uncover this complexity. It is strongly recommended for future research.

Two outcomes are worthy of note. Consistent with the research and theory development of Floyd and Wooldridge (1996), Synthesizing Information did emerge as the most significant direct predictor of organization performance, and

the greatest contributor to the Upward Influence construct which was moderately correlated with all performance indicators and moderately related to overall organization performance.

6.13 *Strategy Making Modes*

There were two major outcomes from this area of the research. First, Hart and Banbury's (1994) model did not fully replicate. This may indicate that the strategy making modes constructs are not fully generalizable between populations. Subsequent analysis appears to support the contention that the model may exhibit situational tendencies. That is, the basic conceptual framework underpinning the model is sound. However, situational characteristics may effect how the relationships in constructs are viewed and defined.

The second observation is that although this researcher' modes model has significant differences with the original model, notably the Autocratic mode and the elimination of the Symbolic mode, the new model maintains many of the characteristics of original. Only two variable indicators were eliminated for cross loading. It was noted how the original model, based on responses from primarily top managers in highly focused organizations, featured clearly defined constructs. In contrast, the definition of this researcher's constructs, primarily from a middle management perspective, was less crisp. This may reflect that middle managers look for involvement in the strategic process, and are somewhat less concerned with which group of strategic actors is steering the strategy ship than their top management counterparts.

6.14 *Impact of Strategy Making Modes on Performance.*

Here the results are succinct. The two most collaborative strategy-making modes have a strong and majority impact on overall organization performance. The rational and participative / aligned modes appear to contribute the only significant input to this relationship. This finding is consistent with the original performance proposition put forward in Hart's conceptual work (1992:340-341) However, the generative and autocratic modes do correlate moderately or significantly on most of the performance indicators. Also, the high degree of correlation between the generative mode and the two major modes in c.f.a. SEM testing may indicate that it plays a supportive role and thus effects performance indirectly.

6.15 *Influence, Implementation Effectiveness, and Organization Performance*

Miller's (1997) three proposed indicators of Implementation Effectiveness, Completion, Achievement and Acceptability, were proven to be excellent subjective parameters. The summated measure of these three indicators facilitated two key findings.

First, middle management upward influence is a moderately strong predictor of implementation effectiveness. It must be noted that both upward and downward influence correlated significantly with all three effectiveness indicators but only upward influence was significant in the regression equation against the summated construct.

Secondly, the summated effectiveness construct proved a strong predictor of overall organization performance. This would suggest that the implementation effectiveness indicators / measure is a reliable proxy for measures of organization performance and may provide researchers a useful addition to other subjective measures.

6.16 *Hypotheses*

As summarized in section 5.9 and Table 11, the input from all of the results and data analysis showed the following. Three of five hypotheses relating strategic roles of middle managers to performance were not supported, reinforcing the view that this relationship may be complex and not direct.(Floyd and Wooldridge, 1996,1997) All four hypotheses relating strategy-making modes to performance were supported to a reasonable degree. This supported the view that strategy-making modes may have a direct and significant impact on performance.(Hart and Banbury,1994, Hart 1992)

Hypotheses that attempted to delineate the relationships between strategy making modes and middle management strategic roles were partially supported, although based on a concept of reversed causality. Strategic roles do not correlate with strategy making modes. Lastly, hypotheses relating middle management strategic influence to implementation effectiveness and effectiveness to performance were strongly supported. (Miller, 1997)

Five of the sixteen hypotheses were not supported and another five only partially supported. However, the picture of the strategic process in general and the

middle manager's involvement in particular, that has emerged, provides valuable learning and a solid foundation for future research as discussed in the two sections below.

6.2 Contributions of the Research

This research has confirmed that middle managers play a significant part in the strategic management process. Most notably they perform strategic roles that allow the strategic actions and intentions of top, middle and operating levels to be integrated, and subsequently wield considerable strategic influence which impacts organization performance. Through strategy making relationships with the TMT they are able to have a major impact on organization performance particularly when the relationships are interactive and collaborative.

In support of this broad contribution the following elements are significant.

1. Confirmation of the Middle Management Strategic Roles model.

This adds an additional piece of support to the validity and generalizability of this model. Despite cautions about the potential biases in the sample, the level of replication and comparative behaviour of the constructs with previous research, these results indicate this was a sound outcome. Although, as noted previously, Schwab (1999) questioned the value and necessity of identical replication, he did acknowledge the contribution that was possible when replication could be linked to previous research. In this case, replicating the original research's questionnaire and many aspects of the sample used by Floyd and Wooldridge (1992A), allows for a significant addition to the cumulative knowledge on middle management strategic roles.

2. Determination of a "new" Strategy Making Modes model

The model challenged the generalizability of the original research. However, both the structure of the new model and the implication that the models are based on a sound foundation concept that exhibits situational behaviour are valuable results. Dess, Lumpkin and Covin (1997) utilized Hart's (1991) original questionnaire and, despite identifying a unique entrepreneurial strategy-making model, supported the validity of Hart's conceptual framework. This work serves to support the conceptual validity of the original strategy modes model. Hart and Banbury (1994:266) acknowledge that cross-sectional snap shots, particularly ones that

focus on limited and narrow populations, may not produce a complete picture of strategy making processes at work. They suggest that longitudinal studies, incorporating a range of organizational contingencies and structural elements may be necessary.

3. Strategy Making Modes featuring collaboration and involvement of all actors have a major positive impact on performance.

The research shows that modes featuring integrative processes, both formal (rational) and participative, contribute the most to organization performance. Not only does this reinforce the original research by Hart and Banbury (1994) but adds credence to contributions from the literature to this researcher's study.

Van Cauwenbergh and Cool (1982:253) asserted that if afforded a major role in the strategic management process, middle managers through "their judgement, opinion, values, and evaluation affect strategy formulation and implementation in a decisive way." In a similar vein, Schilit and Paine (1987:162) noted that " although we think of top level managers as being the only individuals involved in strategic decisions, middle level managers often do, in fact, impact on the nature and outcomes of the decisions". Both Mintzberg (1994) and Burgelman (1983, 1991, 1996) identify the critical need for collaboration between the top, middle and operating levels of the organization in order to maximize strategic effectiveness.

4. Scope of the study sample

_Although not an ideal random sample, the sample was drawn from a diverse group of organizations and in the majority represented practicing middle managers. Its size and range allowed application of analysis techniques that could complement and reinforce each other.

Hair et.al (1998) provided guidance that suggested a minimum sample of 100 was needed for SPSS based factor analysis (1998:98) and that a sample in the range of 100-150 was required for effective MLE (Maximum Likelihood Estimation) approaches to structured equation modeling.

5. Qualitative confirmation

Although at best a cursory indicator of " real life functioning", the three cases did provide useful indicators of actual practice. In addition to satisfying the requirements of triangulation (Jick, 1979), albeit on a minimal scale, the use of a qualitative sample provides another and perhaps closer perspective on strategic

process reality. Pettigrew (1992), as noted previously, suggests that the researcher must get closer to those being studied. Remenyi et.al. (1998) also have acknowledged the potential value of "mini-case studies" as an evidence gathering mechanism in positivistic research.

6.3 Research Limitations

1. Selection of the sample

As noted above, the greatest risk in this researcher's sample is that respondents were not totally representative of the overall population. There certainly is a chance that some respondents were middle and top managers who had a major interest in the strategic process and had a "predisposed positive orientation" to their strategic roles. However, due to the time and effort involved in assembling the sample, this risk is likely low. It has been noted previously that positively inclined respondents may answer questionnaires as they would like things to be, rather than reflect reality.

Scandura and Williams (2000: 1259) writing in respect to cross-sectional surveys, indicated that management research may be moving further away from rigour and jeopardizing applicability. They include the representative nature of the sample as a critical component of validity.

2. Method validity and generalizability of results.

This is particularly relevant in respect to the work that was done utilizing structured equation models and the roles / modes relationship. Although, the move to assume causality is not without precedence, (Hart (1991) acknowledged that perhaps past performance might shape strategy making.) it does drive the SEM models. Also, despite relatively good "fit' measures there is enough variation in variables and constructs that the absolute nature of the results should be treated cautiously.

One area that a number of strategy researchers identify is the tendency, reflected in this research, to equate current strategic process with current organization performance. Boyd (1991) noted how today's strategic plans may not impact the balance sheet for several years. In the survey instrument respondents were asked to use a three-year time frame, in respect of performance, in order to alleviate this immediacy effect.

6.4 Future Research.

The greatest need for future research that this work has uncovered is to be able to understand exactly how the strategic roles and strategy modes actually function within the organization context.

Snow and Thomas (1994) argued for a balance to return between quantitative and qualitative methodology. They suggested that field studies provided the soft data that allowed the true relationships between variables and constructs to be uncovered.

Fuerer, et.al.(1995) commenting on their Hewlett- Packard research, emphasize the need for practitioner and researcher to get closer together and study the strategic process as a whole. In a similar vein Hurst, Rush and White (1989) suggest that theory to practice research needs complementing with practice to theory research based on the actual strategic process,

Pettigrew (1992), referenced previously describing the need for direct observation of managerial elites, states that fundamental strategic processes must be studied close-up over time. In 2002 Pettigrew asserts that the characteristics of effective strategy process research include combining content, process and the context of change alongside longitudinal data collection at all organization levels.

Burgelman, (2001) combines the two views when he calls for strategy research to marry the theoretical modeling with the concrete, experiential reality of the practicing manager. Making conceptual frameworks "real" through applied research is his strong premise, arguing that it does not detract from academic rigour.

Direct observation over "laboratory experiment" was a stance taking by Schwenk (1995). Chakravarthy and Doz (1992:12) commenting directly on Floyd and Wooldridge's (1992A) work suggest that, despite its excellent contribution to strategy process research " it is unlikely to inform us on how strategy process shapes strategy content.". They argue for a combination of methodologies to address the full scope of the strategic context.

A number of authors have called for a broader conceptualization of strategic process research, incorporating multi-level analysis, and contrary perspectives (bottom up versus top down) in order to uncover as yet hidden

relationships and outputs. (Rajagopolan, Rasheed and Datta, 1993, Lowendahl and Revang, 1998, Chakravarthy and White, 2002)

In sum, all of the perspectives reflected in this research could benefit from a more in-depth, comprehensive investigation that combines research rigour with real world immersion. Also, a number of perspectives that impact the strategic process and have received limited or no attention in this research need to be incorporated.

These include, Organizational Knowledge, Strategic Networks, Strategic Renewal, Organization Culture, and multi-level leadership. (see Pappas and Wooldridge, 2002)

6.5 Practical Consequences for Middle and Top Managers.

While prior discussion has identified the potential for sample bias, assessed the reliability of the data and reviewed the generalizability of the results obtained in this research, there are three basic assertions that appear possible as a result of this work.

First, the middle management strategic roles model proposed and supported by Floyd and Wooldridge (1992A, 1996,1997) is a valid description of the behaviours and actions that middle managers can utilize in an organization's strategic process. Secondly, the relationships between top, middle and operating levels of the organization, in respect to formulating strategy, range from ones which feature total top-down control through collaborative relationships with varying degrees of top and other level involvement, to a situation where the top effectively abdicates strategy development to the other organization levels.(Hart, 1991,1992) Finally, collaborative, strategy development relationships between the top and other organization levels are strongly related to superior organization performance.

Ideally, it would be useful to extrapolate from the three assertions what one might expect from top managers and middle managers as actors in the strategic management process, or to provide guidelines for how these groups should behave in order to bring about superior organization performance. However, before attempting to define practical approaches for the TMT and middle managers, there are aspects of the strategic process which provide cautions that require attention.

Two elements in particular must be acknowledged before translating theory into action. The first is that strategic management is a contingent process. Secondly, despite the literature and research which points to an integrated process with both deliberate and emergent strategy and the formulation / implementation dichotomy eliminated, (Figure 17, pp. 128), much of research which provided a foundation for this work uses the segmented "traditional" framework as a basis for description and prescription.

The breadth and depth of this researcher's sample conforms to generally accepted standards (Hair, 1998) and provides strong support for the generalizability of the concepts and theories in respect to strategic roles and strategy making modes. However, the specific and individual nature of each respondent must be acknowledged. Every strategic manager has a unique role and position within an organization that has unique strategic characteristics. In turn, the organization develops and implements its strategy within a specific business / industry / sector environment that has distinct characteristics.

The contingent nature of the strategic process has been reflected in the literature that focused on strategic decision making. Both Rajagopalan, Rasheed, and Datta (1993) and Papadakis, Lioukas and Chambers (1998), although stressing the importance of decision specific characteristics, emphasize the strong contribution to organization performance of organizational and environmental factors. In his classic research review, Venkatraman (1989) identified that establishing fit between influencing factors in the organization's internal and external environment, and its strategy, would contribute to superior performance. Both the dynamic nature and complexity of strategic fit were addressed by Zajac, Kraaatz, and Bresser, (2000) in research which modeled the antecedents and consequences of dynamic strategic fit. They acknowledged that strategy would change in an emergent manner as environmental and organizational contingencies evolved and also that the relationship that emerged was complex and difficult to predict (pp.432: Figure 2.). It should be noted, that this perspective is entirely consistent with the work of Burgelman (1983, 1991, 1996) and Floyd and Wooldridge (1996, 1997) in respect to internal and external forces reinforcing strategic change and influence.

While this research focused on strategic actors, strategic process and performance outcomes, it was not oblivious to the strategic contingencies or

situational forces shaped by them. The conclusion that the strategy making modes models (Hart and Banbury, 1994 , Dess, Lumpkin and Covin, 1997) reflected sector specific characteristics suggests that situational / contingent strategies and outcomes may be quite consistent with the models supported in this research. Both the strategic roles and strategy making modes models identified / confirmed in this research are essentially descriptions of the strategic capabilities of various levels of the organization, and in composite the organization as a whole. Although it may not be possible to completely predict how specific organizations or actors therein will shape the strategic process, or be able to prescribe specific strategic actions that achieve superior performance, this research does provide a sound foundation upon which to build these answers.

In a recent methodological treatise, De Rond (2002:36), after acknowledging that strategy theory must relate to the practitioner, cautions against the view that all theory must lead to generalizability and predictability. "Affording prediction and prescription, however, is but one way in which to speak to practice. Theories can be compelling and useful despite being explanatory. Moreover, good description can foster better prescription.......a proper understanding of the various sources that combine to give rise to an observable phenomenon may allow one to manipulate various aspects of it."

It is the view of this researcher that the conclusions drawn following the analysis of the results obtained in this work, provide a valid and significant description of the strategic roles that middle managers can play, the patterns of interaction between the top, middle and operating levels in respect to strategy development and implementation, and the collaborative modes that lead to superior organization performance. Regardless of the strategic contingencies facing the organization or its actors, these descriptions provide sound guidance to both levels of management in shaping appropriate and effective strategic responses to meet specific organization needs.

The second caution raised earlier in this section also relates to the need to describe "new" theory in a manner that allows the practitioner to have a frame of reference to relate to it. Kay (1993:337) notes that the rationalist approach to strategic thinking, while unfashionable in academic circles, was still the dominant approach in the "real world". Although the work of both Floyd and Wooldridge, and Hart, was clearly focused at developing integrated models which provided a

comprehensive explanation of complex processes, it should not be surprising that they framed it within the nomenclature of traditional strategic process steps. De Rond (2002) suggests, that of necessity, theoretical approaches that seek to explain pluralistic and complex phenomenon tend to be reductionist, seeking simplicity and order. However, the use of labels such as "formulation" and "implementation" does not reinforce the existence of the strategic dichotomy. Noting that meaningful strategy is rooted is rooted in the distinctive capabilities of the firm, Kay (1993: 337) asserts, "When strategy is emergent in this sense, the distinction between formulation and implementation largely falls away". The focus on strategic capability that underpins both models, and the integrative "linked" nature of the strategic processes reflected in the models, strongly mirrors the contemporary view reflected in the Research Model which guided this research. (Figure 18.)

In light of the foregoing discussion in this section, the results of this research provide strong guidance to both top managers and middle managers. As superior organization performance seems to result from strategy making processes that are collaborative and integrative in nature, the responsibility must rest with top managers to create an environment in which this can occur. (Westley, 1990, Dutton & Ashford et.al., 2001: 732,) Also supported is Floyd and Wooldridge's (2000: 22) view that the classical assumptions about the role of the middle manager are changing. Top managers must be prepared to acknowledge the pivotal role they play in the strategic process and facilitate its functioning. The fact that a top-directed (Rational), a balanced collaboration (Participative / Aligned) and a bottom –up (Generative) strategy making mode all contributed to organization performance reflects the contingent /situational nature of involvement by all levels in the strategic process.

Burgelman, (2002) reinforces the need to ensure that organizations surface both broad external perspectives and establish an internal climate which promotes the development of autonomous strategic initiatives. He admonishes top management to ensure middle managers are provided the opportunity to develop strategic capabilities. Building upon his previous work, he emphasizes that middle managers are better positioned and more capable of being fully aware of the external environment affecting the firm and more effectively networked with peers and the operating level in the organization. In sum, they are more sensitive to the strategic contingencies facing the organization and better able to react to them.

This is consistent with the pivotal linking role middle managers are able to undertake with capabilities in the four strategic roles (Floyd and Wooldridge, 2000). However, as Floyd and Wooldridge's earlier research found (1996:127) most middle managers have a limited repertoire of strategic capabilities. They appear to believe they should limit themselves to top directed activity such as implementing strategy.

For middle managers the message from this work is straightforward and challenging. They are significant participants in the strategic process and can have a major impact if they wish. Huy (2002), in promoting the critical balancing role that middle managers can play in strategic change, advocates a continual learning process that allows them to develop a broad and responsive organization context. Huy acknowledges that the majority of effective facilitators were experienced managers. Clearly, if middle managers are to develop and use the full range of strategic behaviours that are within their reach, they must take responsibility for their own learning.

6.6 Reflection on a Research Journey.

As reviewed in the introduction to the thesis, this researcher embarked on his research journey from the perspective of corporate based practitioner. Deep involvement in the strategic processes of a number of organizations had developed growing concerns about the effectiveness and outcomes of key elements of the strategic process. In particular, this researcher was concerned with the challenges organization's seemed to face in implementing strategy, the reality that most strategic processes seemed to be deliberately directed by the top management team and that the roles of middle managers in the strategic processes were at best minimized.

Entering the research program, the practitioner hoped for "enlightenment" that would help identify "quick fix" solutions to these strategic issues. However, as the practitioner evolved into a researcher, it soon became apparent that there may be none. The results of this research study, and the literature that supported it, do provide options and alternatives for describing and reacting to the strategic process. They do not, however, provide a definitive road map. As was noted in the

proceeding section, organization strategy remains a contingent process with "it depends" as an underlying mantra.

The value of thoughtful academic research applied to strategic processes should not be discounted. It does provide viable explanations to organization phenomena; it can identify behavioural options for managers and operating staff, and is able to project possible outcomes. Remenyi in the prologue to his research methodology book co-authored with Williams, Money and Swartz (1998:10-11), stresses that business and management research is different from other disciplines because of "a strong emphasis on the application of knowledge rather than on the creation of knowledge for its own sake."

Unfortunately, the realities of organization life make analysis, reflection and balanced application of research based concepts difficult. The top, middle and operating levels of the organization are all forced to react to circumstances and take action to meet both real and perceived objectives with little foresight or time to respond. After highlighting contemporary management researchers, such as Mintzberg (1973) and Kotter (1982), who proposed that management work featured fast pace, constant communication and fragmented, reactive decision making, Easterby-Smith, Thorpe and Lowe (1996:6) note that " management (research) requires thought and *action*" and that "(managers) are capable of taking action themselves in light of research results."

The results of this researcher's investigation add fuel to the argument that managers will react to or judge a strategic situation by their perception of reality. Responses to Part I of the questionnaire helped confirm that middle managers have a repertoire of strategic roles available to them that should allow them to participate throughout the strategic process. Also, upward influencing roles had the greatest impact on organization performance. Yet, the strategy making modes identified by the same sample (and reinforced in the qualitative cases) suggest that "top down" approaches are still predominant in the organizations represented. Clearly the transition of theory to practice is not automatic in the strategic process.

The experience of this researcher in encountering the discovery and learning available to the practitioner, who undertakes an academic journey, may provide guidance to aid this transition. As a practicing manager the literature and research, in respect to the strategic management process, is characterized by breadth, depth, complexity and simplification. The literature supporting this

research only covers a portion of that referenced, and in turn represents only a portion of the relevant material that exists. Frequently, multi faceted research is reduced to fundamental models, leaving the practitioner reader confused as to which elements to apply to organization strategy.

Practicing managers are willing to experiment with new frameworks, but they look to the experience of other organizations to justify them and are generally comfortable with only incremental change. Research based concepts, theories and generalizations can be compatible with this approach, but they must be structured and communicated in such a way that facilitates practitioner adoption. Although strategy and the strategic process are one of the foundations of a successful contemporary organization, most of its managers relate to strategic issues in basic terms. In the short-term one should not expect this or other strategic process research to result in breakthroughs. However, through development of awareness of the relevance of new research, incremental adoption is likely.

The two models proven (Floyd and Wooldridge, 1992A) and modified (Hart and Banbury, 1994) in this research, that detail the strategic roles of middle managers and the strategy making modes respectively, do so in such a way that the practitioner manager can relate to them, understand them and consider applying them. They generally conform to the admonition, credited to Joseph Pulitzer, that if you want managers to acquire new knowledge and act upon it then one must "put it before them briefly so they will read it, clearly so they will appreciate it, graphically so they will remember it, and above all accurately so they will be guided by its light."

In a recent article, Argyris (2002) suggests that in addition to new knowledge being internally and externally valid it must also have implementable validity. He asserts that many new concepts have low implementation capability and those studies, and the researchers that produce them, must identify the behaviours and the conditions that are necessary to transfer theory into practice.

There can be little doubt that the research journey, that this researcher has traveled, represents the "double–loop learning" that Argyris has championed. As I have made the transition from practitioner to researcher to apprentice academic, personal knowledge, management values and opportunities for action have been profoundly changed. Continual learning, incremental discovery, development of

new and challenging skills, long and sometimes arduous investigation and interpretation were all encountered on the journey.

I began this work as a confident, experienced senior manager practitioner and have ended it as chastened and humble apprentice academic. The research journey has given me a new appreciation of the discipline required for academic management inquiry and the potential it holds. Through my role of "practitioner as a researcher" I hope to contribute to both the body of knowledge in the strategic management field and to enhance "real world" practice. Bridging the two worlds must be a priority for both researcher and practitioner. Both have so much to offer to the other.

As a practitioner I had little appreciation of the scale of relevant research and learning. Despite my focused effort to seek out and address this management area, I realize that I have probably only touched a very small fraction of the learned work in this area. Rather than be frustrated with the inability to access more, I am exhilarated by the potential for further exploration. This journey has reinforced a belief that learning should never stop.

One element of this journey that will remain with this researcher into the future, is his acceptance from, and support of, acclaimed academic leaders. Whether at Henley Management College (UK.), the Academy of Management (USA), University of Calgary (Canada), or other institutions, the willingness to share, advise, and challenge has been exemplary. The realization that as an apprentice researcher I was part of a genuine learning community has sustained me and motivated me to a conclusion.

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Appendices

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1. *Appendix A: Hard copy survey questionnaires*

2. *Appendix B. Electronic versions of survey questionnaire*

3. *Appendix C. Structured Equation Modeling Output: Graphical and Text*

4. *Appendix D. SPSS "Descriptive" analysis of sample responses and segregated sample portions.*

5. *Appendix E. A summary review of three qualitative cases.*

Appendix A: Hard copy survey questionnaires

1. Middle management version
2. Top management version

SURVEY QUESTIONNAIRE

The Impact of Middle Managers on the Strategic Management Process

INTRODUCTION

The attached questionnaire focuses on the participation of the middle management group in the organization's strategic processes that result in the development and implementation of strategy.

The first group of questions asks you to identify the work roles that you perform and to evaluate the influence that these have on the shaping of organization strategy.

The second group of questions allows you to describe the characteristics of the strategy making process in your organization.

A third, and final, group of questions provides an opportunity for you to provide an assessment of organization performance.

When considering what to focus on as your organization's "strategy", Henry Mintzberg's definition, "Strategy is a pattern in a stream of actions" may help. Organizations will have very different strategic practices. Some will be very formal. Others will feature open communication and dialogue. Elsewhere, strategy will emerge from the initiatives of actors across the organization. However, whether deliberate or emergent, a pattern of actions should be evident which impacts overall organization effectiveness and helps establish its' strategic direction.

The questionnaire should take no more than 35 minutes to complete. Your responses will be kept in complete confidence, and will only be reported in a composite form with those of other respondents.

PART 1: STRATEGIC WORK ROLES

Listed below are sixteen strategic activities that can be performed by middle managers. For each please indicate (i) how frequently you perform this activity and (ii) the extent to which you feel that performing this function allows you to influence the organization's strategy. For each item circle a number on both scales.

1. **Gather and communicate information demonstrating the feasibility of new programs to managers above (me).**

Never	Rarely	Sometimes	Frequently	Most of the time

   1----------------2----------------3----------------4----------------5

   Little Influence   Great Influence
   On Strategy   1----------2----------3----------4----------5   On Strategy

2. **Justify and define the role of new programs to managers above(me).**

Never	*Rarely*	*Sometimes*	*Frequently*	*Most of the time*

1----------------2------------------3------------------4------------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

3. **Evaluate the merits of proposals generated in my unit, encouraging and championing some, discouraging others.**

Never	*Rarely*	*Sometimes*	*Frequently*	*Most of the time*

1----------------2------------------3------------------4------------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

4. **Search for new opportunities and bring them to the attention of higher level managers.**

Never	*Rarely*	*Sometimes*	*Frequently*	*Most of the time*

1----------------2------------------3------------------4------------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

5. **Monitor and assess the impact of changes in the organization's external environment.**

Never	*Rarely*	*Sometimes*	*Frequently*	*Most of the time*

1----------------2------------------3------------------4------------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

6. **Communicate and sell top management initiatives to subordinates.**

Never	*Rarely*	*Sometimes*	*Frequently*	*Most of the time*

1----------------2------------------3------------------4------------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

7. **Present arguments to higher level managers designed to "buy time" for experimental programs.**

Never	Rarely	Sometimes	Frequently	Most of the time

1----------------2------------------3------------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

8. **Translate organizational goals into departmental action plans.**

Never	Rarely	Sometimes	Frequently	Most of the time

1----------------2------------------3------------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

9. **Propose new programs or projects to higher level managers.**

Never	Rarely	Sometimes	Frequently	Most of the time

1----------------2------------------3------------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

10. **Locate and provide resources for trial projects.**

Never	Rarely	Sometimes	Frequently	Most of the time

1----------------2------------------3------------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

11. **Monitor and communicate to higher level managers the activities of the competitors, suppliers and /or other outside organizations.**

Never	Rarely	Sometimes	Frequently	Most of the time

1----------------2------------------3------------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

12. **Encourage informal discussion and information sharing among subordinates.**

Never	Rarely	Sometimes	Frequently	Most of the time

1----------------2------------------3------------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

13. Monitor activities in your unit to ensure that they support top management objectives.

| Never | Rarely | Sometimes | Frequently | Most of the time |

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5 On Strategy

14. Relax regulations and procedures in order to get new projects started.

| Never | Rarely | Sometimes | Frequently | Most of the time |

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5 On Strategy

15. Translate organizational goals into individual objectives.

| Never | Rarely | Sometimes | Frequently | Most of the time |

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5 On Strategy

16. Provide a safe haven for experimental programs.

| Never | Rarely | Sometimes | Frequently | Most of the time |

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5 On Strategy

PART II: ORGANIZATION APPROACHES TO STRATEGY- MAKING

The section below will provide an assessment of the approaches to planning, decision making and strategic management used in your company. Each of the statements provide a perspective on the development of strategy within an organization. Please use the scale below each statement to indicate the extent to which you feel that the statement reflects the situation in your organization. Place an "X" on the scale to identify the degree to which you agree or disagree with the statement.

1. The CEO of our company determines and executes the strategy based upon analysis of the business situation.

Strongly   *Strongly*
Disagree   1--------2--------3-------4--------5-------6-------7 Agree

2. Our company / organization adopts a written strategic plan each year to guide our operating activities.

Strongly
Disagree   1---------2---------3-------4---------5--------6-------7 *Strongly* Agree

3. Strategy is made on an iterative basis, involving managers, staff and executives in an ongoing dialogue.

Strongly
Disagree   1---------2---------3-------4---------5--------6-------7 *Strongly* Agree

4. Most people in this organization are willing to take risks.

Strongly
Disagree   1---------2---------3-------4---------5--------6-------7 *Strongly* Agree

5. People are encouraged to experiment in this company so as to identify new, more innovative approaches or products.

Strongly
Disagree   1---------2---------3-------4---------5--------6-------7 *Strongly* Agree

6. Top management regularly challenges staff with new goals and aspirations.

Strongly
Disagree   1---------2---------3-------4---------5--------6-------7 *Strongly* Agree

7. Strategic planning in our organization is a formal procedure occurring in a regular cycle.

Strongly
Disagree   1---------2---------3-------4---------5--------6-------7 *Strongly* Agree

8. Employees in the organization understand what needs to be accomplished in order for the organization to survive and prosper.

Strongly
Disagree   1---------2---------3-------4---------5--------6-------7 *Strongly* Agree

9. Business planning in our organization is ongoing, involving everyone in the process to some degree.

Strongly
Disagree   1---------2-------3-------4---------5-------6-------7 *Strongly* Agree

10. **The CEO primarily defines our firm's vision – its' basic purpose and general direction.**

Strongly   *Strongly*

Disagree   1---------2---------3--------4---------5--------6-------7   Agree

11. **The CEO serves as personal example of how staff are expected to behave in this organization.**

Strongly   *Strongly*

Disagree   1---------2---------3--------4---------5--------6-------7   Agree

12. **The Top Management Team have a joint commitment to long term targets for the company and communicate them with clarity across the organization.**

Strongly   *Strongly*

Disagree   1---------2---------3--------4---------5--------6-------7   Agree

13. **Most people in this company have input into decisions that affect them.**

Strongly   *Strongly*

Disagree   1---------2---------3--------4---------5--------6-------7   Agree

14. **Our company continually adapts its strategy based upon feedback from the market.**

Strongly   *Strongly*

Disagree   1---------2---------3--------4---------5--------6-------7   Agree

15. **The organization has a written mission statement that is communicated to employees.**

Strongly   *Strongly*

Disagree   1---------2---------3--------4---------5--------6-------7   Agree

16. **Strategy, for this company, is primarily set by the CEO and a few of his direct reports.**

Strongly   *Strongly*

Disagree   1---------2---------3--------4---------5--------6-------7   Agree

17. Formal analysis of the business environment and our competitors forms the basis for our company's strategic plan.

Strongly
Disagree   1---------2---------3--------4---------5--------6--------7   Agree   *Strongly*

PART III: IMPLEMENTATION SUCCESS AND ORGANIZATION PERFORMANCE

In this section you have the opportunity to provide your personal assessment of how your organization has implemented strategy and performed during the last three years. For each of the statements below use the seven-point scale to rate the level of achievement that you perceive your company has achieved. You may compare your organization's results against established targets / goals or by comparison against others in your industry. *It is not necessary to refer to specific company results to make this assessment, however you may do so if it aids your judgement.*

Implementation Success:

The three statements that follow provide a basis for judging the success of strategy implementation.

In respect to significant strategic initiatives that your organization has pursued in the last three years, identify how well the following conditions have been met.

1. *Completion :* **The degree to which everything intended to be done, is done, within the expected time frame.**

    Minimal   Poor   Fair   Satisfactory   Good   Very Good   Superior
     1-------------2------------3---------------4------------5--------------6------------7

2. *Achievement:* **The degree to which what was done performs as intended.**

    Minimal   Poor   Fair   Satisfactory   Good   Very Good   Superior
     1------------2------------3---------------4------------5--------------6------------7

3. *Acceptability:* **The degree to which the method of implementation and outcomes are satisfactory to those involved in, or affected by, implementation.**

    Minimal   Poor   Fair   Satisfactory   Good   Very Good   Superior
     1------------2------------3---------------4------------5--------------6------------7

Organization Performance:

For each of the six measures of organization performance below, identify how well you believe your organization has performed over the last three years using the seven point scale..

1. **Overall effectiveness achieving established goals.**

Minimal	Poor	Fair	Satisfactory	Good	Very Good	Superior
1------------2------------3--------------4------------5--------------6------------7

2. **Overall competitive position.**

Minimal	Poor	Fair	Satisfactory	Good	Very Good	Superior
1------------2------------3--------------4------------5--------------6------------7

3. **Return on Assets.**

Minimal	Poor	Fair	Satisfactory	Good	Very Good	Superior
1------------2------------3--------------4------------5--------------6------------7

4. **Efficiency of operations.**

Minimal	Poor	Fair	Satisfactory	Good	Very Good	Superior
1------------2------------3--------------4------------5--------------6------------7

5. **Overall financial performance.**

Minimal	Poor	Fair	Satisfactory	Good	Very Good	Superior
1------------2------------3--------------4------------5--------------6------------7

6. **Growth rate.**

Minimal	Poor	Fair	Satisfactory	Good	Very Good	Superior
1------------2------------3--------------4------------5--------------6------------7

RESPONDENT'S PERSONAL DATA

The following information will only be used to provide an overall picture of the total sample. All individual or company specific data will be retained in the strictest confidence. *All items marked with an asterisk are entirely optional and respondents will only be followed up personally when they have indicated a willingness to do so.*

Name* _____   Position held_____

Organization / Company* _____

What business(es) is your company in? _____

Number of employees (approx) _____ Estimated annual revenue. $_____

How many organization levels is your position below the CEO? _____

What is the title of the position you report to? _____

How many subordinates do you have? _____

What organization function(s) is your role within? _____

What functions, and individual positions (peers, subordinates, and higher level managers) do you frequently interact with?

_____

_____

*Would you be willing to discuss your responses to this questionnaire in a brief telephone interview?   Yes / No

*If "Yes", Telephone contacts: (Business) _____ (Home) _____

THANK YOU, FOR TAKING THE TIME TO RESPOND TO THIS SURVEY.

The Impact of Middle Managers on the Strategic Management Process

INTRODUCTION

The attached questionnaire focuses on the participation of the middle management group in the organization's strategic processes that result in the development and implementation of strategy.

The first group of questions asks you to identify the work roles that middle managers perform and to evaluate the influence that these have on the shaping of organization strategy.

The second group of questions allows you to describe the characteristics of the strategy making process in your organization.

A third, and final, group of questions provides an opportunity for you to provide an assessment of organization performance.

When considering what to focus on as your organization's "strategy", Henry Mintzberg's definition, "Strategy is a pattern in a stream of actions" may help. Organizations will have very different strategic practices. Some will be very formal. Others will feature open communication and dialogue. Elsewhere, strategy will emerge from the initiatives of actors across the organization. However, whether deliberate or emergent, a pattern of actions should be evident which impacts overall organization effectiveness and helps establish its' strategic direction.

The questionnaire should take no more than 35 minutes to complete. Your responses will be kept in complete confidence, and will only be reported in a composite form with those of other respondents.

PART 1: STRATEGIC WORK ROLES

Listed below are sixteen strategic activities that can be performed by middle managers. For each please indicate (i) how frequently they perform this activity in your organization and (ii) the extent to which you feel that performing this function allows them to influence the organization's strategy. For each item circle a number on both scales.

1. **Gather and communicate information demonstrating the feasibility of new programs to managers above.**

	Never	*Rarely*	*Sometimes*	*Frequently*	*Most of the time*
	1-------	------2---	-------3-----	-------4------	------5

Little Influence   Great Influence
On Strategy   1-----------2-----------3-----------4-----------5   On Strategy

2. **Justify and define the role of new programs to managers above.**

| Never | Rarely | Sometimes | Frequently | Most of the time |

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

3. **Evaluate the merits of proposals generated in their unit, encouraging and championing some, discouraging others.**

| Never | Rarely | Sometimes | Frequently | Most of the time |

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

4. **Search for new opportunities and bring them to the attention of higher level managers.**

| Never | Rarely | Sometimes | Frequently | Most of the time |

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

5. **Monitor and assess the impact of changes in the organization's external environment.**

| Never | Rarely | Sometimes | Frequently | Most of the time |

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

6. **Communicate and sell top management initiatives to subordinates.**

| Never | Rarely | Sometimes | Frequently | Most of the time |

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

7. **Present arguments to higher level managers designed to "buy time" for experimental programs.**

| Never | Rarely | Sometimes | Frequently | Most of the time |

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1------------2------------3------------4------------5   On Strategy

8. **Translate organizational goals into departmental action plans.**

Never   *Rarely*   *Sometimes*   *Frequently*   *Most of the time*

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1-----------2-----------3-----------4-----------5   On Strategy

9. **Propose new programs or projects to higher level managers.**

Never   *Rarely*   *Sometimes*   *Frequently*   *Most of the time*

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1-----------2-----------3-----------4-----------5   On Strategy

10. **Locate and provide resources for trial projects.**

Never   *Rarely*   *Sometimes*   *Frequently*   *Most of the time*

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1-----------2-----------3-----------4-----------5   On Strategy

11. **Monitor and communicate to higher level managers the activities of the competitors, suppliers and /or other outside organizations.**

Never   *Rarely*   *Sometimes*   *Frequently*   *Most of the time*

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1-----------2-----------3-----------4-----------5   On Strategy

12. **Encourage informal discussion and information sharing among subordinates.**

Never   *Rarely*   *Sometimes*   *Frequently*   *Most of the time*

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1-----------2-----------3-----------4-----------5   On Strategy

13. **Monitor activities in their unit to ensure that they support top management objectives.**

Never   *Rarely*   *Sometimes*   *Frequently*   *Most of the time*

1----------------2----------------3----------------4----------------5

Little Influence   Great Influence
On Strategy   1-----------2-----------3-----------4-----------5   On Strategy

14. Relax regulations and procedures in order to get new projects started.

Never	*Rarely*	*Sometimes*	*Frequently*	*Most of the time*

1----------------2----------------3------------------4------------------5

Little Influence   Great Influence
On Strategy   1-----------2------------3------------4------------5   On Strategy

15. Translate organizational goals into individual objectives.

Never	*Rarely*	*Sometimes*	*Frequently*	*Most of the time*

1----------------2------------------3------------------4------------------5

Little Influence   Great Influence
On Strategy   1-----------2------------3------------4------------5   On Strategy

16. Provide a safe haven for experimental programs.

Never	*Rarely*	*Sometimes*	*Frequently*	*Most of the time*

1----------------2------------------3------------------4------------------5

Little Influence   Great Influence
On Strategy   1-----------2------------3------------4------------5   On Strategy

PART II: ORGANIZATION APPROACHES TO STRATEGY- MAKING

The section below will provide an assessment of the approaches to planning, decision making and strategic management used in your company. Each of the statements provide a perspective on the development of strategy within an organization. Please use the scale below each statement to indicate the extent to which you feel that the statement reflects the situation in your organization. Place an "X" on the scale to identify the degree to which you agree or disagree with the statement.

1. **The CEO of our company determines and executes the strategy based upon analysis of the business situation.**

     Strongly   *Strongly*

     Disagree   1---------2---------3--------4---------5--------6--------7   Agree

2. **Our company / organization adopts a written strategic plan each year to guide our operating activities.**

     Strongly   *Strongly*

     Disagree   1---------2---------3--------4---------5--------6--------7   Agree

3. **Strategy is made on an iterative basis, involving managers, staff and executives in an ongoing dialogue.**

Strongly   *Strongly*

Disagree   1---------2---------3--------4---------5--------6--------7   Agree

4. **Most people in this organization are willing to take risks.**

Strongly   *Strongly*

Disagree   1---------2---------3--------4---------5--------6--------7   Agree

5. **People are encouraged to experiment in this company so as to identify new, more innovative approaches or products.**

Strongly   *Strongly*

Disagree   1---------2---------3--------4---------5--------6--------7   Agree

6. **Top management regularly challenges staff with new goals and aspirations.**

Strongly   *Strongly*

Disagree   1---------2---------3--------4---------5--------6--------7   Agree

7. **Strategic planning in our organization is a formal procedure occurring in a regular cycle.**

Strongly   *Strongly*

Disagree   1---------2---------3--------4---------5--------6--------7   Agree

8. **Employees in the organization understand what needs to be accomplished in order for the organization to survive and prosper.**

Strongly   *Strongly*

Disagree   1---------2---------3--------4---------5--------6--------7   Agree

9. **Business planning in our organization is ongoing, involving everyone in the process to some degree.**

Strongly   *Strongly*

Disagree   1---------2---------3--------4---------5--------6--------7   Agree

10. **The CEO primarily defines our firm's vision – its' basic purpose and general direction.**

Strongly   *Strongly*

Disagree   1---------2---------3--------4---------5--------6--------7   Agree

11. The CEO serves as personal example of how staff are expected to behave in this organization.

Strongly
Disagree   1---------2---------3--------4---------5--------6--------7   *Strongly* Agree

12. The Top Management Team have a joint commitment to long term targets for the company and communicate them with clarity across the organization.

Strongly
Disagree   1---------2---------3--------4---------5--------6--------7   *Strongly* Agree

13. Most people in this company have input into decisions that affect them.

Strongly
Disagree   1---------2---------3--------4---------5--------6--------7   *Strongly* Agree

14. Our company continually adapts its strategy based upon feedback from the market.

Strongly
Disagree   1---------2---------3--------4---------5--------6--------7   *Strongly* Agree

15. The organization has a written mission statement that is communicated to employees.

Strongly
Disagree   1---------2---------3--------4---------5--------6--------7   *Strongly* Agree

16. Strategy, for this company, is primarily set by the CEO and a few of his direct reports.

Strongly
Disagree   1---------2---------3--------4---------5--------6--------7   *Strongly* Agree

17. Formal analysis of the business environment and our competitors forms the basis for our company's strategic plan.

Strongly
Disagree   1---------2---------3--------4---------5--------6--------7   *Strongly* Agree

PART III: IMPLEMENTATION SUCCESS AND ORGANIZATION PERFORMANCE

In this section you have the opportunity to provide your personal assessment of how your organization has implemented strategy and performed during the last three years. For each of the

statements below use the seven-point scale to rate the level of achievement that you perceive your company has achieved. You may compare your organization's results against established targets / goals or by comparison against others in your industry. *It is not necessary to refer to specific company results to make this assessment, however you may do so if it aids your judgement.*

Implementation Success:

The three statements that follow provide a basis for judging the success of strategy implementation. In respect to significant strategic initiatives that your organization has pursued in the last three years, identify how well the following conditions have been met.

1. *Completion :* **The degree to which everything intended to be done, is done, within the expected time frame.**

Minimal	Poor	Fair	Satisfactory	Good	Very Good	Superior

1------------2------------3---------------4------------5--------------6-----------7

2. *Achievement:* **The degree to which what was done performs as intended.**

Minimal	Poor	Fair	Satisfactory	Good	Very Good	Superior

1------------2------------3---------------4------------5--------------6-----------7

3. *Acceptability:* **The degree to which the method of implementation and outcomes are satisfactory to those involved in, or affected by, implementation.**

Minimal	Poor	Fair	Satisfactory	Good	Very Good	Superior

1------------2------------3---------------4------------5--------------6-----------7

Organization Performance:

For each of the six measures of organization performance below, identify how well you believe your organization has performed over the last three years using the seven point scale..

1. **Overall effectiveness achieving established goals.**

Minimal	Poor	Fair	Satisfactory	Good	Very Good	Superior

1------------2------------3---------------4------------5--------------6-----------7

2. Overall competitive position.

Minimal	Poor	Fair	Satisfactory	Good	Very Good	Superior

1-------------2------------3---------------4------------5--------------6------------7

3. Return on Assets.

Minimal	Poor	Fair	Satisfactory	Good	Very Good	Superior

1-------------2------------3---------------4------------5--------------6------------7

4. Efficiency of operations.

Minimal	Poor	Fair	Satisfactory	Good	Very Good	Superior

1-------------2------------3---------------4------------5--------------6------------7

5. Overall financial performance.

Minimal	Poor	Fair	Satisfactory	Good	Very Good	Superior

1-------------2------------3---------------4------------5--------------6------------7

6. Growth rate.

Minimal	Poor	Fair	Satisfactory	Good	Very Good	Superior

1-------------2------------3---------------4------------5--------------6------------7

RESPONDENT'S PERSONAL DATA

The following information will only be used to provide an overall picture of the total sample. All individual or company specific data will be retained in the strictest confidence. *All items marked with an asterisk are entirely optional and respondents will only be followed up personally when they have indicated a willingness to do so.*

Name* _____   Position held_____

Organization / Company* _____

What business(es) is your company in? _____

Number of employees (approx) _____ Estimated annual revenue. $_____

How many organization levels is your position below the CEO? _____

What is the title of the position you report to? _____

How many subordinates do you have? _____

What organization function(s) is your role within? _____

What functions, and individual positions (peers, subordinates, and higher level managers) do you frequently interact with?

_____

_____

*Would you be willing to discuss your responses to this questionnaire in a brief telephone interview?   Yes / No

*If "Yes", Telephone contacts: (Business) _____ (Home) _____

THANK YOU, FOR TAKING THE TIME TO RESPOND TO THIS SURVEY.

Appendix B. Electronic versions of survey questionnaire

1. Middle management version
2. Top management version

*These are inserted into the Appendices and are somewhat distorted because they are reduced from larger HTML formats.

The Impact of Middle Managers on the
Strategic Management Process
(Middle Management Version)

Introduction

The questionnaire below focuses on the participation of the middle management group in the organization's strategic processes that result in the development and implementation of strategy.

The first group of questions asks you to identify the work roles that you perform and to evaluate the influence that these have on the shaping of the organization strategy.

The second group of questions allows you to describe the characteristics of the strategy making process in your organization.

A third, and final, group of questions provides an opportunity for you to provide an assessment of organization performance.

When considering what to focus on as your organization's "strategy", Henry Mintzberg's definition, "Strategy is a pattern in a stream of actions" may help. Organizations will have very different strategic practices. Some will be very formal. Others will feature open communication dialogue. Elsewhere, strategy will emerge from the initiatives of actors across the organization. However, whether deliberate or emergent, a pattern of actions should be evident which impacts overall organization effectiveness and helps establish its' strategic direction.

The questionnaire should take **no more than 20 minutes** to complete. Your responses will be kept in complete confidence, and will only be reported in a composite form with those of other respondents.

PART I: STRATEGIC WORK ROLES

Listed below are sixteen strategic activities that can be performed by middle managers. For each, please indicate (i) how frequently you perform this activity in your organization and (ii) the extent to which you feel that performing this function allows you to influence the organization's strategy. For each item **click on a number** on **both scales**.

1. Gather and communicate information demonstrating the feasibility of new programs to manag‹ above (me).

	Never	Rarely	Sometimes	Frequently	Most of the time	
	○ 1	○ 2	○ 3	○ 4	○ 5	

	1	2	3	4	5	
Little influence on Strategy	○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influence on Strategy

2. Justify and define the role of new programs to managers above (me).

	Never	Rarely	Sometimes	Frequently	Most of the time	
	○ 1	○ 2	○ 3	○ 4	○ 5	

	1	2	3	4	5	
Little influence on Strategy	○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influence on Strategy

3. Evaluate the merits of proposals generated in my unit, encouraging and championing some,

discouraging others.

	Never	Rarely	Sometimes	Frequently	Most of the time
	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5

	1	2	3	4	5	
Little influence on Strategy	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	Greatest influence on Strategy

4. Search for new opportunities and bring them to the attention of higher level managers.

	Never	Rarely	Sometimes	Frequently	Most of the time
	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5

	1	2	3	4	5	
Little influence on Strategy	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	Greatest influence on Strategy

5. Monitor and assess the impact of changes in the organization's external environment.

	Never	Rarely	Sometimes	Frequently	Most of the time
	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5

	1	2	3	4	5	
Little influence on Strategy	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	Greatest influence on Strategy

6. Communicate and sell top management initiatives to subordinates.

	Never	Rarely	Sometimes	Frequently	Most of the time
	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5

	1	2	3	4	5	
Little influence on Strategy	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	Greatest influence on Strategy

7. Present arguments to higher level managers designed to "buy time" for experimental programs.

	Never	Rarely	Sometimes	Frequently	Most of the time
	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5

	1	2	3	4	5	
Little influence on Strategy	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	Greatest influence on Strategy

8. Translate organizational goals into departmental action plans.

	Never	Rarely	Sometimes	Frequently	Most of the time
	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5

	1	2	3	4	5	
Little influence on Strategy	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	Greatest influence on Strategy

9. Propose new programs or projects to higher level managers.

	Never	Rarely	Sometimes	Frequently	Most of the time	
	○ 1	○ 2	○ 3	○ 4	○ 5	
	1	**2**	**3**	**4**	**5**	
Little influence on Strategy	○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influence on Strategy

10. Locate and provide resources for trial projects.

	Never	Rarely	Sometimes	Frequently	Most of the time	
	○ 1	○ 2	○ 3	○ 4	○ 5	
	1	**2**	**3**	**4**	**5**	
Little influence on Strategy	○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influence on Strategy

11. Monitor and communicate to higher level managers the activities of the competitors, suppliers and / or other outside organizations.

	Never	Rarely	Sometimes	Frequently	Most of the time	
	○ 1	○ 2	○ 3	○ 4	○ 5	
	1	**2**	**3**	**4**	**5**	
Little influence on Strategy	○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influence on Strategy

12. Encourage informal discussion and information sharing among subordinates.

	Never	Rarely	Sometimes	Frequently	Most of the time	
	○ 1	○ 2	○ 3	○ 4	○ 5	
	1	**2**	**3**	**4**	**5**	
Little influence on Strategy	○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influer on Strategy

13. Monitor activities in your unit to ensure that they support top management objectives.

	Never	Rarely	Sometimes	Frequently	Most of the time	
	○ 1	○ 2	○ 3	○ 4	○ 5	
	1	**2**	**3**	**4**	**5**	
Little influence on Strategy	○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influence on Strategy

14. Relax regulations and procedures in order to get new projects started.

	Never	Rarely	Sometimes	Frequently	Most of the time	
	○ 1	○ 2	○ 3	○ 4	○ 5	
	1	**2**	**3**	**4**	**5**	

Little influence on Strategy ○ 1_____ ○ 2_____ ○ 3_____ ○ 4_____ ○ 5_____ Greatest influence on Strategy

15. Translate organizational goals into individual objectives.

Never	Rarely	Sometimes	Frequently	Most of the time
○ 1	○ 2	○ 3	○ 4	○ 5

1	2	3	4	5	
Little influence on Strategy ○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influence on Strategy

16. Provide a safe haven for experimental programs.

Never	Rarely	Sometimes	Frequently	Most of the time
○ 1	○ 2	○ 3	○ 4	○ 5

1	2	3	4	5	
Little influence on Strategy ○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influence on Strategy

PART II: ORGANIZATION APPROACHES TO STRATEGY-MAKING

The section below will provide an assessment of the approaches to planning, decision making, and strategic management used in your company. Each of the statements provide a perspective on the development of strategy within an organization. Please use the scale below each statement to indicate the extent to which you feel that the statement reflects the situation in your organization. Click on a number on the scale to identify the degree to which you agree or disagree with the statement.

1. The CEO of our company determines and executes the strategy based upon analysis of the business situation.

Strongly Disagree	1	2	3	4	5	6	7 Strongly Agree
	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7

2. Our company / organization adopts a written strategic plan each year to guide our operating activities.

Strongly Disagree	1	2	3	4	5	6	7 Strongly Agree
	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7

3. Strategy is made on an iterative basis, involving managers, staff and executives in an ongoing dialogue.

Strongly Disagree	1	2	3	4	5	6	7 Strongly Agree
	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7

4. Most people in this organization are willing to take risks.

Strongly Disagree	1	2	3	4	5	6	7 Strongly Agree
	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7

5. People are encouraged to experiment in this company so as to identify new, more innovative

approaches or products.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
	⊙ 1____	⊙ 2____	⊙ 3____	⊙ 4____	⊙ 5____	⊙ 6____	⊙ 7____	

6. Top management regularly challenges staff with new goals and aspirations.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
	⊙ 1____	⊙ 2____	⊙ 3____	⊙ 4____	⊙ 5____	⊙ 6____	⊙ 7____	

7. Strategic planning in our organization is a formal procedure occurring in a regular cycle.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
	⊙ 1____	⊙ 2____	⊙ 3____	⊙ 4____	⊙ 5____	⊙ 6____	⊙ 7____	

8. Employees in the organization understand what needs to be accomplished in order for the organization to survive and prosper.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
	⊙ 1____	⊙ 2____	⊙ 3____	⊙ 4____	⊙ 5____	⊙ 6____	⊙ 7____	

9. Business planning in our organization is ongoing, involving everyone in the process to some degree.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
	⊙ 1____	⊙ 2____	⊙ 3____	⊙ 4____	⊙ 5____	⊙ 6____	⊙ 7____	

10. The CEO primarily defines our firm's vision - its' basic purpose and general direction.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
	⊙ 1____	⊙ 2____	⊙ 3____	⊙ 4____	⊙ 5____	⊙ 6____	⊙ 7____	

11. The CEO serves as personal example of how staff are expected to behave in this organization.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
	⊙ 1____	⊙ 2____	⊙ 3____	⊙ 4____	⊙ 5____	⊙ 6____	⊙ 7____	

12. The Top Management Team have a joint commitment to long term targets for the company and communicate them with clarity across the organization.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
	⊙ 1____	⊙ 2____	⊙ 3____	⊙ 4____	⊙ 5____	⊙ 6____	⊙ 7____	

13. Most people in this company have input into decisions that affect them.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
	⊙ 1____	⊙ 2____	⊙ 3____	⊙ 4____	⊙ 5____	⊙ 6____	⊙ 7____	

14. Our company continually adapts its strategy based upon feedback from the market.

Strongly Disagree	1	2	3	4	5	6	7	Strongly Agree
	⊙ 1____	⊙ 2____	⊙ 3____	⊙ 4____	⊙ 5____	⊙ 6____	⊙ 7____	

15. The organization has a written mission statement that is communicated to employees.

Strongly   1   2   3   4   5   6   7   Strongly
Disagree   Agree

     ○ 1_____ ○ 2_____ ○ 3_____ ○ 4_____ ○ 5_____ ○ 6_____ ○ 7_____

16. Strategy, for this company, is primarily set by the CEO and a few of his direct reports.

Strongly   1   2   3   4   5   6   7   Strongly
Disagree   Agree

     ○ 1_____ ○ 2_____ ○ 3_____ ○ 4_____ ○ 5_____ ○ 6_____ ○ 7_____

17. Formal analysis of the business environment and our competitors forms the basis for our company's strategic plan.

Strongly   1   2   3   4   5   6   7   Strongly
Disagree   Agree

     ○ 1_____ ○ 2_____ ○ 3_____ ○ 4_____ ○ 5_____ ○ 6_____ ○ 7_____

PART III: IMPLEMENTATION SUCCESS AND ORGANIZATION PERFORMANCE

In this section you have the opportunity to provide your personal assessment of how your organization has implemented strategy and performed during the last three years. For each of the statements below, use the seven-point scale to rate the level of achievement that you perceive your company has achieved. You may compare your organization's results against established targets / goals or by comparison against others in your industry. *It is not necessary to refer to specific company results to make this assessment, however you may do so if it aids your judgement.*

Implementation Success:

The three statements that follow provide a basis for judging the success of strategy implementation. In respect to significant strategic initiatives that your organization has pursued in the last three years, identify how well the following conditions have been met.

1. Completion: The degree to which everything intended to be done, is done, within the expected time frame.

    Minimal   Poor   Fair   Satisfatory   Good   Very Good   Superior
    ○ 1_____ ○ 2_____ ○ 3_____ ○ 4_____ ○ 5_____ ○ 6_____ ○ 7_____

2. Achievement: The degree to which what was done performs as intended.

    Minimal   Poor   Fair   Satisfatory   Good   Very Good   Superior
    ○ 1_____ ○ 2_____ ○ 3_____ ○ 4_____ ○ 5_____ ○ 6_____ ○ 7_____

3. Acceptability: The degree to which the method of implementation and outcomes are satisfactory to those involved in, or affected by, implementation.

    Minimal   Poor   Fair   Satisfatory   Good   Very Good   Superior
    ○ 1_____ ○ 2_____ ○ 3_____ ○ 4_____ ○ 5_____ ○ 6_____ ○ 7_____

Organization Performance:

For each of the six measures of organization performance below, identify how well you believe your organization has performed over the last three years using the seven point scale.

1. Overall effectiveness achieving established goals.

	Minimal	Poor	Fair	Satisfatory	Good	Very Good	Superior
	⊂ 1	⊂ 2	⊂ 3	⊂ 4	⊂ 5	⊂ 6	⊂ 7

2. Overall competitive position.

	Minimal	Poor	Fair	Satisfatory	Good	Very Good	Superior
	⊂ 1	⊂ 2	⊂ 3	⊂ 4	⊂ 5	⊂ 6	⊂ 7

3. Return on Assets.

	Minimal	Poor	Fair	Satisfatory	Good	Very Good	Superior
	⊂ 1	⊂ 2	⊂ 3	⊂ 4	⊂ 5	⊂ 6	⊂ 7

4. Efficiency of operations.

	Minimal	Poor	Fair	Satisfatory	Good	Very Good	Superior
	⊂ 1	⊂ 2	⊂ 3	⊂ 4	⊂ 5	⊂ 6	⊂ 7

5. Overall financial performance.

	Minimal	Poor	Fair	Satisfatory	Good	Very Good	Superior
	⊂ 1	⊂ 2	⊂ 3	⊂ 4	⊂ 5	⊂ 6	⊂ 7

6. Growth rate.

	Minimal	Poor	Fair	Satisfatory	Good	Very Good	Superior
	⊂ 1	⊂ 2	⊂ 3	⊂ 4	⊂ 5	⊂ 6	⊂ 7

RESPONDENT'S PERSONAL DATA

The following information will only be used to provide an overall picture of the total sample. All individual or company specific data will be retained in the strictest confidence. *All items marked with an asterisk are entirely optional and respondents will only be followed up personally when they have indicated a willingness to do so.*

Name*

Position Held

Organization / Company*

What business(es) is your company in?

Number of employees (approx)

Estimated annual revenue $

How many organization levels is your position below the CEO?

What is the title of the position you report to?

How many subordinates do you have?

What organization function(s) is your role within?

What functions, and individual positions (peers, subordinates, and higher level managers) do you frequently interact with?

Would you be willing to discuss your responses to this questionnaire in a brief telephone interview?   ⊂ Yes   ⊂ No

If "YES", Telephone contacts: (Business)

(Home)

THANK YOU, FOR TAKING THE TIME TO RESPOND TO THIS SURVEY.
Please send any comments to lbowd@mgmt.ucalgary.ca

Date: Friday, 1/24/2003 10:09 AM MST

Submit

The Impact of Middle Managers on the Strategic Management Process
(Top Management Version)

Introduction

The questionnaire below focuses on the participation of the middle management group in the organization's strategic processes that result in the development and implementation of strategy.

The first group of questions asks you to identify the work roles that middle managers perform and to evaluate the influence that these have on the shaping of the organization strategy.

The second group of questions allows you to describe the characteristics of the strategy making process in your organization.

A third, and final, group of questions provides an opportunity for you to provide an assessment of organization performance.

When considering what to focus on as your organization's "strategy", Henry Mintzberg's definition, "Strategy is a pattern in a stream of actions" may help. Organizations will have very different strategic practices. Some will be very formal. Others will feature open communication dialogue. Elsewhere, strategy will emerge from the initiatives of actors across the organization. However, whether deliberate or emergent, a pattern of actions should be evident which impacts overall organization effectiveness and helps establish its' strategic direction.

The questionnaire should take **no more than 20 minutes** to complete. Your responses will be kept in complete confidence, and will only be reported in a composite form with those of other respondents.

PART I: STRATEGIC WORK ROLES

Listed below are sixteen strategic activities that can be performed by middle managers. For each, please indicate (i) how frequently they perform this activity in your organization and (ii) the extent to which you feel that performing this function allows you to influence the organization's strategy. For each item **click on a number on both scales**.

1. Gather and communicate information demonstrating the feasibility of new programs to manage above.

	Never	Rarely	Sometimes	Frequently	Most of the time
	○ 1_____	○ 2_____	○ 3_____	○ 4_____	○ 5_____

	1	2	3	4	5	
Little influence on Strategy	○ 1_____	○ 2_____	○ 3_____	○ 4_____	○ 5_____	Greatest influence on Strategy

2. Justify and define the role of new programs to managers above.

	Never	Rarely	Sometimes	Frequently	Most of the time
	○ 1_____	○ 2_____	○ 3_____	○ 4_____	○ 5_____

	1	2	3	4	5	
Little influence on Strategy	○ 1_____	○ 2_____	○ 3_____	○ 4_____	○ 5_____	Greatest influence on Strategy

3. Evaluate the merits of proposals generated in their unit, encouraging and championing some, discouraging others.

	Never	Rarely	Sometimes	Frequently	Most of the time	
	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	

	1	2	3	4	5	
Little influence on Strategy	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	Greatest influence on Strategy

4. Search for new opportunities and bring them to the attention of higher level managers.

	Never	Rarely	Sometimes	Frequently	Most of the time	
	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	

	1	2	3	4	5	
Little influence on Strategy	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	Greatest influence on Strategy

5. Monitor and assess the impact of changes in the organization's external environment.

	Never	Rarely	Sometimes	Frequently	Most of the time	
	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	

	1	2	3	4	5	
Little influence on Strategy	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	Greatest influence on Strategy

6. Communicate and sell top management initiatives to subordinates.

	Never	Rarely	Sometimes	Frequently	Most of the time	
	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	

	1	2	3	4	5	
Little influence on Strategy	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	Greatest influence on Strategy

7. Present arguments to higher level managers designed to "buy time" for experimental programs.

	Never	Rarely	Sometimes	Frequently	Most of the time	
	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	

	1	2	3	4	5	
Little influence on Strategy	⊙ 1	⊙ 2	⊙ 3	⊙ 4		Greatest influence on Strategy
	⊙ 5					

8. Translate organizational goals into departmental action plans.

	Never	Rarely	Sometimes	Frequently	Most of the time	
	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	

	1	2	3	4	5	
Little influence on Strategy	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	Greatest influence on Strategy

9. Propose new programs or projects to higher level managers.

	Never	Rarely	Sometimes	Frequently	Most of the time	
	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	

	1	2	3	4	5	
Little influence on Strategy	⊙ 1	⊙ 2	⊙ 3	⊙ 4	⊙ 5	Greatest influence on Strategy

10. Locate and provide resources for trial projects.

	Never	Rarely	Sometimes	Frequently	Most of the time
	○ 1	○ 2	○ 3	○ 4	○ 5

	1	2	3	4	5	
Little influence on Strategy	○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influence on Strategy

11. Monitor and communicate to higher level managers the activities of the competitors, suppliers and / or other outside organizations.

	Never	Rarely	Sometimes	Frequently	Most of the time
	○ 1	○ 2	○ 3	○ 4	○ 5

	1	2	3	4	5	
Little influence on Strategy	○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influence on Strategy

12. Encourage informal discussion and information sharing among subordinates.

	Never	Rarely	Sometimes	Frequently	Most of the time
	○ 1	○ 2	○ 3	○ 4	○ 5

	1	2	3	4	5	
Little influence on Strategy	○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influence on Strategy

13. Monitor activities in their unit to ensure that they support top management objectives.

	Never	Rarely	Sometimes	Frequently	Most of the time
	○ 1	○ 2	○ 3	○ 4	○ 5

	1	2	3	4	5	
Little influence on Strategy	○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influence on Strategy

14. Relax regulations and procedures in order to get new projects started.

	Never	Rarely	Sometimes	Frequently	Most of the time
	○ 1	○ 2	○ 3	○ 4	○ 5

	1	2	3	4	5	
Little influence on Strategy	○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influence on Strategy

15. Translate organizational goals into individual objectives.

	Never	Rarely	Sometimes	Frequently	Most of the time
	○ 1	○ 2	○ 3	○ 4	○ 5

	1	2	3	4	5	
Little influence on Strategy	○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influence on Strategy

16. Provide a safe haven for experimental programs.

	Never	Rarely	Sometimes	Frequently	Most of the time
	○ 1	○ 2	○ 3	○ 4	○ 5

	1	2	3	4	5	
Little influence on Strategy	○ 1	○ 2	○ 3	○ 4	○ 5	Greatest influence on Strategy

PART II: ORGANIZATION APPROACHES TO STRATEGY-MAKING

The section below will provide an assessment of the approaches to planning, decision making, and strategic management used in your company. Each of the statements provide a perspective on the development of strategy within an organization. Please use the scale below each statement to indicate the extent to which you feel that the statement reflects the situation in your organization. Click on a number on the scale to identify the degree to which you agree or disagree with the statement.

1. The CEO of our company determines and executes the strategy based upon analysis of the business situation.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

      ⌀ 1＿＿＿ ⌀ 2＿＿＿ ⌀ 3＿＿＿ ⌀ 4＿＿＿ ⌀ 5＿＿＿ ⌀ 6＿＿＿
      ⌀ 7＿＿＿

2. Our company / organization adopts a written strategic plan each year to guide our operating activities.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

      ⌀ 1＿＿＿ ⌀ 2＿＿＿ ⌀ 3＿＿＿ ⌀ 4＿＿＿ ⌀ 5＿＿＿ ⌀ 6＿＿＿
      ⌀ 7＿＿＿

3. Strategy is made on an iterative basis, involving managers, staff and executives in an ongoing dialogue.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

      ⌀ 1＿＿＿ ⌀ 2＿＿＿ ⌀ 3＿＿＿ ⌀ 4＿＿＿ ⌀ 5＿＿＿ ⌀ 6＿＿＿
      ⌀ 7＿＿＿

4. Most people in this organization are willing to take risks.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

      ⌀ 1＿＿＿ ⌀ 2＿＿＿ ⌀ 3＿＿＿ ⌀ 4＿＿＿ ⌀ 5＿＿＿ ⌀ 6＿＿＿
      ⌀ 7＿＿＿

5. People are encouraged to experiment in this company so as to identify new, more innovative approaches or products.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

      ⌀ 1＿＿＿ ⌀ 2＿＿＿ ⌀ 3＿＿＿ ⌀ 4＿＿＿ ⌀ 5＿＿＿ ⌀ 6＿＿＿
      ⌀ 7＿＿＿

6. Top management regularly challenges staff with new goals and aspirations.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

      ⌀ 1＿＿＿ ⌀ 2＿＿＿ ⌀ 3＿＿＿ ⌀ 4＿＿＿ ⌀ 5＿＿＿ ⌀ 6＿＿＿
      ⌀ 7＿＿＿

7. Strategic planning in our organization is a formal procedure occurring in a regular cycle.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

      ⌀ 1＿＿＿ ⌀ 2＿＿＿ ⌀ 3＿＿＿ ⌀ 4＿＿＿ ⌀ 5＿＿＿ ⌀ 6＿＿＿
      ⌀ 7＿＿＿

8. Employees in the organization understand what needs to be accomplished in order for the organization to survive and prosper.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

      ⌀ 1＿＿＿ ⌀ 2＿＿＿ ⌀ 3＿＿＿ ⌀ 4＿＿＿ ⌀ 5＿＿＿ ⌀ 6＿＿＿

⌒ 7_____

9. Business planning in our organization is ongoing, involving everyone in the process to some degree.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

⌒ 1_____   ⌒ 2_____   ⌒ 3_____   ⌒ 4_____   ⌒ 5_____   ⌒ 6_____
⌒ 7_____

10. The CEO primarily defines our firm's vision - its' basic purpose and general direction.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

⌒ 1_____   ⌒ 2_____   ⌒ 3_____   ⌒ 4_____   ⌒ 5_____   ⌒ 6_____
⌒ 7_____

11. The CEO serves as personal example of how staff are expected to behave in this organization.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

⌒ 1_____   ⌒ 2_____   ⌒ 3_____   ⌒ 4_____   ⌒ 5_____   ⌒ 6_____
⌒ 7_____

12. The Top Management Team have a joint commitment to long term targets for the company and communicate them with clarity across the organization.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

⌒ 1_____   ⌒ 2_____   ⌒ 3_____   ⌒ 4_____   ⌒ 5_____   ⌒ 6_____
⌒ 7_____

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⌒ 1_____   ⌒ 2_____   ⌒ 3_____   ⌒ 4_____   ⌒ 5_____   ⌒ 6_____
⌒ 7_____

14. Our company continually adapts its strategy based upon feedback from the market.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

⌒ 1_____   ⌒ 2_____   ⌒ 3_____   ⌒ 4_____   ⌒ 5_____   ⌒ 6_____
⌒ 7_____

15. The organization has a written mission statement that is communicated to employees.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

⌒ 1_____   ⌒ 2_____   ⌒ 3_____   ⌒ 4_____   ⌒ 5_____   ⌒ 6_____
⌒ 7_____

16. Strategy, for this company, is primarily set by the CEO and a few of his direct reports.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

⌒ 1_____   ⌒ 2_____   ⌒ 3_____   ⌒ 4_____   ⌒ 5_____   ⌒ 6_____
⌒ 7_____

17. Formal analysis of the business environment and our competitors forms the basis for our company's strategic plan.

| Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Strongly Agree |

⌒ 1_____   ⌒ 2_____   ⌒ 3_____   ⌒ 4_____   ⌒ 5_____   ⌒ 6_____
⌒ 7_____

PART III: IMPLEMENTATION SUCCESS AND ORGANIZATION PERFORMANCE

In this section you have the opportunity to provide your personal assessment of how your organization has implemented strategy and performed during the last three years. For each of the statements below, use the seven-point scale to rate the level of achievement that you perceive your company has achieved. You may compare your organization's results against established targets / goals or by comparison against others in

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The three statements that follow provide a basis for judging the success of strategy implementation. In respect to significant strategic initiatives that your organization has pursued in the last three years, identify how well the following conditions have been met.

1. Completion: The degree to which everything intended to be done, is done, within the expected time frame.

Minimal	Poor	Fair	Satisfatory	Good	Very Good	Superior
⊂ 1	⊂ 2	⊂ 3	⊂ 4	⊂ 5	⊂ 6	⊂ 7

2. Achievement: The degree to which what was done performs as intended.

Minimal	Poor	Fair	Satisfatory	Good	Very Good	Superior
⊂ 1	⊂ 2	⊂ 3	⊂ 4	⊂ 5	⊂ 6	⊂ 7

3. Acceptability: The degree to which the method of implementation and outcomes are satisfactory to those involved in, or affected by, implementation.

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⊂ 1	⊂ 2	⊂ 3	⊂ 4	⊂ 5	⊂ 6	⊂ 7

Organization Performance:

For each of the six measures of organization performance below, identify how well you believe your organization has performed over the last three years using the seven point scale.

1. Overall effectiveness achieving established goals.

Minimal	Poor	Fair	Satisfatory	Good	Very Good	Superior
⊂ 1	⊂ 2	⊂ 3	⊂ 4	⊂ 5	⊂ 6	⊂ 7

2. Overall competitive position.

Minimal	Poor	Fair	Satisfatory	Good	Very Good	Superior
⊂ 1	⊂ 2	⊂ 3	⊂ 4	⊂ 5	⊂ 6	⊂ 7

3. Return on Assets.

Minimal	Poor	Fair	Satisfatory	Good	Very Good	Superior
⊂ 1	⊂ 2	⊂ 3	⊂ 4	⊂ 5	⊂ 6	⊂ 7

4. Efficiency of operations.

Minimal	Poor	Fair	Satisfatory	Good	Very Good	Superior
⊂ 1	⊂ 2	⊂ 3	⊂ 4	⊂ 5	⊂ 6	⊂ 7

5. Overall financial performance.

Minimal	Poor	Fair	Satisfatory	Good	Very Good	Superior
⊂ 1	⊂ 2	⊂ 3	⊂ 4	⊂ 5	⊂ 6	⊂ 7

6. Growth rate.

Minimal	Poor	Fair	Satisfatory	Good	Very Good	Superior

○ 1_____ ○ 2_____ ○ 3_____ ○ 4_____ ○ 5_____ ○ 6_____ ○ 7_____

RESPONDENT'S PERSONAL DATA

The following information will only be used to provide an overall picture of the total sample. All individual or company specific data will be retained in the strictest confidence. *All items marked with an asterisk are entirely optional and respondents will only be followed up personally when they have indicated a willingness to do so.*

Name*

Position Held

Organization / Company*

What business(es) is your company in?

Number of employees (approx)

Estimated annual revenue $

How many organization levels is your position below the CEO?

What is the title of the position you report to?

How many subordinates do you have?

What organization function(s) is your role within?

What functions, and individual positions (peers, subordinates, and higher level managers) do you frequently interact with?

Would you be willing to discuss your responses to this questionnaire in a brief telephone interview?   ○ Yes ○ No

If "YES", Telephone contacts: (Business)

(Home)

THANK YOU, FOR TAKING THE TIME TO RESPOND TO THIS SURVEY.
Please send any comments to ibowd@mgmt.ucalgary.ca

Date: Friday, 1/24/2003 10:24 AM MST

[Submit]

Appendix C. Structured Equation Modeling Output: Graphical and Text

1. a. Path Diagram: Middle Management Strategic Roles confirmatory factor analysis

   b. Unstandardized Estimates: Middle Management Strategic Roles confirmatory factor analysis

   c. Standardized Estimates: Middle Management Strategic Roles confirmatory factor analysis

   d. Text output AMOS: Middle Management Strategic Roles confirmatory factor analysis

2. a. Path Diagram: Strategy Making Modes confirmatory factor analysis

   b. Unstandardized Estimates: Strategy Making Modes confirmatory factor analysis

   c. Standardized Estimates: Strategy Making Modes confirmatory factor analysis

   d. Text output AMOS: Strategy Making Modes confirmatory factor analysis

3. a. Path Diagram : Middle Management Strategic Roles and Organization Performance.

   b. Unstandardized Estimates : Middle Management Strategic Roles and Organization Performance.

   c. Standardized Estimates: Middle Management Strategic Roles and Organization Performance.

   d. Text output AMOS: Middle Management Strategic Roles and Organization Performance.

4. a. Path Diagram: Strategy Making Modes and Organization Performance.

   b. Unstandardized Estimates: Strategy Making Modes and Organization Performance

   c. Standardized Estimates: Strategy Making Modes and Organization Performance

   d. Text output AMOS: Strategy Making Modes and Organization Performance

5. a, Path Diagram: Strategy Making Modes to Middle Management Strategic Roles relationships

b. Unstandardized Estimates: Strategy Making Modes to Middle Management Strategic Roles relationships

c. Standardized Estimates: Strategy Making Modes to Middle Management Strategic Roles relationships

d. Text output AMOS: Strategy Making Modes to Middle Management Strategic Roles relationships

6. a. Path Diagram: Modes to roles relationship generative added

    b. Unstandardized Estimates: Modes to roles relationship generative added

    c. Standardized Estimates: Modes to roles relationship generative added

    d. Text output AMOS: Modes to roles relationship generative added

7. a. Path Diagram: 4 X 5 roles to modes linkages

    b. Unstandardized Estimates: 4 X 5 roles to modes linkages

    c. Standardized Estimates: 4 X 5 roles to modes linkages

    d. Text output AMOS: 4 X 5 roles to modes linkages

Middle Management Strategic Roles

Middle Management Strategic Roles

Middle Management Strategic Roles
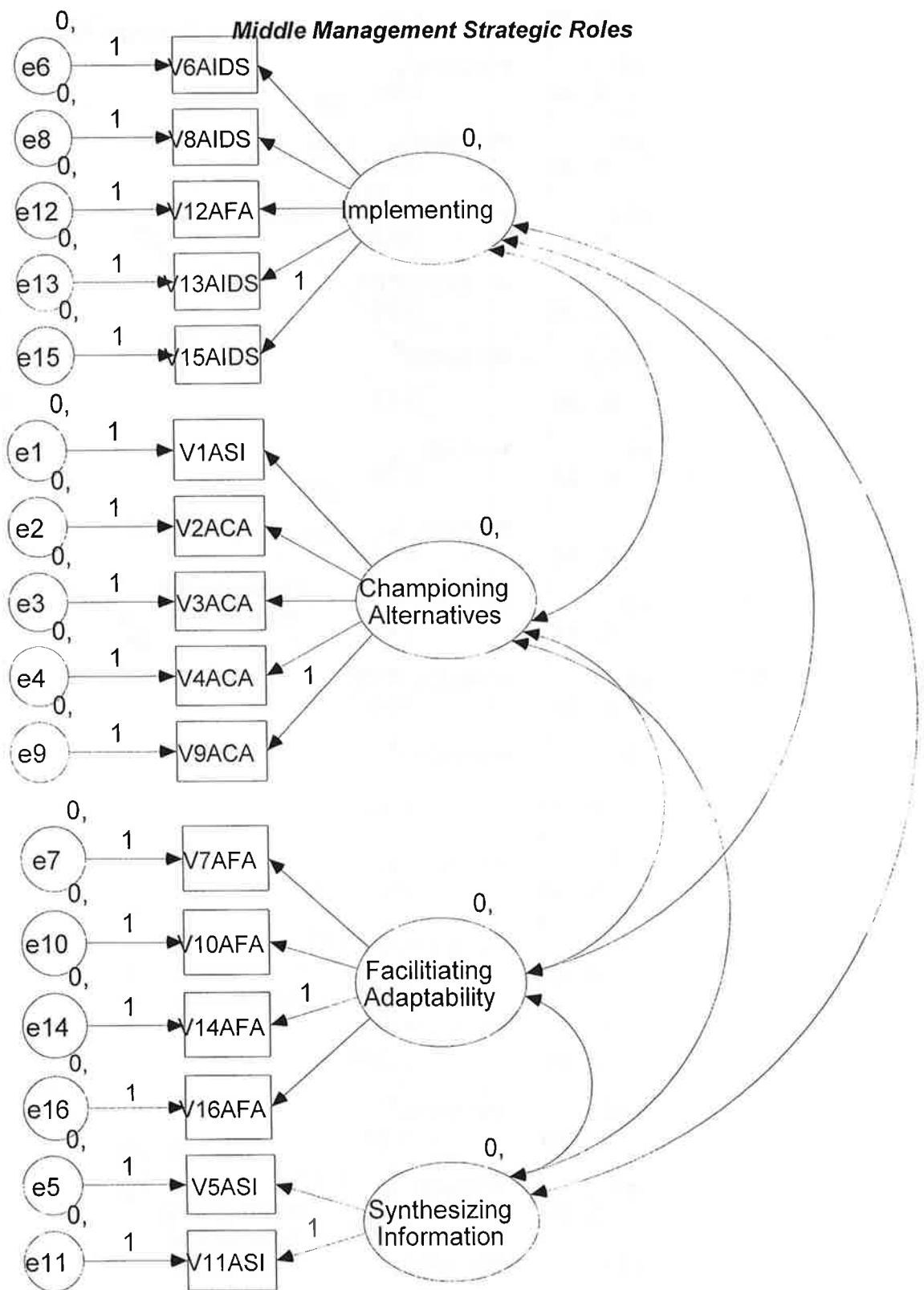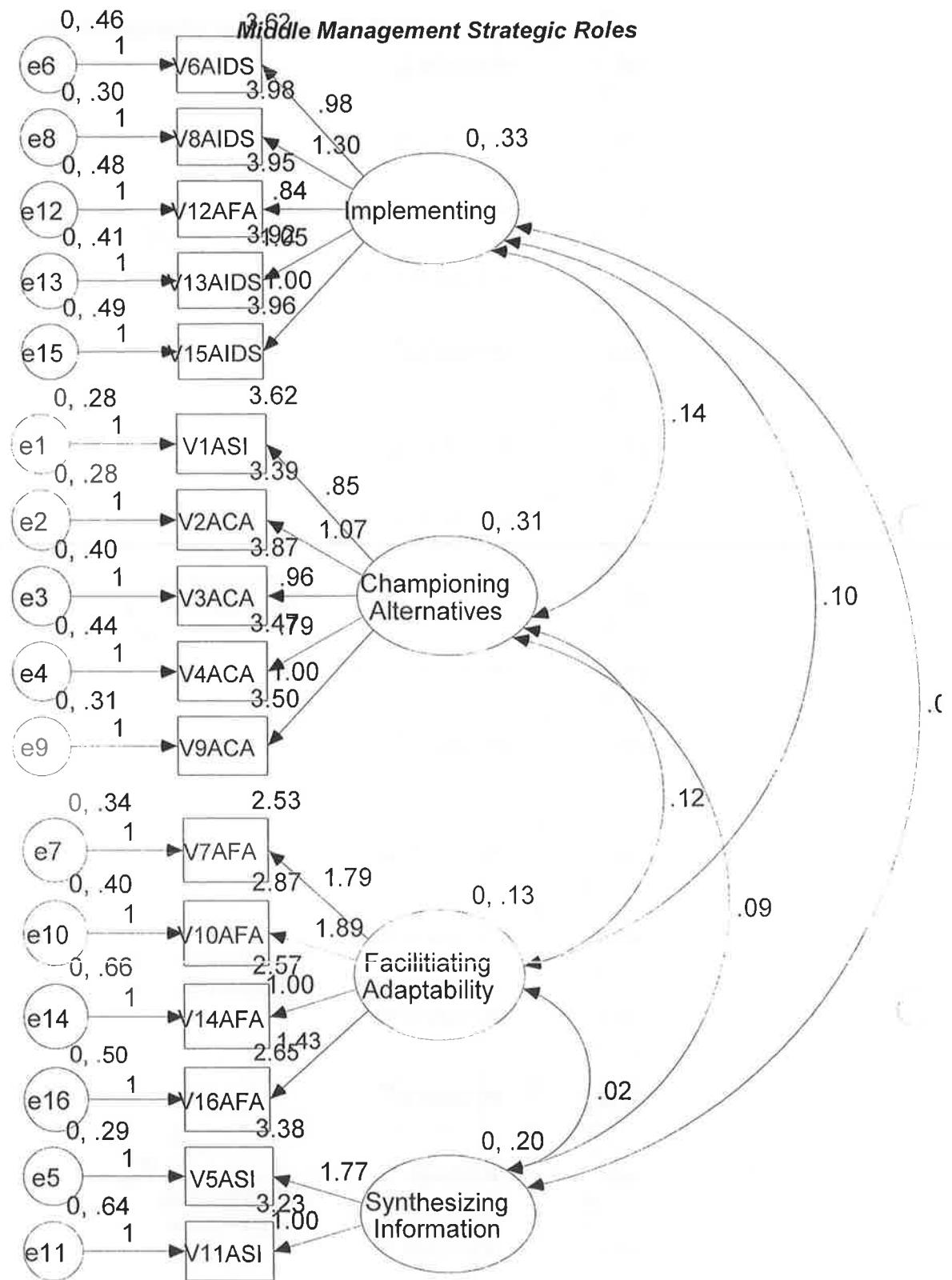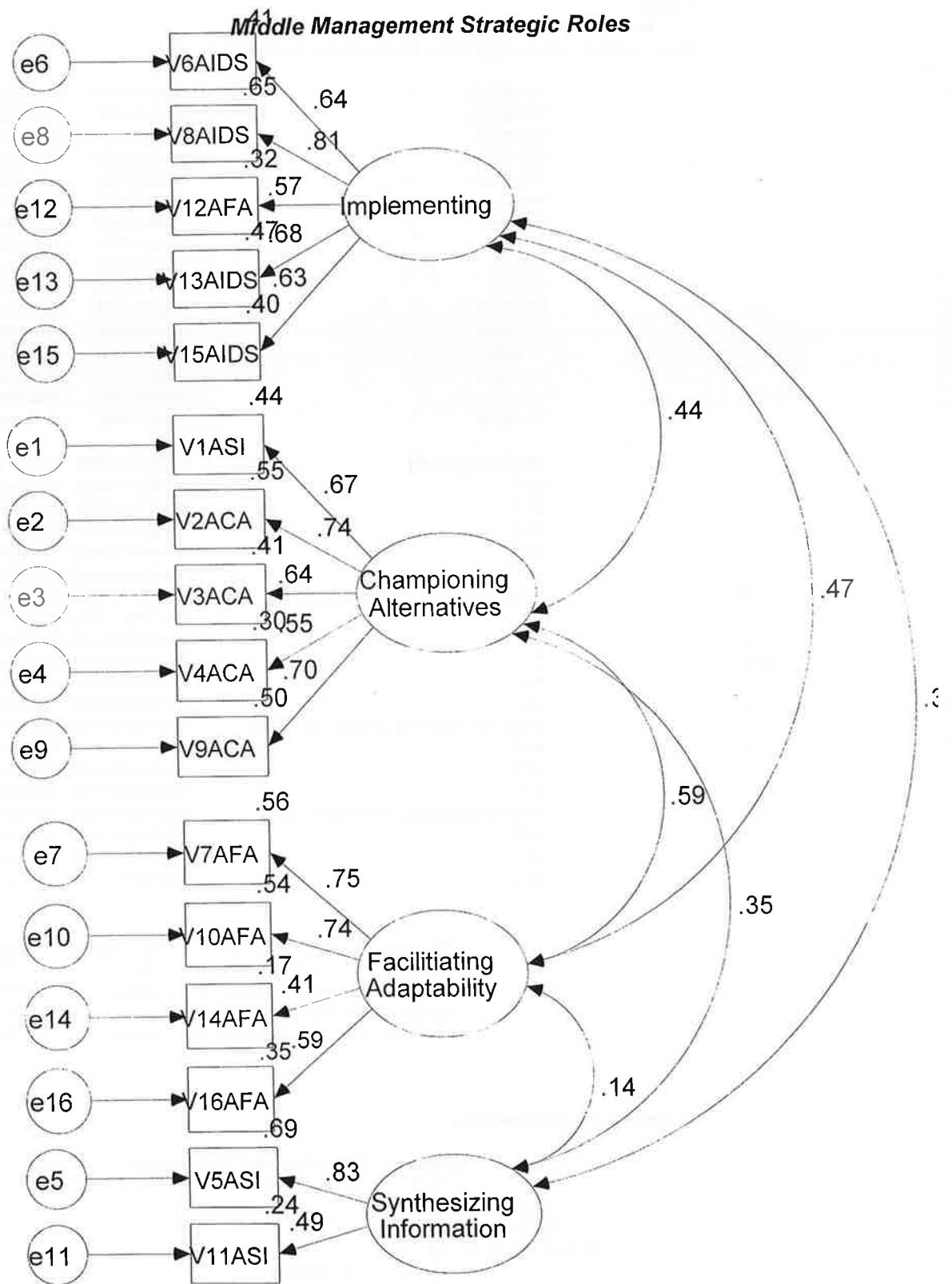
Title
Middle management strategic roles:
Your model contains the following variables

V15AIDS	observed	endogenous
V13AIDS	observed	endogenous
V12AFA	observed	endogenous
V8AIDS	observed	endogenous
V6AIDS	observed	endogenous
V9ACA	observed	endogenous
V4ACA	observed	endogenous
V3ACA	observed	endogenous
V2ACA	observed	endogenous
V1ASI	observed	endogenous
V14AFA	observed	endogenous
V10AFA	observed	endogenous
V7AFA	observed	endogenous
V11ASI	observed	endogenous
V5ASI	observed	endogenous
V16AFA	observed	endogenous
Implementing	unobserved	exogenous
e15	unobserved	exogenous
e13	unobserved	exogenous
e12	unobserved	exogenous
e8	unobserved	exogenous
e6	unobserved	exogenous
Championing_Alternatives	unobserved	exogenous
e9	unobserved	exogenous
e4	unobserved	exogenous
e3	unobserved	exogenous
e2	unobserved	exogenous
e1	unobserved	exogenous
Facilitiating_Adaptability	unobserved	exogenous
e14	unobserved	exogenous
e10	unobserved	exogenous
e7	unobserved	exogenous
Synthesizing_Information	unobserved	exogenous
e11	unobserved	exogenous
e5	unobserved	exogenous
e16	unobserved	exogenous

Number of variables in your model:	36
Number of observed variables:	16
Number of unobserved variables:	20
Number of exogenous variables:	20
Number of endogenous variables:	16

Summary of Parameters

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed:	20	0	0	0	0	20
Labeled:	0	0	0	0	0	0
Unlabeled:	12	6	20	0	16	54
Total:	32	6	20	0	16	74

NOTE:
    The model is recursive.

Sample size: 132

Model: Default model

Computation of degrees of freedom

                    Number of distinct sample moments: 152
        Number of distinct parameters to be estimated: 54

                    Degrees of freedom: 98

     0e 10 0.0e+000 -4.4194e-001 1.00e+004 7.42190392895e+002   0 1.00e+004
     1e 5 0.0e+000 -7.1114e-002 2.38e+000 3.49734429268e+002 20 4.98e-001
     2e 0 1.2e+003 0.0000e+000 1.03e+000 2.32102563384e+002   4 7.36e-001
     3e 0 9.7e+002 0.0000e+000 8.25e-001 1.93394631317e+002   3 0.00e+000
     4e 1 0.0e+000 -2.2754e-002 9.37e-001 1.71610910760e+002   1 8.54e-001
     5e 0 4.9e+003 0.0000e+000 3.86e-001 1.65747882159e+002   8 8.52e-001
     6e 0 9.5e+002 0.0000e+000 5.18e-001 1.65385625394e+002   2 0.00e+000
     7e 1 0.0e+000 -8.5764e-003 3.89e-001 1.62816799769e+002   1 8.65e-001
     8e 0 3.9e+003 0.0000e+000 1.60e-001 1.62519851892e+002   5 7.39e-001
     9e 0 9.4e+003 0.0000e+000 1.62e-001 1.62426801344e+002   1 1.07e+000
    10e 0 1.0e+004 0.0000e+000 9.58e-002 1.62419364212e+002   1 1.00e+000
    11e 0 1.3e+004 0.0000e+000 1.32e-002 1.62418792012e+002   1 1.01e+000
    12e 0 1.3e+004 0.0000e+000 1.88e-003 1.62418790323e+002   1 1.00e+000
    13e 0 1.2e+004 0.0000e+000 4.01e-006 1.62418790322e+002   1 9.88e-001

Minimum was achieved

Chi-square = 162.419
Degrees of freedom = 98
Probability level = 0.000

Maximum Likelihood Estimates

Regression Weights:	Estimate	S.E.	C.R.	Label
V15AIDS <-------------- Implementing	1.000			
V13AIDS <-------------- Implementing	1.050	0.170	6.161	
V12AFA <-------------- Implementing	0.838	0.156	5.356	
V8AIDS <-------------- Implementing	1.302	0.192	6.789	
V6AIDS <------------- Implementing	0.982	0.167	5.869	
V9ACA <---- Championing_Alternatives	1.000			
V4ACA <---- Championing_Alternatives	0.789	0.144	5.492	
V3ACA <---- Championing_Alternatives	0.955	0.152	6.282	
V2ACA <---- Championing_Alternatives	1.071	0.150	7.117	
V1ASI <---- Championing_Alternatives	0.850	0.130	6.518	
V14AFA <- Facilitiating_Adaptability	1.000			
V10AFA <- Facilitiating_Adaptability	1.895	0.468	4.050	
V7AFA <-- Facilitiating_Adaptability	1.790	0.441	4.060	
V11ASI <--- Synthesizing_Information	1.000			
V5ASI <---- Synthesizing_Information	1.774	0.791	2.243	
V16AFA <- Facilitiating_Adaptability	1.429	0.377	3.788	

Standardized Regression Weights: Estimate

```
------------------------------------      ---------
V15AIDS <-------------- Implementing        0.633
V13AIDS <-------------- Implementing        0.683
V12AFA <-------------- Implementing         0.569
V8AIDS <-------------- Implementing         0.805
V6AIDS <-------------- Implementing         0.639
V9ACA <---- Championing_Alternatives        0.704
V4ACA <---- Championing_Alternatives        0.549
V3ACA <---- Championing_Alternatives        0.639
V2ACA <---- Championing_Alternatives        0.743
V1ASI <---- Championing_Alternatives        0.667
V14AFA <- Facilitiating_Adaptability        0.408
V10AFA <- Facilitiating_Adaptability        0.737
V7AFA <-- Facilitiating_Adaptability        0.747
V11ASI <--- Synthesizing_Information        0.491
V5ASI <---- Synthesizing_Information        0.828
V16AFA <- Facilitiating_Adaptability        0.594
```

Intercepts:	Estimate	S.E.	C.R.	Label
V15AIDS	3.962	0.079	50.028	
V13AIDS	3.924	0.077	50.891	
V12AFA	3.947	0.074	53.515	
V8AIDS	3.985	0.081	49.144	
V6AIDS	3.618	0.077	47.005	
V9ACA	3.504	0.069	50.886	
V4ACA	3.473	0.070	49.856	
V3ACA	3.873	0.073	53.281	
V2ACA	3.389	0.070	48.508	
V1ASI	3.617	0.062	58.340	
V14AFA	2.573	0.078	32.910	
V10AFA	2.870	0.082	34.960	
V7AFA	2.532	0.077	33.035	
V11ASI	3.229	0.081	39.974	
V5ASI	3.382	0.085	39.806	
V16AFA	2.649	0.077	34.377	

Covariances:	Estimate	S.E.	C.R.	Label
Synthesizing_Informa <> Implementing	0.082	0.045	1.814	
Implementing <> Facilitiating_Adapta	0.097	0.034	2.829	
Implementing <> Championing_Alternat	0.139	0.041	3.359	
Championing_Alte <> Facilitiating_Ad	0.118	0.037	3.164	
Synthesizing_Inf <> Championing_Alte	0.088	0.046	1.904	
Synthesizing_Inf <> Facilitiating_Ad	0.022	0.022	1.012	

Correlations:	Estimate
Synthesizing_Informa <> Implementing	0.315
Implementing <> Facilitiating_Adapta	0.465
Implementing <> Championing_Alternat	0.441
Championing_Alte <> Facilitiating_Ad	0.586
Synthesizing_Inf <> Championing_Alte	0.351
Synthesizing_Inf <> Facilitiating_Ad	0.136

Variances:	Estimate	S.E.	C.R.	Label
Implementing	0.327	0.089	3.685	
Championing_Alternatives	0.306	0.073	4.203	
Facilitiating_Adaptability	0.133	0.061	2.158	
Synthesizing_Information	0.205	0.111	1.843	
e15	0.489	0.071	6.925	
e13	0.413	0.063	6.561	
e12	0.478	0.066	7.254	
e8	0.301	0.061	4.924	
e6	0.455	0.066	6.885	
e9	0.311	0.049	6.320	
e4	0.441	0.060	7.308	
e3	0.405	0.059	6.825	
e2	0.284	0.048	5.875	
e1	0.276	0.042	6.628	
e14	0.662	0.087	7.621	
e10	0.400	0.076	5.293	
e7	0.335	0.066	5.119	
e11	0.644	0.118	5.440	
e5	0.294	0.277	1.062	
e16	0.497	0.073	6.816	

Squared Multiple Correlations:	Estimate
V16AFA	0.353
V5ASI	0.686
V11ASI	0.241
V7AFA	0.559
V10AFA	0.543
V14AFA	0.167
V1ASI	0.445
V2ACA	0.552
V3ACA	0.408
V4ACA	0.302
V9ACA	0.496
V6AIDS	0.409
V8AIDS	0.648
V12AFA	0.324
V13AIDS	0.466
V15AIDS	0.401

Factor Score Weights

	V16AFA	V5ASI	V11ASI	V7AFA	V10AFA	V14AFA	V1ASI
Facilitiat	0.08071	-0.00770	-0.00199	0.14972	0.13281	0.04240	0.01929
Championin	0.01802	0.02875	0.00741	0.03343	0.02965	0.00947	0.16545
Implementi	0.01071	0.02151	0.00554	0.01987	0.01763	0.00563	0.01025
Synthesizi	-0.00368	0.33623	0.08666	-0.00682	-0.00605	-0.00193	0.01468

	V2ACA	V3ACA	V4ACA	V9ACA	V6AIDS	V8AIDS	V12AFA
Facilitiat	0.02363	0.01480	0.01122	0.02017	0.00803	0.01614	0.00653
Championin	0.20262	0.12694	0.09623	0.17299	0.00718	0.01443	0.00584
Implementi	0.01256	0.00787	0.00596	0.01072	0.11957	0.24028	0.09720
Synthesizi	0.01798	0.01127	0.00854	0.01535	0.00769	0.01546	0.00625

	V13AIDS	V15AIDS
Facilitiat	0.00948	0.00762
Championin	0.00848	0.00682
Implementi	0.14117	0.11351
Synthesizi	0.00908	0.00730

Summary of models

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	54	162.419	98	0.000	1.657
Saturated model	152	0.000	0		
Independence model	16	6521.082	136	0.000	47.949

	DELTA1	RHO1	DELTA2	RHO2	
Model	NFI	RFI	IFI	TLI	CFI
Default model	0.975	0.965	0.990	0.986	0.990
Saturated model	1.000		1.000		1.000
Independence model	0.000	0.000	0.000	0.000	0.000

Model	PRATIO	PNFI	PCFI
Default model	0.721	0.703	0.713
Saturated model	0.000	0.000	0.000
Independence model	1.000	0.000	0.000

Model	NCP	LO 90	HI 90
Default model	64.419	33.273	103.460
Saturated model	0.000	0.000	0.000
Independence model	6385.082	6123.988	6652.498

Model	FMIN	F0	LO 90	HI 90
Default model	1.240	0.492	0.254	0.790
Saturated model	0.000	0.000	0.000	0.000
Independence model	49.779	48.741	46.748	50.782

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.071	0.051	0.090	0.043
Independence model	0.599	0.586	0.611	0.000

Model	AIC	BCC	BIC	CAIC
Default model	270.419	286.524		
Saturated model	304.000	349.333		
Independence model	6553.082	6557.854		

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.064	1.827	2.362	2.187
Saturated model	2.321	2.321	2.321	2.667
Independence model	50.024	48.030	52.065	50.060

	HOELTER	HOELTER
Model	.05	.01
Default model	99	108
Independence model	4	4

Strategy Making Modes CFA

Strategy Making Modes CFA

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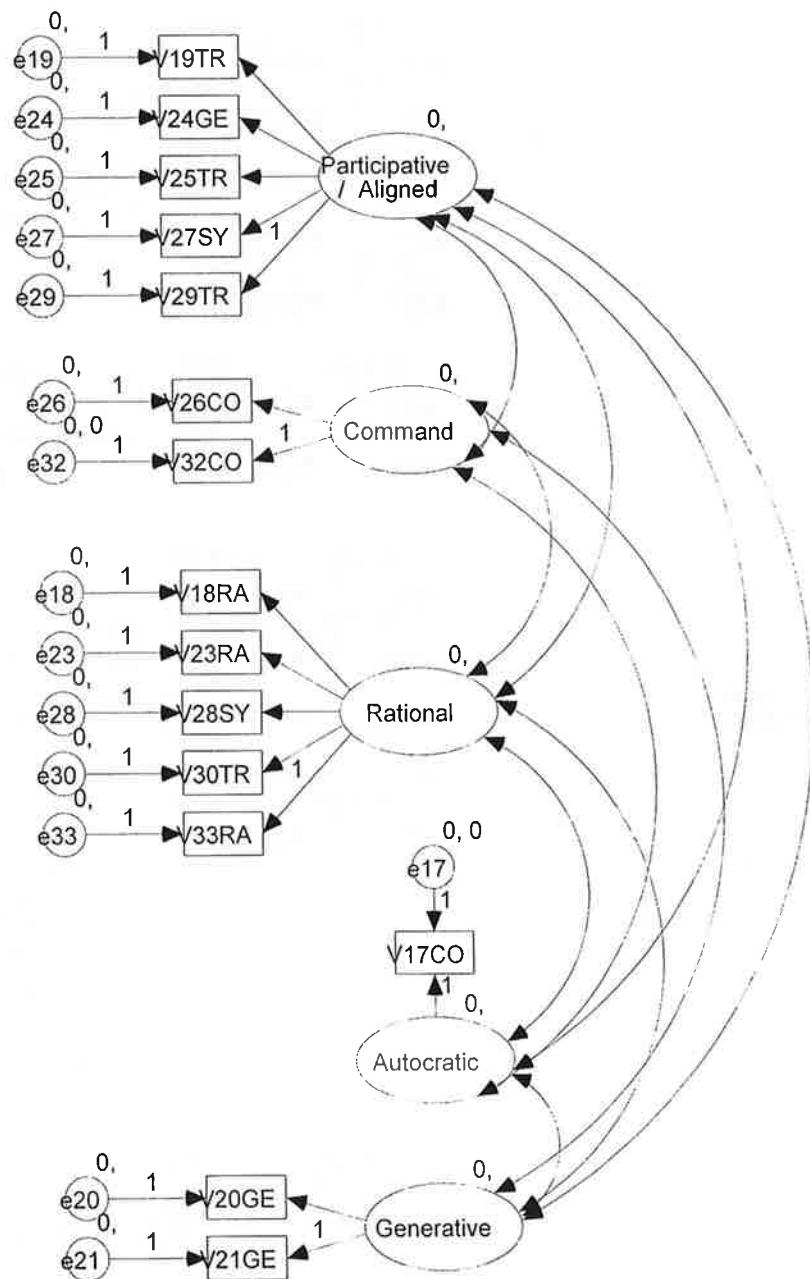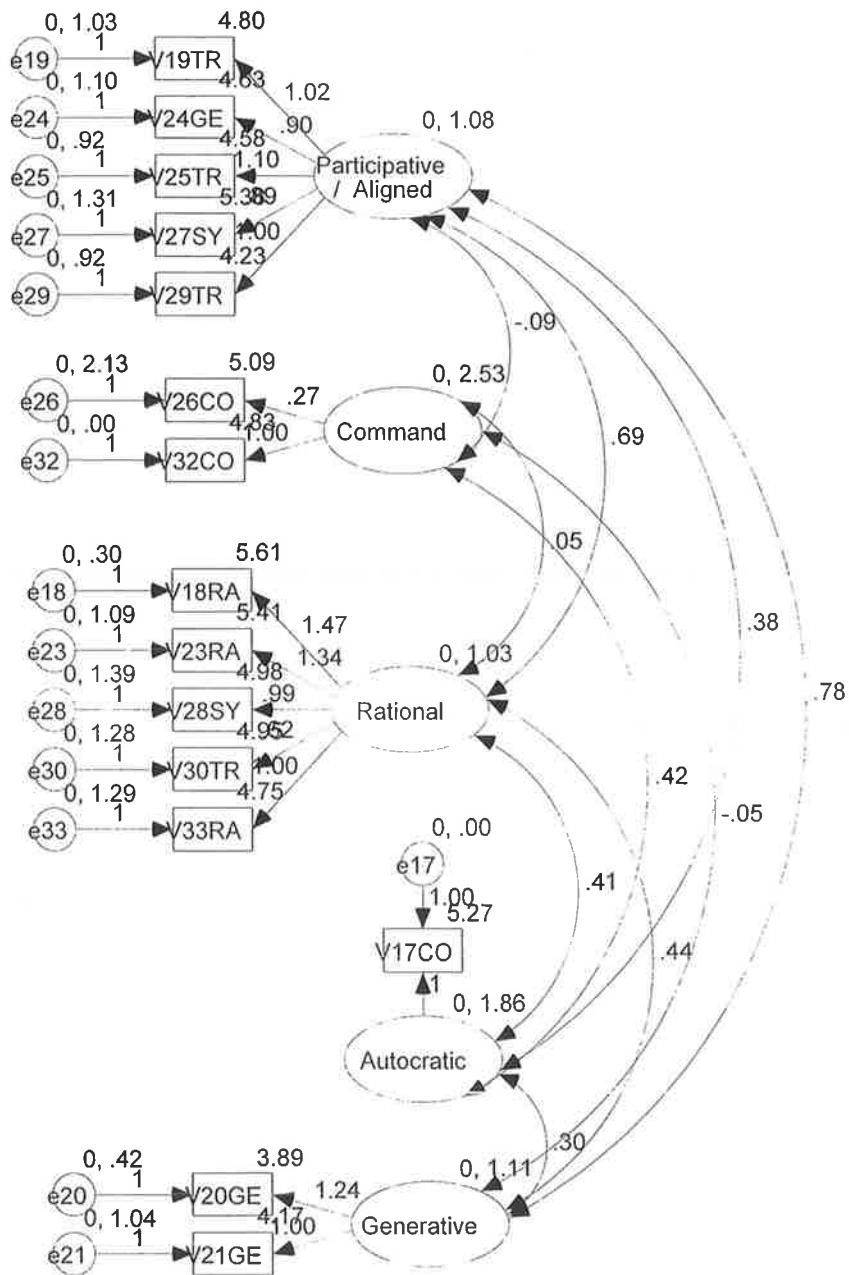
Strategy Making Modes CFA
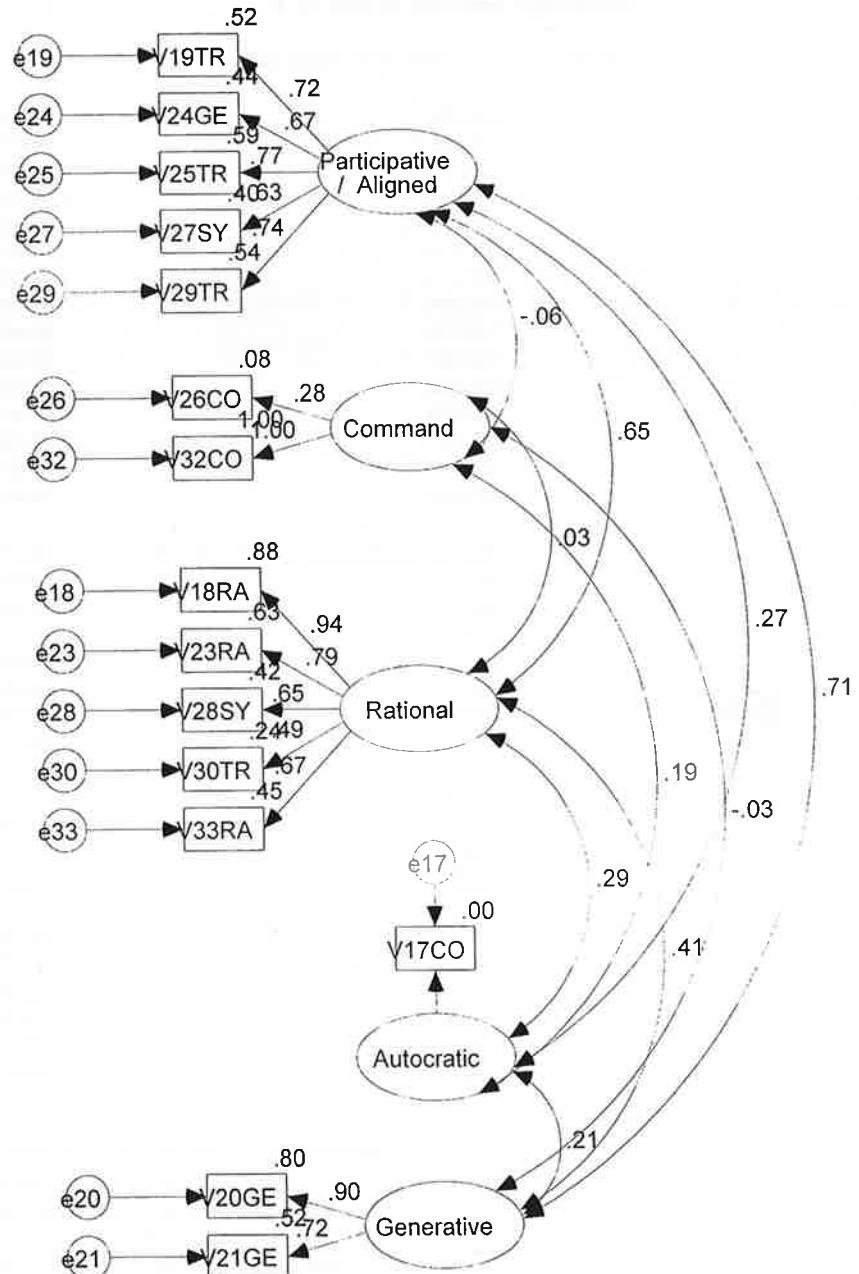
Title

Strategy making modes c.f.a.

Your model contains the following variables

V29TR	observed	endogenous
V27SY	observed	endogenous
V25TR	observed	endogenous
V24GE	observed	endogenous
V19TR	observed	endogenous
V32CO	observed	endogenous
V26CO	observed	endogenous
V33RA	observed	endogenous
V30TR	observed	endogenous
V28SY	observed	endogenous
V23RA	observed	endogenous
V18RA	observed	endogenous
V17CO	observed	endogenous
V21GE	observed	endogenous
V20GE	observed	endogenous
Participative_/ Aligned	unobserved	exogenous
e29	unobserved	exogenous
e27	unobserved	exogenous
e25	unobserved	exogenous
e24	unobserved	exogenous
e19	unobserved	exogenous
Command	unobserved	exogenous
e32	unobserved	exogenous
e26	unobserved	exogenous
Rational	unobserved	exogenous
e33	unobserved	exogenous
e30	unobserved	exogenous
e28	unobserved	exogenous
e23	unobserved	exogenous
e18	unobserved	exogenous
Autocratic	unobserved	exogenous
e17	unobserved	exogenous
Generative	unobserved	exogenous
e21	unobserved	exogenous
e20	unobserved	exogenous

Number of variables in your model:	35
Number of observed variables:	15
Number of unobserved variables:	20
Number of exogenous variables:	20
Number of endogenous variables:	15

Summary of Parameters

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed:	20	0	2	0	0	22
Labeled:	0	0	0	0	0	0
Unlabeled:	10	10	18	0	15	53
Total:	30	10	20	0	15	75

NOTE:
    The model is recursive.

Sample size: 132

Model: Default model

Computation of degrees of freedom

                    Number of distinct sample moments: 135
            Number of distinct parameters to be estimated: 53

                              Degrees of freedom: 82

```
0e  7 0.0e+000 -5.9589e-001 1.00e+004 8.93278352290e+002  0 1.00e+004
1e  5 0.0e+000 -1.9526e-001 2.96e+000 3.99816024972e+002 20 3.64e-001
2e  2 0.0e+000 -6.9901e-002 2.73e-001 3.40048507954e+002  7 8.98e-001
3e  1 0.0e+000 -7.1828e-003 6.18e-001 2.51688022194e+002  6 8.86e-001
4e  0 1.4e+003  0.0000e+000 5.52e-001 2.14519469520e+002  5 8.13e-001
5e  0 3.4e+002  0.0000e+000 6.35e-001 2.01873948871e+002  3 0.00e+000
6e  0 4.3e+002  0.0000e+000 3.63e-001 1.96714127522e+002  1 1.08e+000
7e  0 5.2e+002  0.0000e+000 9.78e-002 1.96372656062e+002  1 1.06e+000
8e  0 5.4e+002  0.0000e+000 1.49e-002 1.96368193258e+002  1 1.01e+000
9e  0 5.4e+002  0.0000e+000 3.07e-004 1.96368191476e+002  1 1.00e+000
```


Minimum was achieved

Chi-square = 196.368
Degrees of freedom = 82
Probability level = 0.000

Maximum Likelihood Estimates

Regression Weights:	Estimate	S.E.	C.R.	Label
V29TR <---- Participative_/ Aligned	1.000			
V27SY <---- Participative_/ Aligned	0.888	0.131	6.754	
V25TR <---- Participative_/ Aligned	1.102	0.134	8.226	
V24GE <---- Participative_/ Aligned	0.899	0.126	7.132	
V19TR <---- Participative_/ Aligned	1.023	0.132	7.749	
V32CO <-------------------- Command	1.000			
V26CO <-------------------- Command	0.269	0.080	3.363	
V33RA <-------------------- Rational	1.000			
V30TR <-------------------- Rational	0.617	0.120	5.157	
V28SY <-------------------- Rational	0.987	0.147	6.705	
V23RA <-------------------- Rational	1.336	0.167	7.980	
V18RA <-------------------- Rational	1.471	0.167	8.808	
V17CO <---------------------- e17	1.000			
V21GE <------------------ Generative	1.000			
V20GE <------------------ Generative	1.241	0.181	6.843	

```
Standardized Regression Weights:              Estimate
------------------------------                --------

V29TR <---- Participative_/  Aligned           0.736
V27SY <---- Participative_/  Aligned           0.629
V25TR <---- Participative_/  Aligned           0.768
V24GE <---- Participative_/  Aligned           0.665
V19TR <---- Participative_/  Aligned           0.723
V32CO <---------------------- Command          1.000
V26CO <---------------------- Command          0.282
V33RA <------------------- Rational            0.667
V30TR <------------------- Rational            0.486
V28SY <------------------- Rational            0.648
V23RA <------------------- Rational            0.793
V18RA <------------------- Rational            0.939
V21GE <----------------- Generative            0.719
V20GE <----------------- Generative            0.895


Intercepts:                          Estimate    S.E.      C.R.     Label
-----------                          --------    ----      ----     -----

                           V29TR      4.232     0.124    34.173
                           V27SY      5.379     0.128    41.893
                           V25TR      4.576     0.130    35.078
                           V24GE      4.632     0.123    37.625
                           V19TR      4.803     0.129    37.263
                           V32CO      4.833     0.139    34.760
                           V26CO      5.091     0.133    38.338
                           V33RA      4.748     0.134    35.494
                           V30TR      4.947     0.113    43.796
                           V28SY      4.977     0.135    36.765
                           V23RA      5.409     0.150    36.115
                           V18RA      5.614     0.139    40.314
                           V17CO      5.265     0.119    44.169
                           V21GE      4.174     0.128    32.630
                           V20GE      3.886     0.128    30.471


Covariances:                         Estimate    S.E.      C.R.     Label
------------                         --------    ----      ----     -----

Generative <> Participative_/  Align   0.775     0.172     4.519
Participative_/  Aligned <> Rational   0.689     0.151     4.580
Participative_/  Aligned <-> Command  -0.094     0.159    -0.596
Generative <-------------> Rational    0.440     0.132     3.328
Command <----------------> Rational    0.052     0.148     0.352
Generative <-------------> Command     -0.052    0.160    -0.325
Autocratic <> Participative_/  Align   0.379     0.143     2.653
Autocratic <-----------> Generative    0.303     0.144     2.104
Autocratic <-------------> Rational    0.407     0.138     2.951
Autocratic <-------------> Command     0.423     0.193     2.188


Correlations:                         Estimate
-------------                         --------

Generative <> Participative_/  Align    0.708
Participative_/  Aligned <> Rational    0.651
Participative_/  Aligned <-> Command   -0.057
Generative <-------------> Rational     0.411
Command <----------------> Rational     0.032
Generative <-------------> Command     -0.031
Autocratic <> Participative_/  Align    0.267
Autocratic <-----------> Generative     0.211
Autocratic <-------------> Rational     0.293
Autocratic <-------------> Command      0.195
```

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Variances:		Estimate	S.E.	C.R.	Label
	e17	0.000			
Participative_/	Aligned	1.082	0.234	4.621	
	Command	2.533	0.313	8.093	
	Rational	1.035	0.250	4.146	
	Generative	1.108	0.267	4.156	
	e32	0.000			
	e29	0.918	0.139	6.602	
	e27	1.306	0.179	7.287	
	e25	0.915	0.145	6.300	
	e24	1.102	0.155	7.085	
	e19	1.034	0.154	6.707	
	e26	2.126	0.263	8.093	
	e33	1.288	0.174	7.402	
	e30	1.277	0.162	7.866	
	e28	1.394	0.185	7.528	
	e23	1.092	0.166	6.563	
	e18	0.302	0.112	2.687	
	Autocratic	1.862	0.230	8.093	
	e21	1.035	0.184	5.641	
	e20	0.423	0.209	2.021	

Squared Multiple Correlations:	Estimate
V20GE	0.801
V21GE	0.517
V17CO	0.000
V18RA	0.881
V23RA	0.628
V28SY	0.419
V30TR	0.236
V33RA	0.445
V26CO	0.079
V32CO	1.000
V19TR	0.523
V24GE	0.443
V25TR	0.589
V27SY	0.395
V29TR	0.541

Factor Score Weights

	V20GE	V21GE	V17CO	V18RA	V23RA	V28SY	V30TR
Rational	0.002	0.001	0.014	0.402	0.101	0.058	0.040
Command	-0.000	0.000	0.000	0.000	-0.000	-0.000	0.000
Participa	0.089	0.029	0.016	0.064	0.016	0.009	0.006
Generativ	0.475	0.157	0.011	0.003	0.001	0.000	0.000

	V33RA	V26CO	V32CO	V19TR	V24GE	V25TR	V27SY
Rational	0.064	-0.000	0.003	0.013	0.011	0.016	0.009
Command	0.000	0.000	1.000	-0.000	0.000	0.000	-0.000
Participa	0.010	0.000	-0.015	0.140	0.115	0.170	0.096
Generativ	0.000	0.000	-0.002	0.030	0.025	0.037	0.021

	V29TR
Rational	0.014
Command	0.000
Participa	0.154
Generativ	0.033

Summary of models

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	53	196.368	82	0.000	2.395
Saturated model	135	0.000	0		
Independence model	15	5681.857	120	0.000	47.349

Model	DELTA1 NFI	RHO1 RFI	DELTA2 IFI	RHO2 TLI	CFI
Default model	0.965	0.949	0.980	0.970	0.979
Saturated model	1.000		1.000		1.000
Independence model	0.000	0.000	0.000	0.000	0.000

Model	PRATIO	PNFI	PCFI
Default model	0.683	0.660	0.669
Saturated model	0.000	0.000	0.000
Independence model	1.000	0.000	0.000

Model	NCP	LO 90	HI 90
Default model	114.368	77.159	159.283
Saturated model	0.000	0.000	0.000
Independence model	5561.857	5318.370	5811.666

Model	FMIN	F0	LO 90	HI 90
Default model	1.499	0.873	0.589	1.216
Saturated model	0.000	0.000	0.000	0.000
Independence model	43.373	42.457	40.598	44.364

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.103	0.085	0.122	0.000
Independence model	0.595	0.582	0.608	0.000

Model	AIC	BCC	BIC	CAIC
Default model	302.368	317.116		
Saturated model	270.000	307.565		
Independence model	5711.857	5716.031		

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.308	2.024	2.651	2.421
Saturated model	2.061	2.061	2.061	2.348
Independence model	43.602	41.743	45.509	43.634

Model	HOELTER .05	HOELTER .01
Default model	70	77
Independence model	4	4

Middle Management Strategic Roles

Middle Management Strategic Roles

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Middle Management Strategic Roles

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```
Title

    Middle management strategic roles and performance:

Your model contains the following variables

                V15AIDS                             observed    endogenous
                V13AIDS                             observed    endogenous
                V12AFA                              observed    endogenous
                V8AIDS                              observed    endogenous
                V6AIDS                              observed    endogenous
                V9ACA                               observed    endogenous
                V4ACA                               observed    endogenous
                V3ACA                               observed    endogenous
                V2ACA                               observed    endogenous
                V1ASI                               observed    endogenous
                V14AFA                              observed    endogenous
                V10AFA                              observed    endogenous
                V7AFA                               observed    endogenous
                V11ASI                              observed    endogenous
                V5ASI                               observed    endogenous
                V16AFA                              observed    endogenous
                OPERFSUM                            observed    endogenous

                Implementing                        unobserved  exogenous
                e15                                 unobserved  exogenous
                e13                                 unobserved  exogenous
                e12                                 unobserved  exogenous
                e8                                  unobserved  exogenous
                e6                                  unobserved  exogenous
                Championing_Alternatives            unobserved  exogenous
                e9                                  unobserved  exogenous
                e4                                  unobserved  exogenous
                e3                                  unobserved  exogenous
                e2                                  unobserved  exogenous
                e1                                  unobserved  exogenous
                Facilitiating_Adaptability          unobserved  exogenous
                e14                                 unobserved  exogenous
                e10                                 unobserved  exogenous
                e7                                  unobserved  exogenous
                Synthesizing_Information            unobserved  exogenous
                e11                                 unobserved  exogenous
                e5                                  unobserved  exogenous
                e16                                 unobserved  exogenous
                ep                                  unobserved  exogenous

                Number of variables in your model:     38
                Number of observed variables:          17
                Number of unobserved variables:        21
                Number of exogenous variables:         21
                Number of endogenous variables:        17

Summary of Parameters

                Weights  Covariances Variances   Means   Intercepts   Total
                -------  ----------- ---------   -----   ----------   -----
      Fixed:      21          0          0         0          0         21
    Labeled:       0          0          0         0          0          0
 Unlabeled:       16          6         21         0         17         60
                -------  ----------- ---------   -----   ----------   -----
      Total:      37          6         21         0         17         81

NOTE:

    The model is recursive.


Sample size:    132
```

Model: Default model

Computation of degrees of freedom

                    Number of distinct sample moments: 170
            Number of distinct parameters to be estimated: 60

                            Degrees of freedom: 110

    0e 10 0.0e+000 -4.3562e-001 1.00e+004 7.71111098885e+002 0 1.00e+004
    1e 4 0.0e+000 -6.6623e-002 2.39e+000 3.74229410131e+002 20 5.04e-001
    2e 0 1.3e+003 0.0000e+000 1.03e+000 2.54297742398e+002 4 7.47e-001
    3e 0 9.4e+002 0.0000e+000 8.24e-001 2.14978728169e+002 3 0.00e+000
    4e 0 2.7e+003 0.0000e+000 9.38e-001 1.91740805767e+002 1 9.59e-001
    5e 0 9.1e+002 0.0000e+000 5.89e-001 1.88046206951e+002 2 0.00e+000
    6e 0 5.5e+003 0.0000e+000 4.04e-001 1.84156690565e+002 1 1.01e+000
    7e 0 2.8e+003 0.0000e+000 2.31e-001 1.83777613290e+002 1 1.11e+000
    8e 0 2.9e+003 0.0000e+000 1.18e-001 1.83729972426e+002 1 1.10e+000
    9e 0 3.1e+003 0.0000e+000 2.35e-002 1.83728425712e+002 1 1.03e+000
   10e 0 3.2e+003 0.0000e+000 1.15e-003 1.83728422689e+002 1 1.00e+000
   11e 0 3.2e+003 0.0000e+000 2.48e-006 1.83728422689e+002 1 1.07e+000

Minimum was achieved

Chi-square = 183.728
Degrees of freedom = 110
Probability level = 0.000

Maximum Likelihood Estimates

Regression Weights:	Estimate	S.E.	C.R.	Label
V15AIDS <-------------- Implementing	1.000			
V13AIDS <-------------- Implementing	1.029	0.166	6.210	
V12AFA <-------------- Implementing	0.813	0.152	5.341	
V8AIDS <-------------- Implementing	1.294	0.187	6.918	
V6AIDS <-------------- Implementing	0.961	0.163	5.905	
V9ACA <---- Championing_Alternatives	1.000			
V4ACA <---- Championing_Alternatives	0.788	0.143	5.495	
V3ACA <---- Championing_Alternatives	0.953	0.152	6.280	
V2ACA <---- Championing_Alternatives	1.070	0.150	7.126	
V1ASI <---- Championing_Alternatives	0.850	0.130	6.530	
V14AFA <- Facilitiating_Adaptability	1.000			
V10AFA <- Facilitiating_Adaptability	1.863	0.457	4.074	
V7AFA <-- Facilitiating_Adaptability	1.797	0.438	4.100	
V11ASI <--- Synthesizing_Information	1.000			
V5ASI <---- Synthesizing_Information	1.423	0.463	3.073	
V16AFA <- Facilitiating_Adaptability	1.409	0.370	3.804	
OPERFSUM <------------- Implementing	0.206	0.227	0.906	
OPERFSUM <- Championing_Alternatives	-0.020	0.292	-0.067	
OPERFSUM <- Facilitiating_Adaptabili	-0.462	0.436	-1.059	
OPERFSUM <- Synthesizing_Information	0.656	0.301	2.181	

```
Standardized Regression Weights:            Estimate
----------------------------------          --------

V15AIDS <-------------- Implementing         0.642
V13AIDS <------------- Implementing          0.678
V12AFA <-------------- Implementing          0.561
V8AIDS <-------------- Implementing          0.811
V6AIDS <-------------- Implementing          0.635
V9ACA <---- Championing_Alternatives         0.705
V4ACA <---- Championing_Alternatives         0.549
V3ACA <---- Championing_Alternatives         0.638
V2ACA <---- Championing_Alternatives         0.743
V1ASI <---- Championing_Alternatives         0.667
V14AFA <- Facilitiating_Adaptability         0.411
V10AFA <- Facilitiating_Adaptability         0.729
V7AFA <-- Facilitiating_Adaptability         0.756
V11ASI <--- Synthesizing_Information         0.548
V5ASI <---- Synthesizing_Information         0.742
V16AFA <- Facilitiating_Adaptability         0.590
OPERFSUM <------------- Implementing          0.111
OPERFSUM <- Championing_Alternatives         -0.010
OPERFSUM <- Facilitiating_Adaptabili         -0.157
OPERFSUM <- Synthesizing_Information          0.307
```

Intercepts:	Estimate	S.E.	C.R.	Label
V15AIDS	3.962	0.079	50.029	
V13AIDS	3.924	0.077	50.892	
V12AFA	3.946	0.074	53.515	
V8AIDS	3.985	0.081	49.146	
V6AIDS	3.618	0.077	47.006	
V9ACA	3.504	0.069	50.885	
V4ACA	3.473	0.070	49.856	
V3ACA	3.873	0.073	53.280	
V2ACA	3.389	0.070	48.508	
V1ASI	3.617	0.062	58.340	
V14AFA	2.573	0.078	32.911	
V10AFA	2.870	0.082	34.962	
V7AFA	2.532	0.077	33.050	
V11ASI	3.229	0.081	39.978	
V5ASI	3.381	0.085	39.816	
V16AFA	2.649	0.077	34.389	
OPERFSUM	5.121	0.095	53.843	

Covariances:	Estimate	S.E.	C.R.	Label
Synthesizing_Informa <> Implementing	0.094	0.044	2.108	
Implementing <> Facilitiating_Adapta	0.098	0.035	2.842	
Implementing <> Championing_Alternat	0.141	0.042	3.370	
Championing_Alte <> Facilitiating_Ad	0.119	0.037	3.175	
Synthesizing_Inf <> Championing_Alte	0.111	0.046	2.413	
Synthesizing_Inf <> Facilitiating_Ad	0.035	0.026	1.329	

Correlations:	Estimate
Synthesizing_Informa <> Implementing	0.320
Implementing <> Facilitiating_Adapta	0.463
Implementing <> Championing_Alternat	0.440
Championing_Alte <> Facilitiating_Ad	0.584
Synthesizing_Inf <> Championing_Alte	0.396
Synthesizing_Inf <> Facilitiating_Ad	0.189

Variances:	Estimate	S.E.	C.R.	Label
Implementing	0.336	0.089	3.751	
Championing_Alternatives	0.306	0.073	4.210	
Facilitiating_Adaptability	0.134	0.062	2.176	
Synthesizing_Information	0.255	0.109	2.336	
e15	0.480	0.070	6.879	
e13	0.418	0.063	6.613	
e12	0.485	0.066	7.298	
e8	0.292	0.061	4.818	
e6	0.460	0.066	6.924	
e9	0.310	0.049	6.314	
e4	0.441	0.060	7.310	
e3	0.405	0.059	6.832	
e2	0.284	0.048	5.879	
e1	0.276	0.042	6.626	
e14	0.660	0.087	7.616	
e10	0.410	0.076	5.422	
e7	0.325	0.065	4.988	
e11	0.593	0.108	5.491	
e5	0.422	0.169	2.503	
e16	0.500	0.073	6.847	
ep	1.024	0.139	7.358	

Factor Score Weights

	OPERFSUM	V16AFA	V5ASI	V11ASI	V7AFA	V10AFA	V14AFA
Facilitia	-0.0123	0.0798	-0.0009	-0.0004	0.1564	0.1286	0.0429
Championi	0.0018	0.0174	0.0258	0.0129	0.0341	0.0281	0.0094
Implement	0.0122	0.0107	0.0136	0.0068	0.0210	0.0172	0.0058
Synthesiz	0.0561	-0.0007	0.2913	0.1455	-0.0015	-0.0012	-0.0004

	V1ASI	V2ACA	V3ACA	V4ACA	V9ACA	V6AIDS	V8AIDS
Facilitia	0.0190	0.0232	0.0145	0.0110	0.0199	0.0079	0.0168
Championi	0.1658	0.2026	0.1265	0.0962	0.1736	0.0071	0.0151
Implement	0.0105	0.0129	0.0080	0.0061	0.0110	0.1180	0.2503
Synthesiz	0.0236	0.0288	0.0180	0.0137	0.0247	0.0084	0.0178

	V12AFA	V13AIDS	V15AIDS
Facilitia	0.0064	0.0093	0.0079
Championi	0.0057	0.0084	0.0071
Implement	0.0948	0.1391	0.1178
Synthesiz	0.0067	0.0099	0.0084

Summary of models

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	60	183.728	110	0.000	1.670
Saturated model	170	0.000	0		
Independence model	17	6957.028	153	0.000	45.471

Model	DELTA1 NFI	RHO1 RFI	DELTA2 IFI	RHO2 TLI	CFI
Default model	0.974	0.963	0.989	0.985	0.989
Saturated model	1.000		1.000		1.000
Independence model	0.000	0.000	0.000	0.000	0.000

Model	PRATIO	PNFI	PCFI
Default model	0.719	0.700	0.711
Saturated model	0.000	0.000	0.000
Independence model	1.000	0.000	0.000

Model	NCP	LO 90	HI 90
Default model	73.728	40.294	115.053
Saturated model	0.000	0.000	0.000
Independence model	6804.028	6534.323	7080.058

Model	FMIN	F0	LO 90	HI 90
Default model	1.403	0.563	0.308	0.878
Saturated model	0.000	0.000	0.000	0.000
Independence model	53.107	51.939	49.880	54.046

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.072	0.053	0.089	0.030
Independence model	0.583	0.571	0.594	0.000

Model	AIC	BCC	BIC	CAIC
Default model	303.728	322.843		
Saturated model	340.000	394.159		
Independence model	6991.028	6996.444		

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.319	2.063	2.634	2.464
Saturated model	2.595	2.595	2.595	3.009
Independence model	53.367	51.308	55.474	53.408

Model	HOELTER .05	HOELTER .01
Default model	97	106
Independence model	4	4

Strategy Making Modes CFA
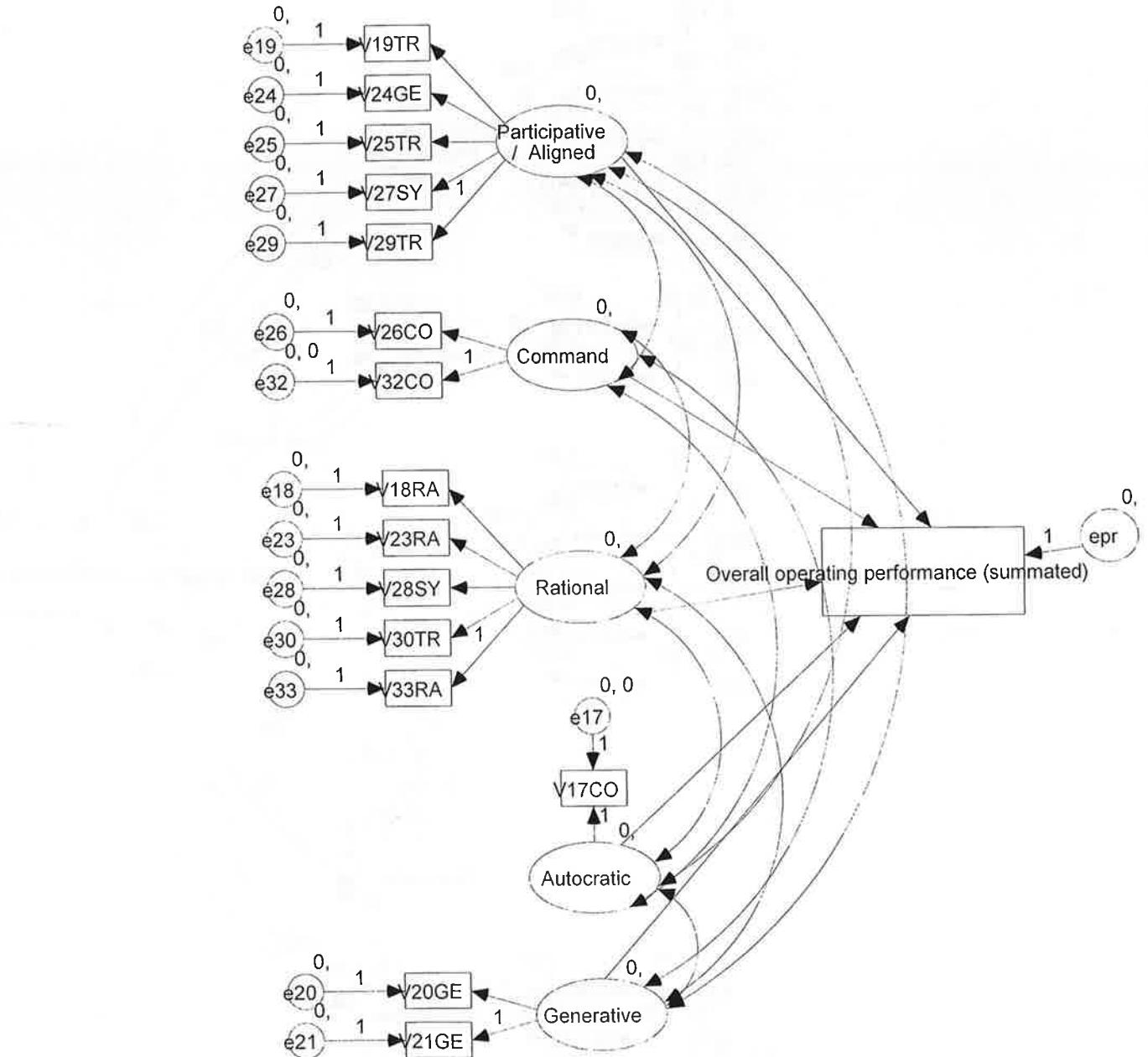
Strategy Making Modes CFA
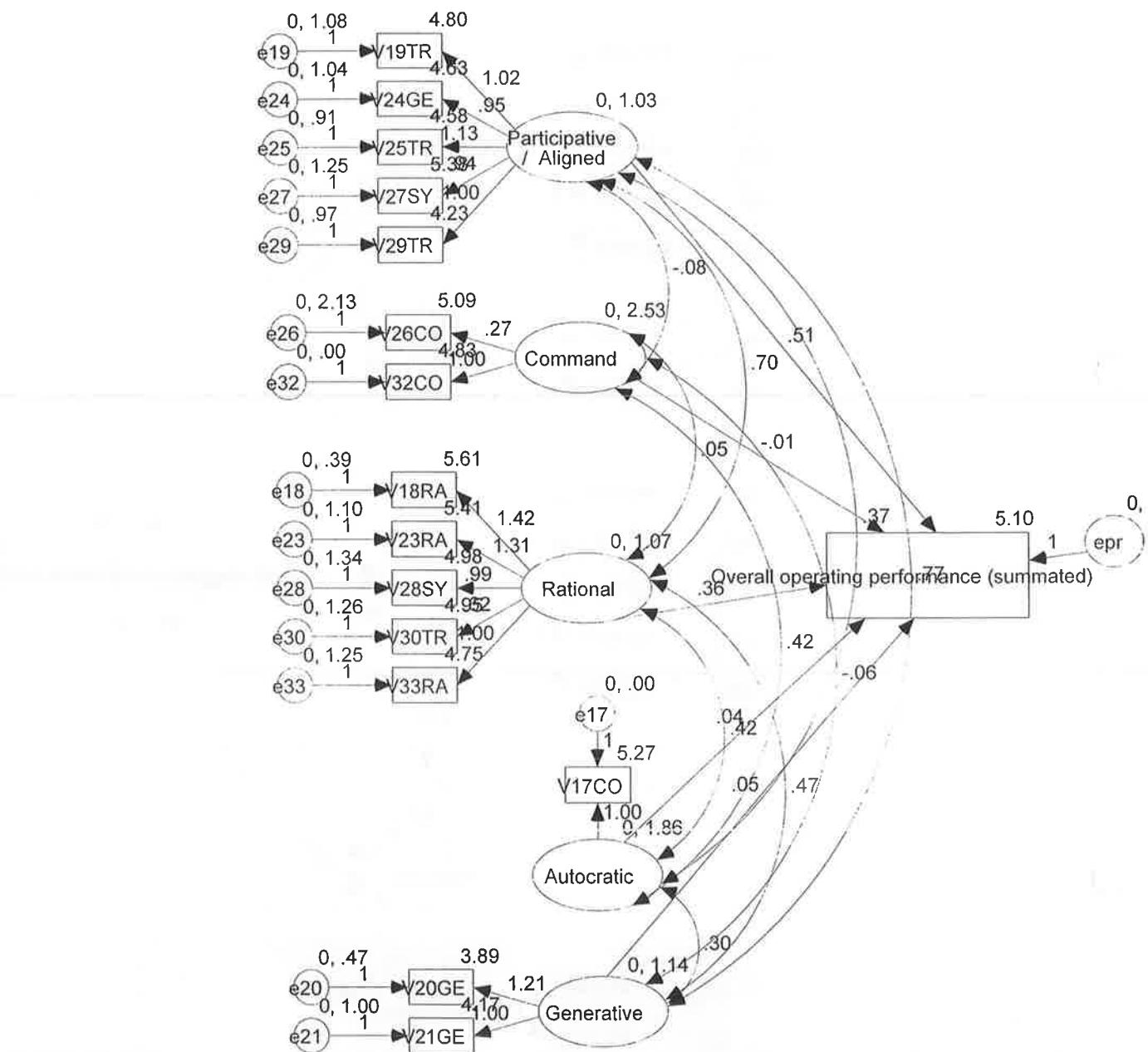
Strategy Making Modes CFA
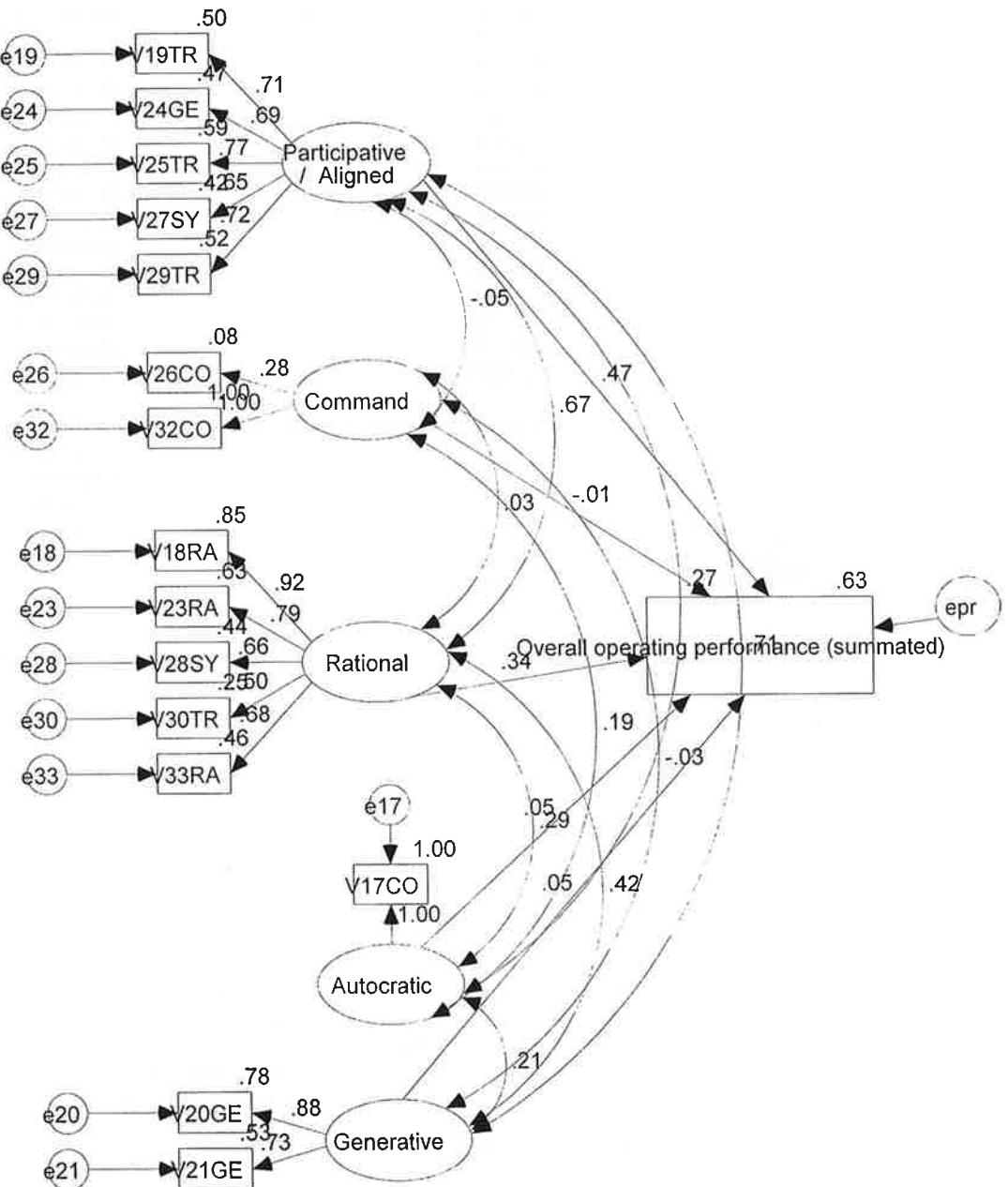
Title

Strategy modes to organization performance:

Your model contains the following variables

V29TR	observed	endogenous
V27SY	observed	endogenous
V25TR	observed	endogenous
V24GE	observed	endogenous
V19TR	observed	endogenous
V32CO	observed	endogenous
V26CO	observed	endogenous
V33RA	observed	endogenous
V30TR	observed	endogenous
V28SY	observed	endogenous
V23RA	observed	endogenous
V18RA	observed	endogenous
V17CO	observed	endogenous
V21GE	observed	endogenous
V20GE	observed	endogenous
OPERFSUM	observed	endogenous
Participative_/ Aligned	unobserved	exogenous
e29	unobserved	exogenous
e27	unobserved	exogenous
e25	unobserved	exogenous
e24	unobserved	exogenous
e19	unobserved	exogenous
Command	unobserved	exogenous
e32	unobserved	exogenous
e26	unobserved	exogenous
Rational	unobserved	exogenous
e33	unobserved	exogenous
e30	unobserved	exogenous
e28	unobserved	exogenous
e23	unobserved	exogenous
e18	unobserved	exogenous
Autocratic	unobserved	exogenous
e17	unobserved	exogenous
Generative	unobserved	exogenous
e21	unobserved	exogenous
e20	unobserved	exogenous
epr	unobserved	exogenous

Number of variables in your model: 37
Number of observed variables: 16
Number of unobserved variables: 21
Number of exogenous variables: 21
Number of endogenous variables: 16

Summary of Parameters

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed:	21	0	2	0	0	23
Labeled:	0	0	0	0	0	0
Unlabeled:	15	10	19	0	16	60
Total:	36	10	21	0	16	83

NOTE:

The model is recursive.

Sample size: 132

Model: Default model

Computation of degrees of freedom

```
              Number of distinct sample moments:   152
        Number of distinct parameters to be estimated:   60
                        ----------------------------
                        Degrees of freedom:   92
```

```
0e  8  0.0e+000  -6.9162e-001  1.00e+004  9.95664215408e+002   0 1.00e+004
1e* 6  0.0e+000  -2.6614e-001  3.31e+000  4.59988406871e+002  20 2.92e-001
2e  3  0.0e+000  -9.9060e-002  3.08e-001  3.85457645814e+002   6 8.53e-001
3e  1  0.0e+000  -5.5882e-003  9.60e-001  2.68942906063e+002   7 7.16e-001
4e  0  5.9e+002   0.0000e+000  8.76e-001  2.25544361830e+002   6 8.32e-001
5e  0  5.8e+002   0.0000e+000  5.67e-001  2.17790475268e+002   1 8.27e-001
6e  0  6.1e+002   0.0000e+000  1.25e-001  2.15750121857e+002   1 1.08e+000
7e  0  6.1e+002   0.0000e+000  4.70e-002  2.15678205879e+002   1 1.04e+000
8e  0  6.0e+002   0.0000e+000  2.76e-003  2.15677705634e+002   1 1.00e+000
9e  0  6.1e+002   0.0000e+000  3.38e-005  2.15677705602e+002   1 1.00e+000
```

Minimum was achieved

Chi-square = 215.678
Degrees of freedom = 92
Probability level = 0.000

Maximum Likelihood Estimates

Regression Weights:			Estimate	S.E.	C.R.	Label
V29TR <---- Participative_/	Aligned		1.000			
V27SY <---- Participative_/	Aligned		0.937	0.136	6.899	
V25TR <---- Participative_/	Aligned		1.130	0.139	8.134	
V24GE <---- Participative_/	Aligned		0.949	0.130	7.288	
V19TR <---- Participative_/	Aligned		1.024	0.137	7.502	
V32CO <-------------------- Command			1.000			
V26CO <-------------------- Command			0.269	0.080	3.363	
V33RA <-------------------- Rational			1.000			
V30TR <-------------------- Rational			0.621	0.117	5.288	
V28SY <-------------------- Rational			0.994	0.144	6.917	
V23RA <-------------------- Rational			1.309	0.162	8.073	
V18RA <-------------------- Rational			1.417	0.158	8.965	
V17CO <----------------- Autocratic			1.000			
V21GE <----------------- Generative			1.000			
V20GE <----------------- Generative			1.208	0.172	7.023	
OPERFSUM <- Participative_/	Aligned		0.511	0.156	3.283	
OPERFSUM <----------------- Command			-0.006	0.041	-0.150	
OPERFSUM <---------------- Rational			0.362	0.106	3.427	
OPERFSUM <-------------- Autocratic			0.039	0.050	0.770	
OPERFSUM <-------------- Generative			0.053	0.110	0.477	

```
Standardized Regression Weights:                    Estimate
--------------------------------------              --------

V29TR <---- Participative_/  Aligned                 0.718
V27SY <---- Participative_/  Aligned                 0.647
V25TR <---- Participative_/  Aligned                 0.768
V24GE <---- Participative_/  Aligned                 0.686
V19TR <---- Participative_/  Aligned                 0.707
V32CO <-------------------- Command                  1.000
V26CO <-------------------- Command                  0.282
V33RA <------------------- Rational                  0.679
V30TR <------------------- Rational                  0.497
V28SY <------------------- Rational                  0.664
V23RA <------------------- Rational                  0.791
V18RA <------------------- Rational                  0.921
V17CO <---------------- Autocratic                   1.000
V21GE <---------------- Generative                   0.729
V20GE <---------------- Generative                   0.883
OPERFSUM <- Participative_/  Aligned                 0.471
OPERFSUM <-------------------- Command               -0.009
OPERFSUM <------------------ Rational                0.341
OPERFSUM <-------------- Autocratic                  0.048
OPERFSUM <-------------- Generative                  0.051
```

```
Intercepts:                          Estimate    S.E.    C.R.     Label
------------                         --------   -------  -------   -------

                          V29TR       4.233     0.124   34.204
                          V27SY       5.379     0.128   41.893
                          V25TR       4.576     0.130   35.078
                          V24GE       4.634     0.123   37.689
                          V19TR       4.802     0.129   37.276
                          V32CO       4.833     0.139   34.760
                          V26CO       5.091     0.133   38.338
                          V33RA       4.747     0.134   35.489
                          V30TR       4.947     0.113   43.796
                          V28SY       4.977     0.135   36.765
                          V23RA       5.409     0.150   36.115
                          V18RA       5.614     0.139   40.314
                          V17CO       5.265     0.119   44.169
                          V21GE       4.174     0.128   32.630
                          V20GE       3.886     0.128   30.471
                       OPERFSUM       5.097     0.097   52.769
```

```
Covariances:                                  Estimate    S.E.    C.R.     Label
------------                                  --------   -------  -------   -------

Generative <> Participative_/  Align           0.767     0.168    4.554
Participative_/  Align <> Autocratic           0.368     0.140    2.634
Participative_/  Aligned <> Rational           0.701     0.151    4.625
Participative_/  Aligned <-> Command          -0.081     0.155   -0.524
Generative <-----------> Autocratic            0.304     0.146    2.079
Rational <-------------> Autocratic            0.416     0.141    2.955
Command <--------------> Autocratic            0.423     0.193    2.188
Generative <-------------> Rational            0.469     0.137    3.416
Command <----------------> Rational            0.049     0.152    0.322
Generative <-------------> Command            -0.057     0.164   -0.350
```

```
Correlations:                              Estimate
--------------                             --------

Generative <> Participative_/  Align         0.708
Participative_/  Align <> Autocratic         0.265
Participative_/  Aligned <> Rational         0.666
Participative_/  Aligned <-> Command        -0.050
Generative <------------> Autocratic         0.209
Rational <--------------> Autocratic         0.295
Command <----------------> Autocratic        0.195
Generative <--------------> Rational         0.425
Command <-----------------> Rational         0.030
Generative <--------------> Command         -0.034

Variances:                        Estimate    S.E.      C.R.     Label
----------                        --------   -------   -------   -------

     Participative_/  Aligned       1.031     0.229     4.503
                      Command       2.533     0.313     8.093
                      Rational      1.072     0.253     4.234
                      Autocratic    1.862     0.230     8.093
                      Generative    1.139     0.268     4.245
                      e32           0.000
                      e17           0.000
                      e29           0.967     0.141     6.860
                      e27           1.255     0.172     7.282
                      e25           0.914     0.142     6.448
                      e24           1.043     0.148     7.062
                      e19           1.082     0.156     6.937
                      e26           2.126     0.263     8.093
                      e33           1.251     0.171     7.321
                      e30           1.258     0.161     7.828
                      e28           1.342     0.181     7.436
                      e23           1.102     0.167     6.599
                      e18           0.387     0.109     3.537
                      e21           1.005     0.181     5.562
                      e20           0.469     0.200     2.343
                      epr           0.449     0.065     6.925


Squared Multiple Correlations:             Estimate
------------------------------             --------

                      OPERFSUM              0.629
                      V20GE                 0.780
                      V21GE                 0.531
                      V17CO                 1.000
                      V18RA                 0.848
                      V23RA                 0.625
                      V28SY                 0.441
                      V30TR                 0.247
                      V33RA                 0.462
                      V26CO                 0.079
                      V32CO                 1.000
                      V19TR                 0.500
                      V24GE                 0.471
                      V25TR                 0.590
                      V27SY                 0.419
                      V29TR                 0.516

Summary of models
-----------------
```

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	60	215.678	92	0.000	2.344
Saturated model	152	0.000	0		
Independence model	16	6210.990	136	0.000	45.669

Model	DELTA1 NFI	RHO1 RFI	DELTA2 IFI	RHO2 TLI	CFI
Default model	0.965	0.949	0.980	0.970	0.980
Saturated model	1.000		1.000		1.000
Independence model	0.000	0.000	0.000	0.000	0.000

Model	PRATIO	PNFI	PCFI
Default model	0.676	0.653	0.663
Saturated model	0.000	0.000	0.000
Independence model	1.000	0.000	0.000

Model	NCP	LO 90	HI 90
Default model	123.678	84.629	170.441
Saturated model	0.000	0.000	0.000
Independence model	6074.990	5820.325	6335.979

Model	FMIN	F0	LO 90	HI 90
Default model	1.646	0.944	0.646	1.301
Saturated model	0.000	0.000	0.000	0.000
Independence model	47.412	46.374	44.430	48.366

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.101	0.084	0.119	0.000
Independence model	0.584	0.572	0.596	0.000

Model	AIC	BCC	BIC	CAIC
Default model	335.678	353.572		
Saturated model	304.000	349.333		
Independence model	6242.990	6247.762		

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.562	2.264	2.919	2.699
Saturated model	2.321	2.321	2.321	2.667
Independence model	47.656	45.712	49.649	47.693

Model	HOELTER .05	HOELTER .01
Default model	71	77
Independence model	4	4
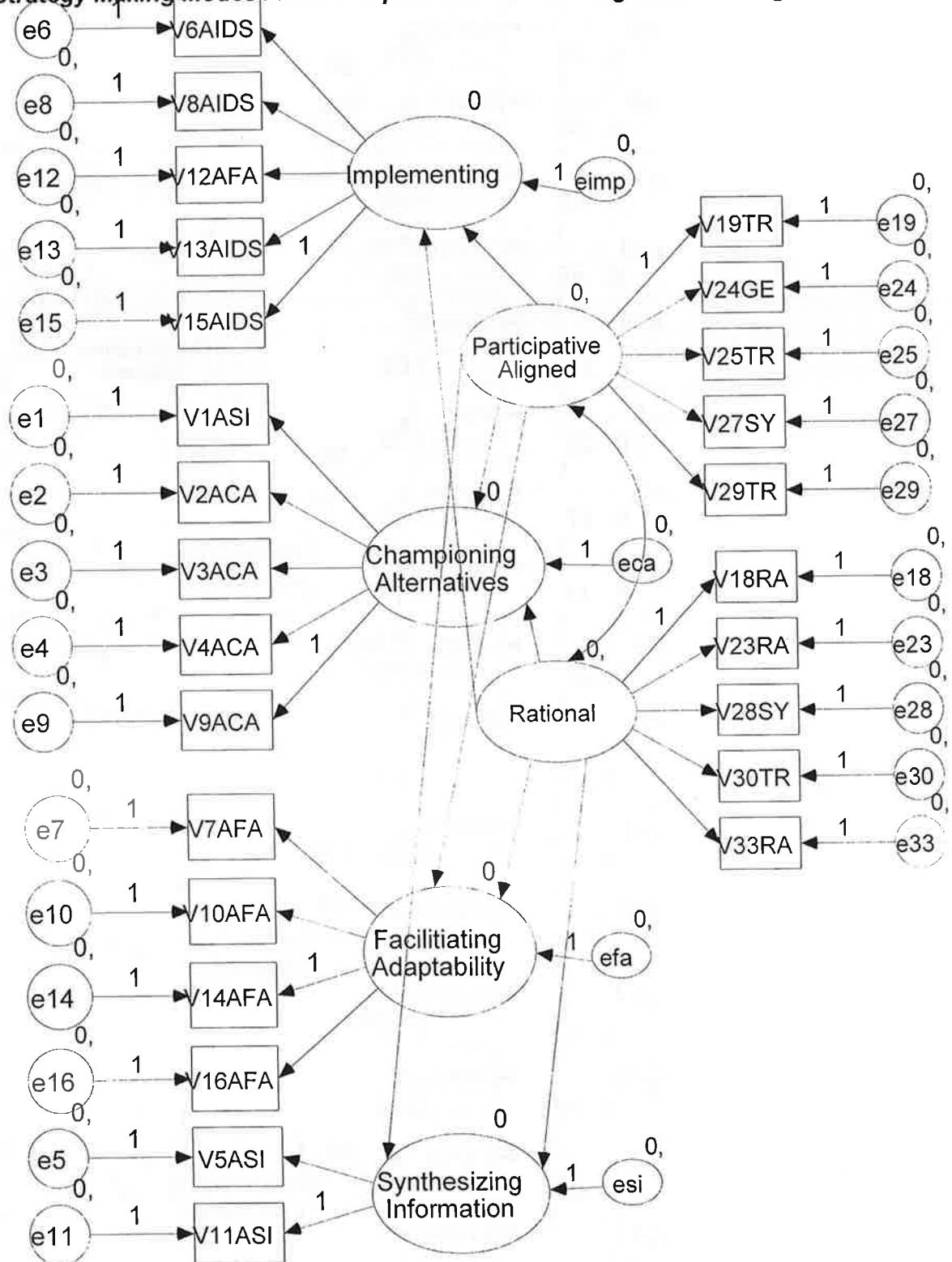
Strategy Making Modes relationships with Middle Management Strategic Roles
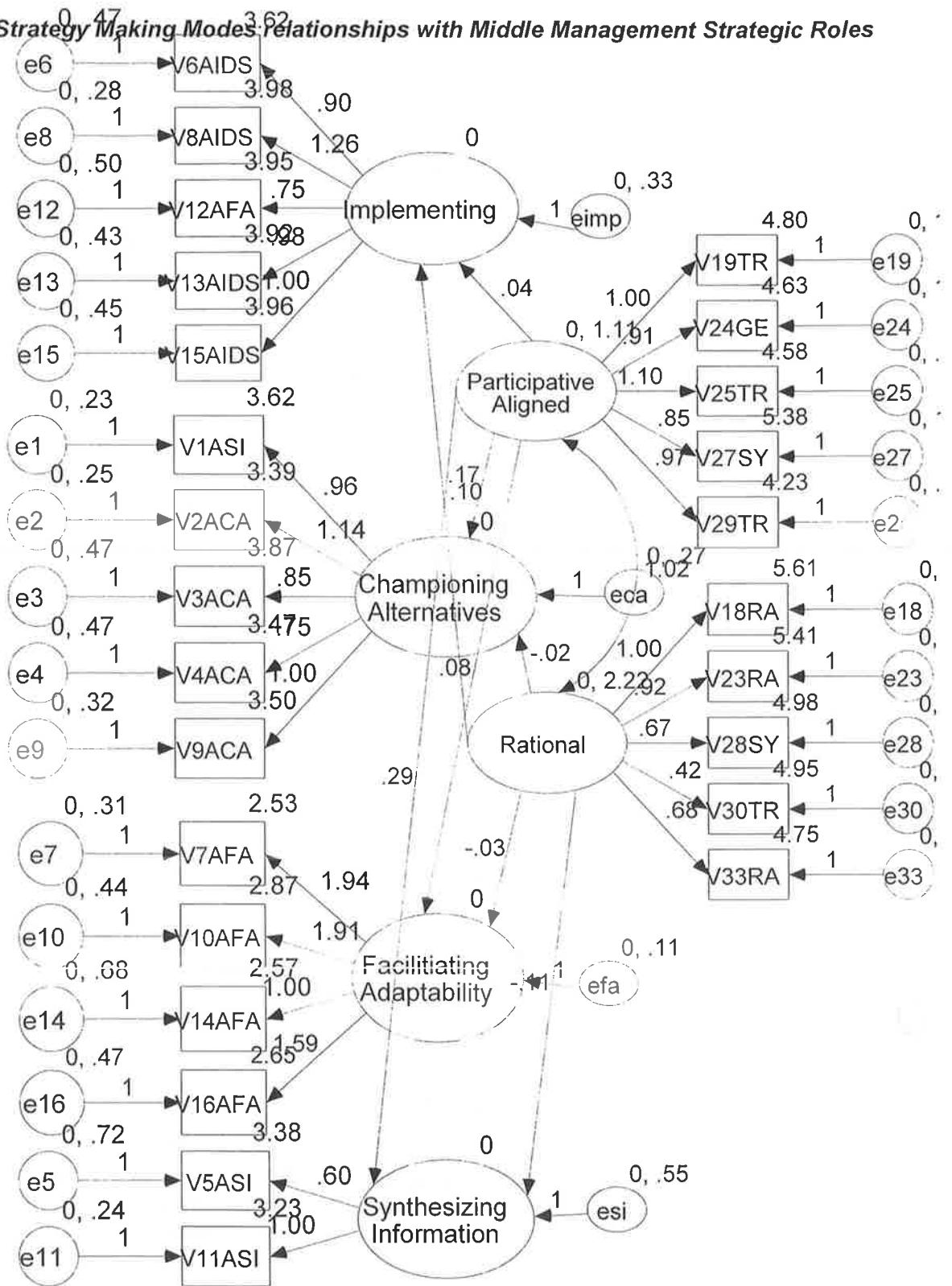
Strategy Making Modes relationships with Middle Management Strategic Roles
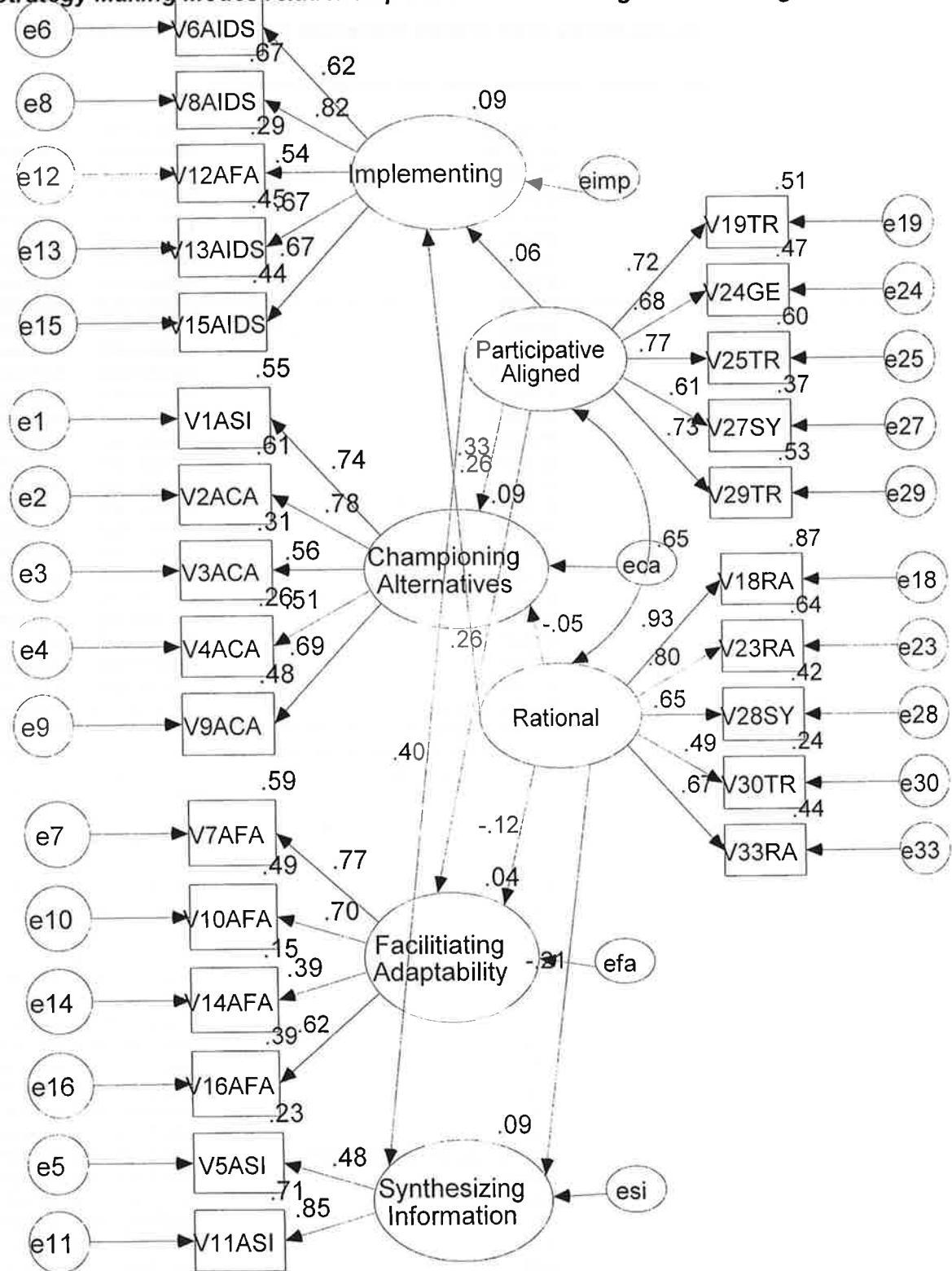
Strategy Making Modes to Middle Management Strategic Roles relationships:

Your model contains the following variables

V15AIDS	observed	endogenous
V13AIDS	observed	endogenous
V12AFA	observed	endogenous
V8AIDS	observed	endogenous
V6AIDS	observed	endogenous
V9ACA	observed	endogenous
V4ACA	observed	endogenous
V3ACA	observed	endogenous
V2ACA	observed	endogenous
V1ASI	observed	endogenous
V14AFA	observed	endogenous
V10AFA	observed	endogenous
V7AFA	observed	endogenous
V11ASI	observed	endogenous
V5ASI	observed	endogenous
V16AFA	observed	endogenous
V19TR	observed	endogenous
V24GE	observed	endogenous
V25TR	observed	endogenous
V27SY	observed	endogenous
V29TR	observed	endogenous
V18RA	observed	endogenous
V23RA	observed	endogenous
V28SY	observed	endogenous
V30TR	observed	endogenous
V33RA	observed	endogenous
Implementing	unobserved	endogenous
Championing_Alternatives	unobserved	endogenous
Facilitiating_Adaptability	unobserved	endogenous
Synthesizing_Information	unobserved	endogenous
e15	unobserved	exogenous
e13	unobserved	exogenous
e12	unobserved	exogenous
e8	unobserved	exogenous
e6	unobserved	exogenous
e9	unobserved	exogenous
e4	unobserved	exogenous
e3	unobserved	exogenous
e2	unobserved	exogenous
e1	unobserved	exogenous
e14	unobserved	exogenous
e10	unobserved	exogenous
e7	unobserved	exogenous
e11	unobserved	exogenous
e5	unobserved	exogenous
e16	unobserved	exogenous
Participative_Aligned	unobserved	exogenous
e19	unobserved	exogenous
e24	unobserved	exogenous
e25	unobserved	exogenous
e27	unobserved	exogenous
e29	unobserved	exogenous
Rational	unobserved	exogenous
e18	unobserved	exogenous
e23	unobserved	exogenous
e28	unobserved	exogenous
e30	unobserved	exogenous
e33	unobserved	exogenous
eimp	unobserved	exogenous
eca	unobserved	exogenous
efa	unobserved	exogenous

Number of variables in your model: 62
Number of observed variables: 26
Number of unobserved variables: 36
Number of exogenous variables: 32
Number of endogenous variables: 30

Summary of Parameters

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed:	36	0	0	0	0	36
Labeled:	0	0	0	0	0	0
Unlabeled:	28	1	32	0	26	87
Total:	64	1	32	0	26	123

NOTE:
    The model is recursive.

Sample size: 132

Model: Default model

Computation of degrees of freedom

                    Number of distinct sample moments: 377
        Number of distinct parameters to be estimated: 87

                    Degrees of freedom: 290

0e	12	0.0e+000	-5.2220e-001	1.00e+004	1.56648667054e+003	0	1.00e+004
1e*	4	0.0e+000	-9.1388e-002	3.40e+000	8.07027859575e+002	20	4.39e-001
2e	0	2.4e+003	0.0000e+000	1.55e+000	6.17042346564e+002	5	6.65e-001
3e	0	1.9e+003	0.0000e+000	1.60e+000	5.88522329025e+002	3	0.00e+000
4e	1	0.0e+000	-4.8612e-003	1.06e+000	5.38581235092e+002	1	8.11e-001
5e	0	6.0e+003	0.0000e+000	3.67e-001	5.12880533757e+002	9	1.18e+000
6e	0	5.0e+003	0.0000e+000	3.51e-001	5.08450666647e+002	1	1.14e+000
7e	0	5.0e+003	0.0000e+000	1.70e-001	5.08027767537e+002	1	1.09e+000
8e	0	5.1e+003	0.0000e+000	8.30e-002	5.08011401706e+002	1	1.05e+000
9e	0	5.1e+003	0.0000e+000	9.36e-003	5.08011168379e+002	1	1.01e+000
10e	0	5.1e+003	0.0000e+000	2.38e-004	5.08011168293e+002	1	1.00e+000

Minimum was achieved

Chi-square = 508.011
Degrees of freedom = 290
Probability level = 0.000

```
Maximum Likelihood Estimates
-------------------------------
Regression Weights:                            Estimate      S.E.       C.R.      Label
---------------------                          --------    --------   --------   --------

Implementing <- Participative_Aligne            0.037       0.083      0.446
Championing_Alte <- Participative_Al            0.171       0.079      2.158
Facilitiating_Ad <- Participative_Al            0.085       0.055      1.540
Synthesizing_Inf <- Participative_Al            0.295       0.121      2.445
Synthesizing_Information <- Rational           -0.112       0.080     -1.408
Facilitiating_Adaptabili <- Rational           -0.028       0.035     -0.779
Championing_Alternatives <- Rational           -0.018       0.052     -0.346
Implementing <------------- Rational            0.105       0.058      1.807
V15AIDS <-------------- Implementing            1.000
V13AIDS <-------------- Implementing            0.979       0.155      6.309
V12AFA <--------------- Implementing            0.752       0.143      5.249
V8AIDS <--------------- Implementing            1.263       0.177      7.117
V6AIDS <--------------- Implementing            0.905       0.153      5.928
V9ACA <---- Championing_Alternatives            1.000
V4ACA <---- Championing_Alternatives            0.749       0.148      5.068
V3ACA <---- Championing_Alternatives            0.849       0.156      5.456
V2ACA <---- Championing_Alternatives            1.143       0.161      7.110
V1ASI <---- Championing_Alternatives            0.962       0.139      6.902
V14AFA <- Facilitiating_Adaptability            1.000
V10AFA <- Facilitiating_Adaptability            1.913       0.517      3.698
V7AFA <-- Facilitiating_Adaptability            1.937       0.520      3.726
V11ASI <--- Synthesizing_Information            1.000
V5ASI <---- Synthesizing_Information            0.599       0.386      1.551
V16AFA <- Facilitiating_Adaptability            1.588       0.442      3.591
V19TR <------- Participative_Aligned            1.000
V24GE <------- Participative_Aligned            0.910       0.129      7.053
V25TR <------- Participative_Aligned            1.096       0.139      7.906
V27SY <------- Participative_Aligned            0.848       0.134      6.336
V29TR <------- Participative_Aligned            0.974       0.130      7.466
V18RA <------------------- Rational             1.000
V23RA <------------------- Rational             0.922       0.079     11.672
V28SY <------------------- Rational             0.674       0.080      8.454
V30TR <------------------- Rational             0.423       0.072      5.852
V33RA <------------------- Rational             0.681       0.078      8.740


Standardized Regression Weights:               Estimate
--------------------------------               --------

Implementing <- Participative_Aligne            0.065
Championing_Alte <- Participative_Al            0.332
Facilitiating_Ad <- Participative_Al            0.260
Synthesizing_Inf <- Participative_Al            0.399
Synthesizing_Information <- Rational           -0.215
Facilitiating_Adaptabili <- Rational           -0.119
Championing_Alternatives <- Rational           -0.049
Implementing <------------- Rational            0.259
V15AIDS <-------------- Implementing            0.666
V13AIDS <-------------- Implementing            0.669
V12AFA <--------------- Implementing            0.538
V8AIDS <--------------- Implementing            0.821
V6AIDS <--------------- Implementing            0.620
V9ACA <---- Championing_Alternatives            0.691
V4ACA <---- Championing_Alternatives            0.511
V3ACA <---- Championing_Alternatives            0.556
V2ACA <---- Championing_Alternatives            0.778
V1ASI <---- Championing_Alternatives            0.740
V14AFA <- Facilitiating_Adaptability            0.386
V10AFA <- Facilitiating_Adaptability            0.703
V7AFA <-- Facilitiating_Adaptability            0.766
V11ASI <--- Synthesizing_Information            0.845
V5ASI <---- Synthesizing_Information            0.481
```

```
V16AFA <- Facilitiating_Adaptability      0.625
V19TR <------- Participative_Aligned      0.716
V24GE <------- Participative_Aligned      0.682
V25TR <------- Participative_Aligned      0.774
V27SY <------- Participative_Aligned      0.608
V29TR <------- Participative_Aligned      0.726
V18RA <-------------------- Rational      0.934
V23RA <-------------------- Rational      0.800
V28SY <-------------------- Rational      0.647
V30TR <-------------------- Rational      0.487
V33RA <-------------------- Rational      0.665
```

Intercepts:	Estimate	S.E.	C.R.	Label
V15AIDS	3.961	0.079	50.037	
V13AIDS	3.923	0.077	50.901	
V12AFA	3.946	0.074	53.521	
V8AIDS	3.984	0.081	49.159	
V6AIDS	3.618	0.077	47.012	
V9ACA	3.504	0.069	50.901	
V4ACA	3.473	0.070	49.865	
V3ACA	3.874	0.073	53.253	
V2ACA	3.389	0.070	48.526	
V1ASI	3.618	0.062	58.367	
V14AFA	2.573	0.078	32.913	
V10AFA	2.870	0.082	34.967	
V7AFA	2.534	0.076	33.134	
V11ASI	3.229	0.081	39.994	
V5ASI	3.382	0.085	39.814	
V16AFA	2.650	0.077	34.446	
V19TR	4.801	0.129	37.278	
V24GE	4.632	0.123	37.644	
V25TR	4.576	0.130	35.078	
V27SY	5.379	0.128	41.893	
V29TR	4.232	0.124	34.195	
V18RA	5.614	0.139	40.314	
V23RA	5.409	0.150	36.115	
V28SY	4.977	0.135	36.765	
V30TR	4.947	0.113	43.796	
V33RA	4.748	0.134	35.500	

Covariances:	Estimate	S.E.	C.R.	Label
Rational <---> Participative_Aligned	1.024	0.202	5.063	

Correlations:	Estimate
Rational <---> Participative_Aligned	0.653

Variances:	Estimate	S.E.	C.R.	Label
Participative_Aligned	1.110	0.251	4.418	
Rational	2.215	0.329	6.743	
eimp	0.328	0.085	3.877	
eca	0.267	0.067	4.014	
efa	0.113	0.057	1.989	
esi	0.549	0.386	1.421	
e15	0.454	0.068	6.648	
e13	0.426	0.064	6.619	
e12	0.502	0.068	7.361	
e8	0.278	0.063	4.448	
e6	0.474	0.068	6.969	
e9	0.322	0.051	6.364	
e4	0.466	0.063	7.421	

e3	0.472	0.065	7.220
e2	0.250	0.048	5.193
e1	0.225	0.039	5.774
e14	0.676	0.089	7.615
e10	0.443	0.084	5.285
e7	0.313	0.075	4.194
e11	0.242	0.383	0.633
e5	0.721	0.164	4.408
e16	0.467	0.074	6.323
e19	1.054	0.159	6.615
e24	1.056	0.154	6.870
e25	0.895	0.148	6.029
e27	1.361	0.187	7.291
e29	0.946	0.145	6.533
e18	0.325	0.112	2.889
e23	1.056	0.164	6.448
e28	1.396	0.186	7.516
e30	1.276	0.162	7.857
e33	1.294	0.175	7.395

Squared Multiple Correlations:	Estimate
Synthesizing_Information	0.093
Facilitiating_Adaptability	0.041
Championing_Alternatives	0.091
Implementing	0.093
V33RA	0.443
V30TR	0.237
V28SY	0.419
V23RA	0.641
V18RA	0.872
V29TR	0.527
V27SY	0.370
V25TR	0.598
V24GE	0.465
V19TR	0.513
V16AFA	0.390
V5ASI	0.232
V11ASI	0.714
V7AFA	0.587
V10AFA	0.494
V14AFA	0.149
V1ASI	0.547
V2ACA	0.605
V3ACA	0.310
V4ACA	0.262
V9ACA	0.477
V6AIDS	0.384
V8AIDS	0.674
V12AFA	0.289
V13AIDS	0.448
V15AIDS	0.443

Summary of models

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	87	508.011	290	0.000	1.752
Saturated model	377	0.000	0		
Independence model	26	10595.753	351	0.000	30.187

Model	DELTA1 NFI	RHO1 RFI	DELTA2 IFI	RHO2 TLI	CFI
Default model	0.952	0.942	0.979	0.974	0.979
Saturated model	1.000		1.000		1.000

Model					
Independence model	0.000	0.000	0.000	0.000	0.000

Model	PRATIO	PNFI	PCFI
Default model	0.826	0.787	0.809
Saturated model	0.000	0.000	0.000
Independence model	1.000	0.000	0.000

Model	NCP	LO 90	HI 90
Default model	218.011	159.225	284.654
Saturated model	0.000	0.000	0.000
Independence model	10244.753	9912.124	10583.732

Model	FMIN	F0	LO 90	HI 90
Default model	3.878	1.664	1.215	2.173
Saturated model	0.000	0.000	0.000	0.000
Independence model	80.884	78.204	75.665	80.792

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.076	0.065	0.087	0.000
Independence model	0.472	0.464	0.480	0.000

Model	AIC	BCC	BIC	CAIC
Default model	682.011	727.184		
Saturated model	754.000	949.750		
Independence model	10647.753	10661.253		

Model	ECVI	LO 90	HI 90	MECVI
Default model	5.206	4.757	5.715	5.551
Saturated model	5.756	5.756	5.756	7.250
Independence model	81.281	78.741	83.868	81.384

Model	HOELTER .05	HOELTER .01
Default model	86	90
Independence model	5	6
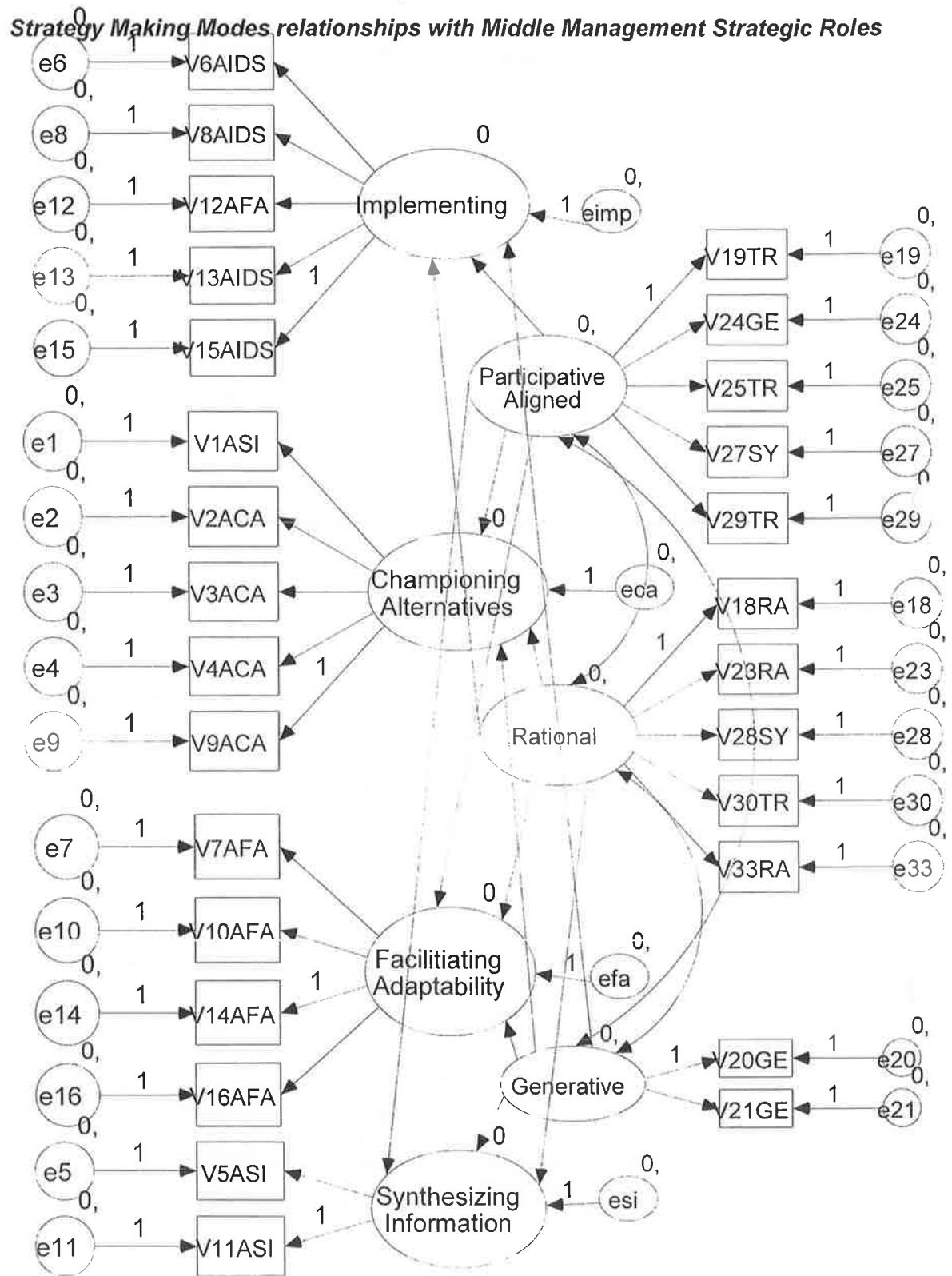
Strategy Making Modes relationships with Middle Management Strategic Roles

Strategy Making Modes relationships with Middle Management Strategic Roles

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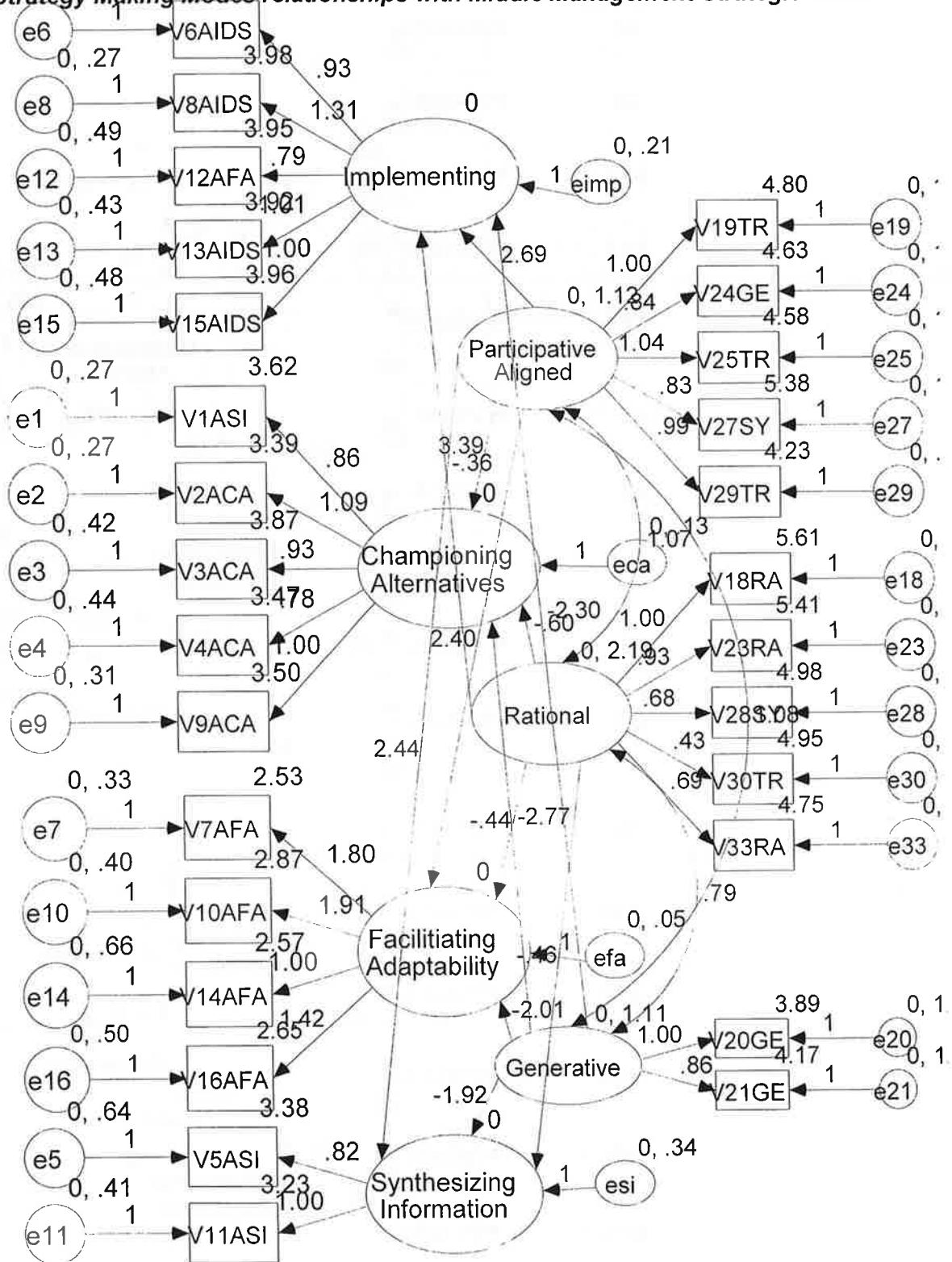
Strategy Making Modes Relationships with Middle Management Strategic Roles
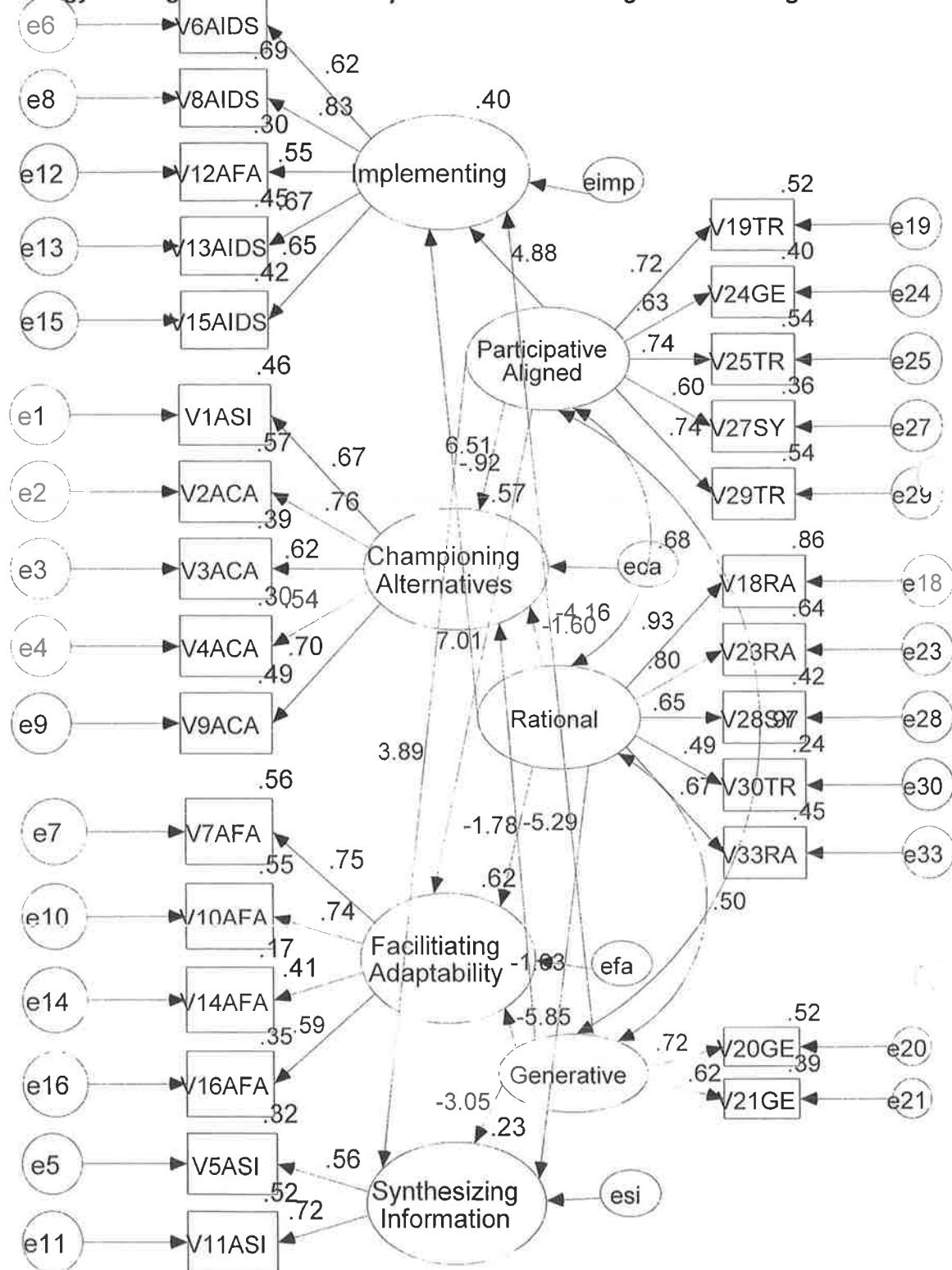
```
Title
  Modes to roles relationship generative added:

Your model contains the following variables

                    V15AIDS                observed    endogenous
                    V13AIDS                observed    endogenous
                    V12AFA                 observed    endogenous
                    V8AIDS                 observed    endogenous
                    V6AIDS                 observed    endogenous
                    V9ACA                  observed    endogenous
                    V4ACA                  observed    endogenous
                    V3ACA                  observed    endogenous
                    V2ACA                  observed    endogenous
                    V1ASI                  observed    endogenous
                    V14AFA                 observed    endogenous
                    V10AFA                 observed    endogenous
                    V7AFA                  observed    endogenous
                    V11ASI                 observed    endogenous
                    V5ASI                  observed    endogenous
                    V16AFA                 observed    endogenous
                    V19TR                  observed    endogenous
                    V24GE                  observed    endogenous
                    V25TR                  observed    endogenous
                    V27SY                  observed    endogenous
                    V29TR                  observed    endogenous
                    V18RA                  observed    endogenous
                    V23RA                  observed    endogenous
                    V28SY                  observed    endogenous
                    V30TR                  observed    endogenous
                    V33RA                  observed    endogenous
                    V20GE                  observed    endogenous
                    V21GE                  observed    endogenous
                    Implementing           unobserved  endogenous
                    Championing_Alternatives    unobserved  endogenous
                    Facilitiating_Adaptability  unobserved  endogenous
                    Synthesizing_Information    unobserved  endogenous
                    e15                    unobserved  exogenous
                    e13                    unobserved  exogenous
                    e12                    unobserved  exogenous
                    e8                     unobserved  exogenous
                    e6                     unobserved  exogenous
                    e9                     unobserved  exogenous
                    e4                     unobserved  exogenous
                    e3                     unobserved  exogenous
                    e2                     unobserved  exogenous
                    e1                     unobserved  exogenous
                    e14                    unobserved  exogenous
                    e10                    unobserved  exogenous
                    e7                     unobserved  exogenous
                    e11                    unobserved  exogenous
                    e5                     unobserved  exogenous
                    e16                    unobserved  exogenous
                    Participative_Aligned  unobserved  exogenous
                    e19                    unobserved  exogenous
                    e24                    unobserved  exogenous
                    e25                    unobserved  exogenous
                    e27                    unobserved  exogenous
                    e29                    unobserved  exogenous
                    Rational               unobserved  exogenous
                    e18                    unobserved  exogenous
                    e23                    unobserved  exogenous
                    e28                    unobserved  exogenous
                    e30                    unobserved  exogenous
                    e33                    unobserved  exogenous
                    eimp                   unobserved  exogenous
```

```
        eca                                   unobserved exogenous
        efa                                   unobserved exogenous
        esi                                   unobserved exogenous
        Generative                            unobserved exogenous
        e20                                   unobserved exogenous
        e21                                   unobserved exogenous


              Number of variables in your model:    67
              Number of observed variables:         28
              Number of unobserved variables:       39
              Number of exogenous variables:        35
              Number of endogenous variables:       32
```

Summary of Parameters

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed:	39	0	0	0	0	39
Labeled:	0	0	0	0	0	0
Unlabeled:	33	3	35	0	28	99
Total:	72	3	35	0	28	138

NOTE:
    The model is recursive.

Sample size: 132

Model: Default model

Computation of degrees of freedom

```
                  Number of distinct sample moments:    434
          Number of distinct parameters to be estimated:   99
                  --------------------------
                  Degrees of freedom:   335

     0e 15 0.0e+000 -5.4761e-001  1.00e+004  1.78321909236e+003   0 1.00e+004
     1e*  6 0.0e+000 -1.4713e-001  3.41e+000  9.59222629581e+002  20 4.57e-001
     2e   3 0.0e+000 -3.2888e-002  9.56e-001  7.75002192096e+002   5 7.89e-001
     3e*  1 0.0e+000 -3.0082e-001  1.01e+000  6.77297875999e+002   5 6.71e-001
     4e   0 8.4e+003  0.0000e+000  7.52e-001  6.24133312567e+002   6 7.64e-001
     5e   1 0.0e+000 -3.6732e-002  1.06e+000  6.09857327218e+002   2 0.00e+000
     6e   0 8.6e+003  0.0000e+000  3.02e-001  5.89317786664e+002   6 8.99e-001
     7e   1 0.0e+000 -1.0451e-002  1.15e+000  5.78119180570e+002   2 0.00e+000
     8e   1 0.0e+000 -3.2086e-003  6.41e-001  5.70475153116e+002   8 9.18e-001
     9e   0 1.1e+004  0.0000e+000  1.19e+000  5.61981800798e+002   5 7.90e-001
    10e   0 2.4e+004  0.0000e+000  6.12e-001  5.58123132343e+002   2 0.00e+000
    11e   0 9.5e+004  0.0000e+000  9.19e-001  5.55149912711e+002   1 1.24e+000
    12e   0 3.0e+005  0.0000e+000  9.36e-001  5.53832237677e+002   1 1.25e+000
    13e   0 9.7e+005  0.0000e+000  8.51e-001  5.53071346188e+002   1 1.31e+000
    14e   0 2.0e+006  0.0000e+000  1.02e+000  5.52691709854e+002   1 1.12e+000
    15e   0 7.5e+006  0.0000e+000  6.94e-001  5.52401608581e+002   1 1.25e+000
    16e   0 8.0e+006  0.0000e+000  1.29e+000  5.52391455978e+002   1 7.03e-002
    17e   0 5.4e+007  0.0000e+000  4.77e-001  5.52160585401e+002   1 1.05e+000
    18e   0 4.0e+007  0.0000e+000  7.39e-001  5.52127829033e+002   2 0.00e+000
    19e   0 1.1e+008  0.0000e+000  5.07e-001  5.52101205928e+002   1 1.26e+000
    20e   0 1.2e+008  0.0000e+000  7.09e-001  5.52091905707e+002   1 9.21e-001
    21e   0 3.3e+008  0.0000e+000  2.45e-001  5.52085604380e+002   1 1.11e+000
    22e   0 3.2e+008  0.0000e+000  3.44e-001  5.52084562869e+002   1 9.47e-001
    23e   0 4.7e+008  0.0000e+000  4.63e-002  5.52084353219e+002   1 1.02e+000
    24e   0 4.7e+008  0.0000e+000  1.53e-002  5.52084351520e+002   1 1.00e+000
    25e   0 4.7e+008  0.0000e+000  9.08e-005  5.52084351519e+002   1 9.94e-001
```

Minimum was achieved

Chi-square = 552.084

Degrees of freedom = 335
Probability level = 0.000
Maximum Likelihood Estimates

Regression Weights:	Estimate	S.E.	C.R.	Label
Implementing <- Participative_Aligne	2.687	2.142	1.255	
Championing_Alte <- Participative_Al	3.391	2.596	1.306	
Facilitiating_Ad <- Participative_Al	2.400	1.928	1.245	
Synthesizing_Inf <- Participative_Al	2.439	1.938	1.258	
Synthesizing_Information <- Rational	-0.464	0.392	-1.183	
Facilitiating_Adaptabili <- Rational	-0.436	0.387	-1.126	
Championing_Alternatives <- Rational	-0.599	0.524	-1.141	
Implementing <------------- Rational	-0.363	0.431	-0.843	
Synthesizing_Informati <- Generative	-1.918	1.654	-1.159	
Facilitiating_Adaptabi <- Generative	-2.011	1.648	-1.220	
Championing_Alternativ <- Generative	-2.769	2.219	-1.248	
Implementing <----------- Generative	-2.301	1.834	-1.255	
V15AIDS <-------------- Implementing	1.000			
V13AIDS <-------------- Implementing	1.008	0.162	6.220	
V12AFA <--------------- Implementing	0.794	0.149	5.312	
V8AIDS <--------------- Implementing	1.312	0.185	7.081	
V6AIDS <--------------- Implementing	0.933	0.159	5.860	
V9ACA <----- Championing_Alternatives	1.000			
V4ACA <----- Championing_Alternatives	0.783	0.143	5.461	
V3ACA <----- Championing_Alternatives	0.929	0.151	6.135	
V2ACA <----- Championing_Alternatives	1.093	0.151	7.235	
V1ASI <----- Championing_Alternatives	0.862	0.131	6.602	
V14AFA <- Facilitiating_Adaptability	1.000			
V10AFA <- Facilitiating_Adaptability	1.909	0.472	4.042	
V7AFA <--- Facilitiating_Adaptability	1.801	0.445	4.051	
V11ASI <--- Synthesizing_Information	1.000			
V5ASI <---- Synthesizing_Information	0.824	0.312	2.644	
V16AFA <- Facilitiating_Adaptability	1.420	0.377	3.764	
V19TR <------- Participative_Aligned	1.000			
V24GE <------- Participative_Aligned	0.838	0.124	6.768	
V25TR <------- Participative_Aligned	1.037	0.132	7.886	
V27SY <------- Participative_Aligned	0.833	0.129	6.452	
V29TR <------- Participative_Aligned	0.985	0.125	7.885	
V18RA <-------------------- Rational	1.000			
V23RA <-------------------- Rational	0.928	0.080	11.612	
V28SY <-------------------- Rational	0.680	0.080	8.459	
V30TR <-------------------- Rational	0.429	0.073	5.889	
V33RA <-------------------- Rational	0.691	0.079	8.796	
V20GE <------------------ Generative	1.000			
V21GE <------------------ Generative	0.865	0.135	6.419	

Standardized Regression Weights:	Estimate
Implementing <- Participative_Aligne	4.881
Championing_Alte <- Participative_Al	6.505
Facilitiating_Ad <- Participative_Al	7.013
Synthesizing_Inf <- Participative_Al	3.894
Synthesizing_Information <- Rational	-1.035
Facilitiating_Adaptabili <- Rational	-1.778
Championing_Alternatives <- Rational	-1.603
Implementing <------------- Rational	-0.921
Synthesizing_Informati <- Generative	-3.049
Facilitiating_Adaptabi <- Generative	-5.851
Championing_Alternativ <- Generative	-5.290
Implementing <----------- Generative	-4.163
V15AIDS <-------------- Implementing	0.646
V13AIDS <-------------- Implementing	0.669
V12AFA <--------------- Implementing	0.551

```
V8AIDS  <-------------- Implementing              0.828
V6AIDS  <-------------- Implementing              0.620
V9ACA   <---- Championing_Alternatives            0.703
V4ACA   <---- Championing_Alternatives            0.545
V3ACA   <---- Championing_Alternatives            0.621
V2ACA   <---- Championing_Alternatives            0.758
V1ASI   <---- Championing_Alternatives            0.675
V14AFA  <- Facilitiating_Adaptability             0.407
V10AFA  <- Facilitiating_Adaptability             0.739
V7AFA   <-- Facilitiating_Adaptability            0.749
V11ASI  <--- Synthesizing_Information             0.720
V5ASI   <---- Synthesizing_Information            0.565
V16AFA  <- Facilitiating_Adaptability             0.588
V19TR   <------- Participative_Aligned            0.720
V24GE   <------- Participative_Aligned            0.631
V25TR   <------- Participative_Aligned            0.736
V27SY   <------- Participative_Aligned            0.600
V29TR   <------- Participative_Aligned            0.737
V18RA   <------------------- Rational             0.928
V23RA   <------------------- Rational             0.800
V28SY   <------------------- Rational             0.649
V30TR   <------------------- Rational             0.490
V33RA   <------------------- Rational             0.670
V20GE   <----------------- Generative             0.723
V21GE   <----------------- Generative             0.623
```

Intercepts:	Estimate	S.E.	C.R.	Label
V15AIDS	3.961	0.079	50.038	
V13AIDS	3.923	0.077	50.902	
V12AFA	3.946	0.074	53.522	
V8AIDS	3.984	0.081	49.161	
V6AIDS	3.618	0.077	47.013	
V9ACA	3.504	0.069	50.901	
V4ACA	3.473	0.070	49.866	
V3ACA	3.874	0.073	53.271	
V2ACA	3.389	0.070	48.525	
V1ASI	3.617	0.062	58.358	
V14AFA	2.573	0.078	32.913	
V10AFA	2.870	0.082	34.966	
V7AFA	2.532	0.077	33.046	
V11ASI	3.229	0.081	39.984	
V5ASI	3.382	0.085	39.813	
V16AFA	2.649	0.077	34.386	
V19TR	4.803	0.129	37.262	
V24GE	4.632	0.123	37.619	
V25TR	4.576	0.130	35.078	
V27SY	5.379	0.128	41.893	
V29TR	4.230	0.124	34.133	
V18RA	5.614	0.139	40.314	
V23RA	5.409	0.150	36.115	
V28SY	4.977	0.135	36.765	
V30TR	4.947	0.113	43.796	
V33RA	4.748	0.134	35.496	
V20GE	3.886	0.128	30.471	
V21GE	4.174	0.128	32.630	

Covariances:	Estimate	S.E.	C.R.	Label
Participative_Aligned <---> Rational	1.068	0.205	5.215	
Generative <-> Participative_Aligned	1.082	0.196	5.516	
Generative <--------------> Rational	0.787	0.199	3.961	

```
Correlations:                                   Estimate
--------------

Participative_Aligned <---> Rational             0.682
Generative <-> Participative_Aligned             0.968
Generative <--------------> Rational             0.504


Variances:                                      Estimate    S.E.      C.R.      Label
----------                                      --------  --------  --------  --------

                       Participative_Aligned      1.122     0.248     4.533
                                    Rational      2.187     0.328     6.676
                                  Generative      1.113     0.253     4.407
                                        eimp      0.205     0.062     3.333
                                         eca      0.130     0.049     2.671
                                         efa      0.050     0.030     1.661
                                         esi      0.339     0.163     2.076
                                         e15      0.475     0.069     6.891
                                         e13      0.427     0.063     6.732
                                         e12      0.493     0.067     7.363
                                          e8      0.269     0.059     4.535
                                          e6      0.474     0.067     7.048
                                          e9      0.311     0.049     6.353
                                          e4      0.444     0.060     7.338
                                          e3      0.421     0.060     6.955
                                          e2      0.270     0.047     5.712
                                          e1      0.271     0.041     6.586
                                         e14      0.663     0.087     7.629
                                         e10      0.397     0.075     5.272
                                          e7      0.333     0.065     5.103
                                         e11      0.408     0.169     2.410
                                          e5      0.639     0.135     4.719
                                         e16      0.502     0.073     6.862
                                         e19      1.045     0.151     6.931
                                         e24      1.188     0.161     7.369
                                         e25      1.021     0.149     6.838
                                         e27      1.381     0.184     7.502
                                         e29      0.914     0.134     6.803
                                         e18      0.353     0.112     3.142
                                         e23      1.056     0.164     6.436
                                         e28      1.389     0.185     7.492
                                         e30      1.270     0.162     7.843
                                         e33      1.279     0.174     7.359
                                         e20      1.018     0.162     6.301
                                         e21      1.312     0.185     7.084


Squared Multiple Correlations:                  Estimate
------------------------------                  --------

                   Synthesizing_Information       0.229
                  Facilitiating_Adaptability      0.617
                   Championing_Alternatives       0.574
                                Implementing      0.397
                                      V21GE      0.388
                                      V20GE      0.522
                                      V33RA      0.449
                                      V30TR      0.240
                                      V28SY      0.421
                                      V23RA      0.641
                                      V18RA      0.861
                                      V29TR      0.544
                                      V27SY      0.360
                                      V25TR      0.542
                                      V24GE      0.399
```

```
              V19TR      0.518
             V16AFA      0.346
              V5ASI      0.319
             V11ASI      0.519
              V7AFA      0.561
             V10AFA      0.546
             V14AFA      0.165
              V1ASI      0.455
              V2ACA      0.574
              V3ACA      0.385
              V4ACA      0.297
              V9ACA      0.495
             V6AIDS      0.384
             V8AIDS      0.686
             V12AFA      0.303
            V13AIDS      0.447
            V15AIDS      0.417
```

Summary of models

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	99	552.084	335	0.000	1.648
Saturated model	434	0.000	0		
Independence model	28	11359.642	406	0.000	27.979

Model	DELTA1 NFI	RHO1 RFI	DELTA2 IFI	RHO2 TLI	CFI
Default model	0.951	0.941	0.980	0.976	0.980
Saturated model	1.000		1.000		1.000
Independence model	0.000	0.000	0.000	0.000	0.000

Model	PRATIO	PNFI	PCFI
Default model	0.825	0.785	0.809
Saturated model	0.000	0.000	0.000
Independence model	1.000	0.000	0.000

Model	NCP	LO 90	HI 90
Default model	217.084	156.486	285.581
Saturated model	0.000	0.000	0.000
Independence model	10953.642	10609.353	11304.287

Model	FMIN	F0	LO 90	HI 90
Default model	4.214	1.657	1.195	2.180
Saturated model	0.000	0.000	0.000	0.000
Independence model	86.715	83.616	80.987	86.292

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.070	0.060	0.081	0.001
Independence model	0.454	0.447	0.461	0.000

Model	AIC	BCC	BIC	CAIC
Default model	750.084	806.378		
Saturated model	868.000	1114.784		
Independence model	11415.642	11431.564		

Model	ECVI	LO 90	HI 90	MECVI
Default model	5.726	5.263	6.249	6.156
Saturated model	6.626	6.626	6.626	8.510
Independence model	87.142	84.514	89.819	87.264

Model	HOELTER .05	HOELTER .01
Default model	90	95
Independence model	6	6

4 by 5 Roles to Modes linkages

4 by 5 Roles to Modes linkages

337

4 by 5 Roles to Modes linkages

338
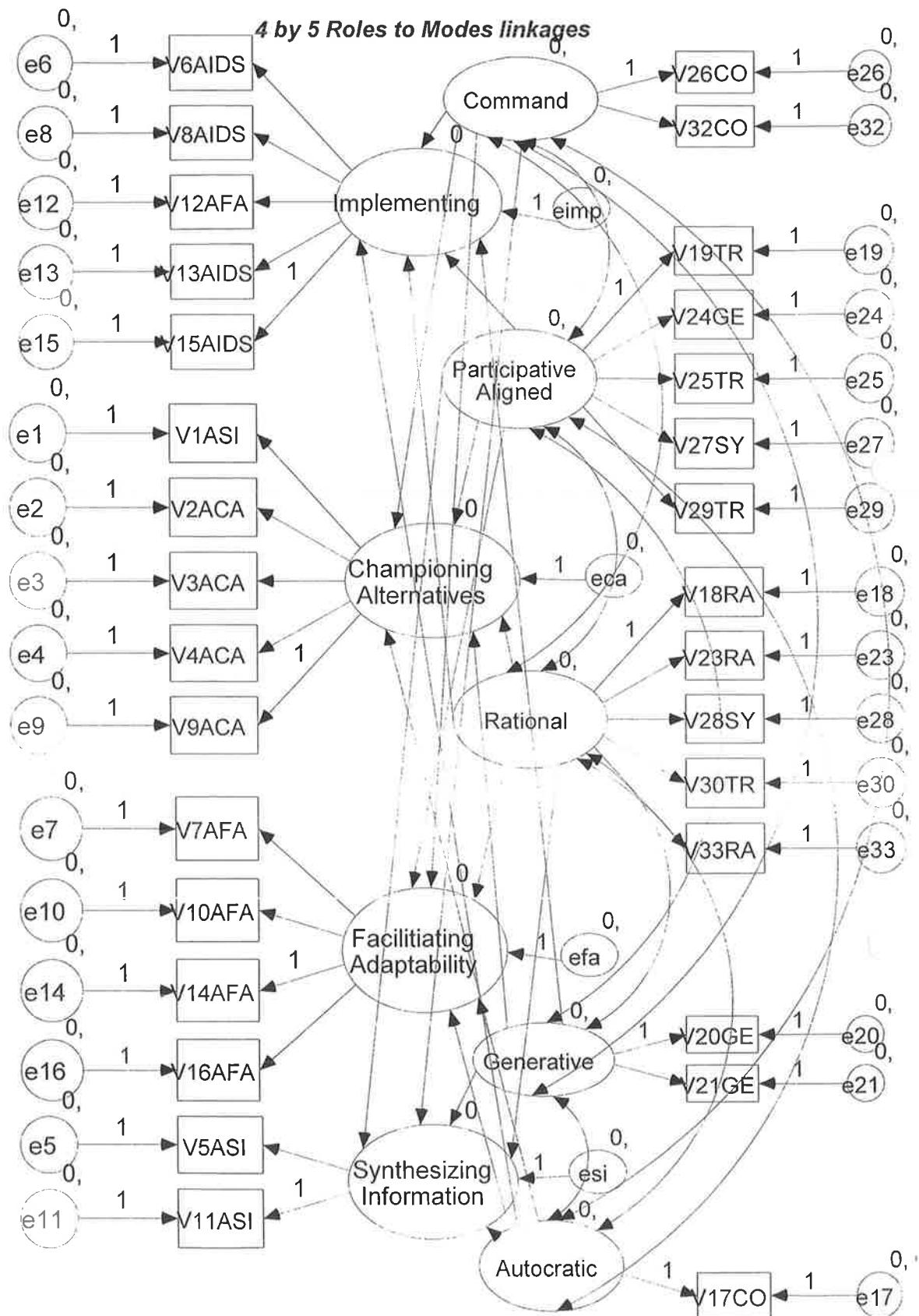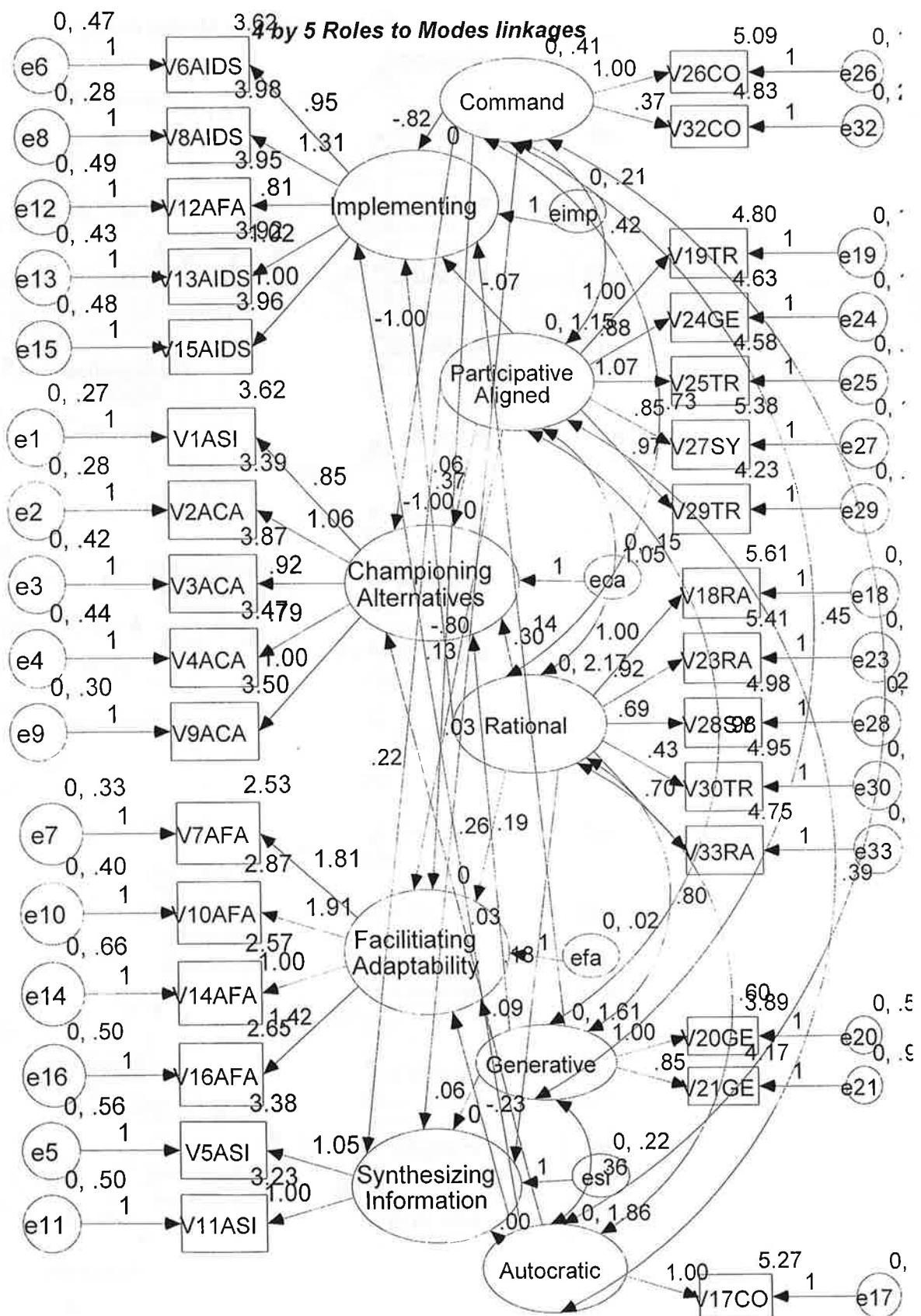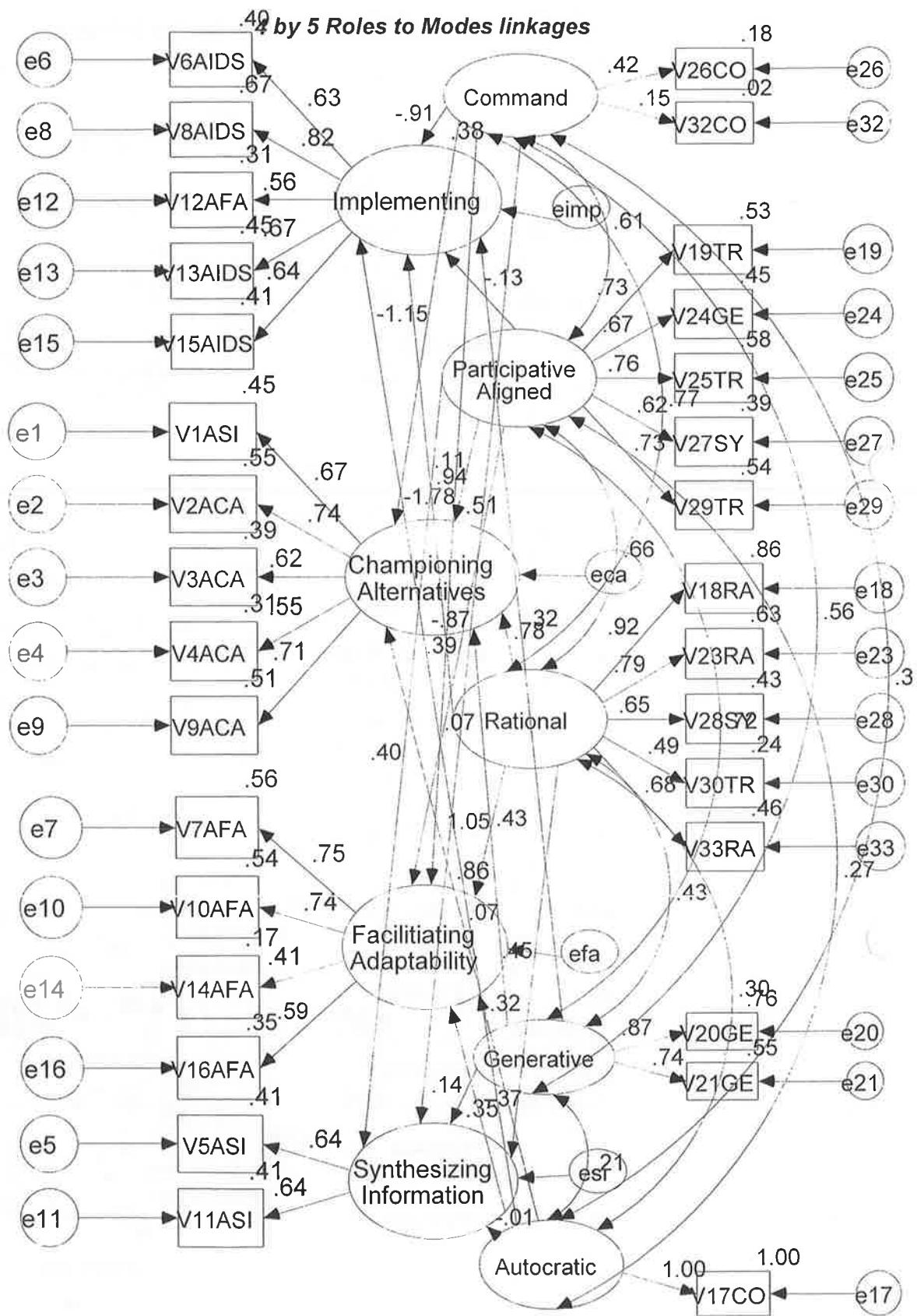
```
Title

4 by 5 roles to modes linkages:

Your model contains the following variables

              V15AIDS                        observed    endogenous
              V13AIDS                        observed    endogenous
              V12AFA                         observed    endogenous
              V8AIDS                         observed    endogenous
              V6AIDS                         observed    endogenous
              V9ACA                          observed    endogenous
              V4ACA                          observed    endogenous
              V3ACA                          observed    endogenous
              V2ACA                          observed    endogenous
              V1ASI                          observed    endogenous
              V14AFA                         observed    endogenous
              V10AFA                         observed    endogenous
              V7AFA                          observed    endogenous
              V11ASI                         observed    endogenous
              V5ASI                          observed    endogenous
              V16AFA                         observed    endogenous
              V19TR                          observed    endogenous
              V24GE                          observed    endogenous
              V25TR                          observed    endogenous
              V27SY                          observed    endogenous
              V29TR                          observed    endogenous
              V18RA                          observed    endogenous
              V23RA                          observed    endogenous
              V28SY                          observed    endogenous
              V30TR                          observed    endogenous
              V33RA                          observed    endogenous
              V20GE                          observed    endogenous
              V21GE                          observed    endogenous
              V26CO                          observed    endogenous
              V32CO                          observed    endogenous
              V17CO                          observed    endogenous
              Implementing                   unobserved  endogenous
              Championing_Alternatives       unobserved  endogenous
              Facilitiating_Adaptability     unobserved  endogenous
              Synthesizing_Information       unobserved  endogenous
              e15                            unobserved  exogenous
              e13                            unobserved  exogenous
              e12                            unobserved  exogenous
              e8                             unobserved  exogenous
              e6                             unobserved  exogenous
              e9                             unobserved  exogenous
              e4                             unobserved  exogenous
              e3                             unobserved  exogenous
              e2                             unobserved  exogenous
              e1                             unobserved  exogenous
              e14                            unobserved  exogenous
              e10                            unobserved  exogenous
              e7                             unobserved  exogenous
              e11                            unobserved  exogenous
              e5                             unobserved  exogenous
              e16                            unobserved  exogenous
              Participative_Aligned          unobserved  exogenous
              e19                            unobserved  exogenous
              e24                            unobserved  exogenous
              e25                            unobserved  exogenous
              e27                            unobserved  exogenous
              e29                            unobserved  exogenous
              Rational                       unobserved  exogenous
              e18                            unobserved  exogenous
              e23                            unobserved  exogenous
```

```
        e28                                unobserved exogenous
        e30                                unobserved exogenous
        e33                                unobserved exogenous
        eimp                               unobserved exogenous
        eca                                unobserved exogenous
        efa                                unobserved exogenous
        esi                                unobserved exogenous
        Generative                         unobserved exogenous
        e20                                unobserved exogenous
        e21                                unobserved exogenous
        Command                            unobserved exogenous
        e26                                unobserved exogenous
        e32                                unobserved exogenous
        Autocratic                         unobserved exogenous
        e17                                unobserved exogenous


            Number of variables in your model:    75
            Number of observed variables:         31
            Number of unobserved variables:       44
            Number of exogenous variables:        40
            Number of endogenous variables:       35
```

Summary of Parameters

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed:	44	0	1	0	0	45
Labeled:	0	0	0	0	0	0
Unlabeled:	42	10	39	0	31	122
Total:	86	10	40	0	31	167

NOTE:
    The model is recursive.

Sample size: 132

Model: Default model

Computation of degrees of freedom

```
                        Number of distinct sample moments:    527
              Number of distinct parameters to be estimated:  122
                        -----------------------------
                                 Degrees of freedom:  405

      0e 19 0.0e+000 -5.6977e-001 1.00e+004  1.97391494093e+003   0 1.00e+004
      1e*  9 0.0e+000 -1.7624e-001 3.41e+000  1.13416403374e+003  20 4.55e-001
      2e   7 0.0e+000 -9.2107e-002 4.84e-001  1.01853697370e+003   6 8.37e-001
      3e   1 0.0e+000 -2.6307e-002 1.13e+000  8.12996422274e+002   6 8.66e-001
      4e   2 0.0e+000 -2.0528e-001 1.46e+000  7.21584633916e+002   6 7.49e-001
      5e   2 0.0e+000 -2.4578e-002 6.97e-001  6.91408216065e+002   5 8.49e-001
      6e   1 0.0e+000 -8.6587e-004 9.17e-001  6.64698033303e+002   4 8.07e-001
      7e   1 0.0e+000 -9.2065e-003 5.13e-001  6.56570573937e+002   5 8.17e-001
      8e   0 4.8e+003  0.0000e+000 5.02e-001  6.51368710412e+002   6 9.94e-001
      9e   0 4.3e+003  0.0000e+000 7.93e-001  6.50720818209e+002   1 3.42e-001
     10e   0 1.6e+004  0.0000e+000 3.24e-001  6.48768220265e+002   1 1.01e+000
     11e   0 1.8e+004  0.0000e+000 2.26e-001  6.48662008684e+002   2 0.00e+000
     12e   0 2.7e+004  0.0000e+000 1.68e-001  6.48627394311e+002   1 1.10e+000
     13e   0 3.4e+004  0.0000e+000 5.14e-002  6.48624247549e+002   1 1.08e+000
     14e   0 3.5e+004  0.0000e+000 1.10e-002  6.48624184728e+002   1 1.01e+000
     15e   0 3.5e+004  0.0000e+000 2.11e-004  6.48624184688e+002   1 1.00e+000
```

Minimum was achieved

Chi-square = 648.624
Degrees of freedom = 405
Probability level = 0.000

Maximum Likelihood Estimates

Regression Weights:	Estimate	S.E.	C.R.	Label
Synthesizing_Inf <- Participative_Al	0.220	0.249	0.884	
Synthesizing_Information <- Rational	0.181	0.168	1.078	
Synthesizing_Informati <- Generative	0.063	0.178	0.356	
Synthesizing_Information <-- Command	-0.800	0.408	-1.960	
Synthesizing_Informati <- Autocratic	-0.003	0.045	-0.062	
Implementing <- Participative_Aligne	-0.069	0.237	-0.293	
Championing_Alte <- Participative_Al	0.055	0.272	0.203	
Facilitiating_Ad <- Participative_Al	0.132	0.267	0.494	
Facilitiating_Adaptabili <- Rational	0.259	0.190	1.364	
Championing_Alternatives <- Rational	0.295	0.181	1.632	
Implementing <------------ Rational	0.369	0.161	2.290	
Facilitiating_Adaptabi <- Generative	0.093	0.191	0.484	
Championing_Alternativ <- Generative	0.187	0.199	0.938	
Implementing <---------- Generative	0.145	0.173	0.838	
Implementing <------------- Command	-0.819	0.351	-2.336	
Championing_Alternatives <-- Command	-0.996	0.403	-2.473	
Facilitiating_Adaptabilit <- Command	-1.002	0.502	-1.998	
Facilitiating_Ad <- Synthesizing_Inf	-0.228	0.181	-1.260	
Championing_Alternativ <- Autocratic	0.030	0.038	0.781	
Implementing <----------- Autocratic	0.030	0.041	0.733	
V15AIDS <------------- Implementing	1.000			
V13AIDS <------------- Implementing	1.017	0.164	6.192	
V12AFA <-------------- Implementing	0.807	0.151	5.330	
V8AIDS <-------------- Implementing	1.309	0.187	7.003	
V6AIDS <-------------- Implementing	0.952	0.162	5.893	
V9ACA <----- Championing_Alternatives	1.000			
V4ACA <----- Championing_Alternatives	0.787	0.141	5.571	
V3ACA <----- Championing_Alternatives	0.924	0.149	6.209	
V2ACA <----- Championing_Alternatives	1.062	0.147	7.215	
V1ASI <----- Championing_Alternatives	0.849	0.128	6.628	
V14AFA <- Facilitiating_Adaptability	1.000			
V10AFA <- Facilitiating_Adaptability	1.906	0.469	4.067	
V7AFA <-- Facilitiating_Adaptability	1.807	0.443	4.080	
V11ASI <--- Synthesizing_Information	1.000			
V5ASI <---- Synthesizing_Information	1.051	0.350	2.999	
V16AFA <- Facilitiating_Adaptability	1.420	0.376	3.782	
V19TR <------- Participative_Aligned	1.000			
V24GE <------- Participative_Aligned	0.880	0.123	7.148	
V25TR <------- Participative_Aligned	1.065	0.131	8.127	
V27SY <------- Participative_Aligned	0.854	0.128	6.655	
V29TR <------- Participative_Aligned	0.971	0.124	7.816	
V18RA <-------------------- Rational	1.000			
V23RA <-------------------- Rational	0.921	0.081	11.422	
V28SY <-------------------- Rational	0.686	0.081	8.514	
V30TR <-------------------- Rational	0.433	0.073	5.930	
V33RA <-------------------- Rational	0.704	0.078	8.991	
V20GE <------------------ Generative	1.000			
V21GE <------------------ Generative	0.853	0.119	7.168	
V26CO <--------------------- Command	1.000			
V32CO <--------------------- Command	0.373	0.243	1.534	
V17CO <------------------ Autocratic	1.000			

```
Standardized Regression Weights:              Estimate
-------------------------------              --------


Synthesizing_Inf <- Participative_Al          0.401
Synthesizing_Information <- Rational          0.454
Synthesizing_Informati <- Generative          0.137
Synthesizing_Information <-- Command         -0.874
Synthesizing_Informati <- Autocratic         -0.007
Implementing <- Participative_Aligne         -0.128
Championing_Alte <- Participative_Al          0.106
Facilitiating_Ad <- Participative_Al          0.390
Facilitiating_Adaptabili <- Rational          1.054
Championing_Alternatives <- Rational          0.780
Implementing <------------- Rational          0.939
Facilitiating_Adaptabi <- Generative          0.324
Championing_Alternativ <- Generative          0.425
Implementing <----------- Generative          0.317
Implementing <------------- Command          -0.907
Championing_Alternatives <-- Command         -1.145
Facilitiating_Adaptabilit <- Command         -1.775
Facilitiating_Ad <- Synthesizing_Inf         -0.369
Championing_Alternativ <- Autocratic          0.073
Implementing <----------- Autocratic          0.070
V15AIDS <--------------- Implementing          0.642
V13AIDS <-------------- Implementing           0.671
V12AFA <--------------- Implementing           0.556
V8AIDS <--------------- Implementing           0.821
V6AIDS <--------------- Implementing           0.629
V9ACA <---- Championing_Alternatives           0.711
V4ACA <---- Championing_Alternatives           0.553
V3ACA <---- Championing_Alternatives           0.624
V2ACA <---- Championing_Alternatives           0.744
V1ASI <---- Championing_Alternatives           0.672
V14AFA <- Facilitiating_Adaptability          0.407
V10AFA <- Facilitiating_Adaptability          0.738
V7AFA <-- Facilitiating_Adaptability          0.751
V11ASI <--- Synthesizing_Information          0.638
V5ASI <---- Synthesizing_Information          0.637
V16AFA <- Facilitiating_Adaptability          0.588
V19TR <------- Participative_Aligned          0.728
V24GE <------- Participative_Aligned          0.671
V25TR <------- Participative_Aligned          0.764
V27SY <------- Participative_Aligned          0.622
V29TR <------- Participative_Aligned          0.735
V18RA <-------------------- Rational          0.925
V23RA <------------------- Rational           0.792
V28SY <------------------- Rational           0.652
V30TR <------------------- Rational           0.494
V33RA <------------------- Rational           0.681
V20GE <----------------- Generative           0.870
V21GE <----------------- Generative           0.739
V26CO <-------------------- Command           0.422
V32CO <-------------------- Command           0.150
V17CO <----------------- Autocratic           1.000


Intercepts:                    Estimate    S.E.     C.R.     Label
-----------                    --------    ------   ------   -------

               V15AIDS          3.961     0.079    50.036
               V13AIDS          3.923     0.077    50.901
                V12AFA          3.946     0.074    53.521
                V8AIDS          3.984     0.081    49.160
                V6AIDS          3.618     0.077    47.012
                 V9ACA          3.504     0.069    50.903
                 V4ACA          3.473     0.070    49.866
                 V3ACA          3.874     0.073    53.285
                 V2ACA          3.389     0.070    48.526
```

V1ASI	3.617	0.062	58.358
V14AFA	2.573	0.078	32.917
V10AFA	2.871	0.082	34.979
V7AFA	2.532	0.077	33.040
V11ASI	3.229	0.081	39.989
V5ASI	3.382	0.085	39.821
V16AFA	2.649	0.077	34.382
V19TR	4.802	0.129	37.280
V24GE	4.632	0.123	37.632
V25TR	4.576	0.130	35.078
V27SY	5.379	0.128	41.893
V29TR	4.232	0.124	34.172
V18RA	5.614	0.139	40.314
V23RA	5.409	0.150	36.115
V28SY	4.977	0.135	36.765
V30TR	4.947	0.113	43.796
V33RA	4.747	0.134	35.491
V20GE	3.886	0.128	30.471
V21GE	4.174	0.128	32.630
V26CO	5.091	0.133	38.338
V32CO	4.833	0.139	34.760
V17CO	5.265	0.119	44.169

Covariances:	Estimate	S.E.	C.R.	Label
Participative_Aligned <---> Rational	1.047	0.203	5.149	
Participative_Aligned <-> Generative	0.975	0.189	5.163	
Rational <--------------> Generative	0.798	0.207	3.862	
Autocratic <-----------> Generative	0.362	0.171	2.109	
Autocratic <-------------> Rational	0.600	0.193	3.114	
Autocratic <-> Participative_Aligned	0.392	0.147	2.668	
Autocratic <---------------> Command	0.277	0.105	2.638	
Participative_Aligned <----> Command	0.418	0.159	2.629	
Rational <----------------> Command	0.726	0.213	3.409	
Generative <---------------> Command	0.453	0.187	2.425	

Correlations:	Estimate
Participative_Aligned <---> Rational	0.664
Participative_Aligned <-> Generative	0.718
Rational <--------------> Generative	0.426
Autocratic <-----------> Generative	0.209
Autocratic <-------------> Rational	0.298
Autocratic <-> Participative_Aligned	0.269
Autocratic <---------------> Command	0.316
Participative_Aligned <----> Command	0.609
Rational <----------------> Command	0.768
Generative <---------------> Command	0.556

Variances:	Estimate	S.E.	C.R.	Label
Participative_Aligned	1.146	0.251	4.562	
Rational	2.172	0.327	6.649	
Generative	1.611	0.313	5.143	
Command	0.412	0.176	2.337	
Autocratic	1.862	0.230	8.093	
esi	0.223	0.108	2.060	
eimp	0.209	0.062	3.365	
eca	0.152	0.050	3.072	
efa	0.019	0.033	0.576	
e17	0.000			
e15	0.479	0.069	6.907	
e13	0.425	0.063	6.707	
e12	0.488	0.067	7.335	

```
                        e8      0.278      0.060      4.679
                        e6      0.465      0.067      6.987
                        e9      0.305      0.049      6.280
                        e4      0.438      0.060      7.305
                        e3      0.417      0.060      6.935
                        e2      0.283      0.048      5.895
                        e1      0.273      0.041      6.612
                       e14      0.663      0.087      7.645
                       e10      0.399      0.074      5.404
                        e7      0.331      0.064      5.189
                       e11      0.503      0.128      3.926
                        e5      0.557      0.142      3.935
                       e16      0.502      0.073      6.908
                       e19      1.018      0.152      6.707
                       e24      1.087      0.154      7.084
                       e25      0.929      0.145      6.391
                       e27      1.323      0.180      7.335
                       e29      0.921      0.139      6.650
                       e18      0.368      0.111      3.310
                       e23      1.095      0.167      6.554
                       e28      1.379      0.184      7.476
                       e30      1.264      0.161      7.835
                       e33      1.246      0.170      7.312
                       e20      0.520      0.193      2.697
                       e21      0.972      0.179      5.446
                       e26      1.898      0.244      7.773
                       e32      2.476      0.307      8.062
```

```
Squared Multiple Correlations:              Estimate
--------------------------------            --------

        Synthesizing_Information              0.354
      Facilitiating_Adaptability              0.856
       Championing_Alternatives               0.512
                    Implementing              0.379
                           V17CO              1.000
                           V32CO              0.023
                           V26CO              0.178
                           V21GE              0.546
                           V20GE              0.756
                           V33RA              0.464
                           V30TR              0.244
                           V28SY              0.426
                           V23RA              0.628
                           V18RA              0.855
                           V29TR              0.540
                           V27SY              0.387
                           V25TR              0.583
                           V24GE              0.450
                           V19TR              0.529
                          V16AFA              0.345
                           V5ASI              0.406
                          V11ASI              0.407
                           V7AFA              0.564
                          V10AFA              0.545
                          V14AFA              0.165
                           V1ASI              0.451
                           V2ACA              0.554
                           V3ACA              0.389
                           V4ACA              0.306
                           V9ACA              0.506
                          V6AIDS              0.396
                          V8AIDS              0.674
                          V12AFA              0.309
                         V13AIDS              0.450
                         V15AIDS              0.412
```

Summary of models

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	122	648.624	405	0.000	1.602
Saturated model	527	0.000	0		
Independence model	31	12518.228	496	0.000	25.238

Model	DELTA1 NFI	RHO1 RFI	DELTA2 IFI	RHO2 TLI	CFI
Default model	0.948	0.937	0.980	0.975	0.980
Saturated model	1.000		1.000		1.000
Independence model	0.000	0.000	0.000	0.000	0.000

Model	PRATIO	PNFI	PCFI
Default model	0.817	0.774	0.800
Saturated model	0.000	0.000	0.000
Independence model	1.000	0.000	0.000

Model	NCP	LO 90	HI 90
Default model	243.624	178.068	317.099
Saturated model	0.000	0.000	0.000
Independence model	12022.228	11661.013	12389.807

Model	FMIN	F0	LO 90	HI 90
Default model	4.951	1.860	1.359	2.421
Saturated model	0.000	0.000	0.000	0.000
Independence model	95.559	91.773	89.015	94.579

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.068	0.058	0.077	0.002
Independence model	0.430	0.424	0.437	0.000

Model	AIC	BCC	BIC	CAIC
Default model	892.624	971.493		
Saturated model	1054.000	1394.687		
Independence model	12580.228	12600.268		

Model	ECVI	LO 90	HI 90	MECVI
Default model	6.814	6.313	7.375	7.416
Saturated model	8.046	8.046	8.046	10.646
Independence model	96.032	93.275	98.838	96.185

Model	HOELTER .05	HOELTER .01
Default model	92	96
Independence model	6	6

Appendix D.

SPSS "Descripitive" analysis of sample responses and segregated sample portions.

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
V1ASI	130	2	5	3.62	.71	-.218	.212	-.092	.422
V2ACA	131	2	5	3.39	.80	-.089	.212	-.521	.420
V3ACA	130	1	5	3.87	.83	-.826	.212	1.293	.422
V4ACA	131	2	5	3.47	.80	-.235	.212	-.456	.420
V5ASI	131	1	5	3.38	.97	-.017	.212	-.594	.420
V6AIDS	131	1	5	3.62	.88	-.676	.212	.602	.420
V7AFA	130	1	5	2.54	.87	.342	.212	.282	.422
V8AIDS	131	1	5	3.98	.93	-1.083	.212	1.328	.420
V9ACA	131	2	5	3.50	.79	-.300	.212	-.388	.420
V10AFA	131	1	5	2.87	.94	-.076	.212	-.289	.420
V11ASI	131	1	5	3.23	.92	-.177	.212	-.258	.420
V12AFA	131	1	5	3.95	.84	-.911	.212	1.379	.420
V13AIDS	131	1	5	3.92	.88	-.668	.212	.231	.420
V14AFA	131	1	5	2.57	.89	.237	.212	.080	.420
V15AIDS	131	1	5	3.96	.91	-.805	.212	.347	.420
V16AFA	130	1	5	2.65	.88	.042	.212	-.136	.422
Valid N (listwise)	128								

Total sample: Middle management strategic roles items

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
V17CO	132	1	7	5.27	1.37	-1.035	.211	.824	.419
V18RA	132	1	7	5.61	1.60	-1.141	.211	.365	.419
V19TR	131	1	7	4.79	1.48	-.409	.212	-.600	.420
V20GE	132	1	7	3.89	1.47	.096	.211	-.569	.419
V21GE	132	1	7	4.17	1.47	-.160	.211	-.780	.419
V22SY	132	2	7	4.67	1.29	-.425	.211	-.468	.419
V23RA	132	1	7	5.41	1.72	-.957	.211	-.181	.419
V24GE	131	1	7	4.64	1.41	-.645	.212	.227	.420
V25TR	132	1	7	4.58	1.50	-.625	.211	-.194	.419
V26CO	132	1	7	5.09	1.53	-.863	.211	.191	.419
V27SY	132	1	7	5.38	1.48	-.998	.211	.673	.419
V28SY	132	1	7	4.98	1.56	-.839	.211	.080	.419
V29TR	131	1	7	4.24	1.41	-.244	.212	-.615	.420
V30TR	132	1	7	4.95	1.30	-.560	.211	-.017	.419
V31RA	132	1	7	5.18	1.86	-.888	.211	-.327	.419
V32CO	132	1	7	4.83	1.60	-.407	.211	-.749	.419
V33RA	130	1	7	4.75	1.53	-.627	.212	-.184	.422
Valid N (listwise)	127								

Total sample: Strategy-making modes items

347

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
V1ASI	14	2	5	4.00	.78	.615	-1.115	.597	2.622	1.154
V2ACA	14	2	5	3.79	.70	.489	-1.253	.597	2.876	1.154
V3ACA	14	3	5	3.93	.83	.687	.145	.597	-1.509	1.154
V4ACA	14	2	5	3.36	.84	.709	.074	.597	-.182	1.154
V5ASI	14	3	5	3.50	.76	.577	1.229	.597	.158	1.154
V6AIDS	14	2	5	3.79	.70	.489	-1.253	.597	2.876	1.154
V7AFA	14	2	5	2.86	.77	.593	1.442	.597	4.238	1.154
V8AIDS	14	2	5	4.14	.86	.747	-1.140	.597	1.746	1.154
V9ACA	14	2	5	3.57	.76	.571	-.280	.597	.294	1.154
V10AFA	14	2	5	3.36	.74	.555	.572	.597	.725	1.154
V11ASI	14	2	4	3.43	.65	.418	-.692	.597	-.252	1.154
V12AFA	14	2	5	3.86	.77	.593	-.914	.597	1.855	1.154
V13AIDS	14	2	5	3.79	.89	.797	-.278	.597	-.327	1.154
V14AFA	14	2	5	2.64	.93	.863	1.529	.597	2.029	1.154
V15AIDS	14	2	5	3.79	1.12	1.258	-.658	.597	-.780	1.154
V16AFA	14	2	3	2.71	.47	.220	-1.067	.597	-1.034	1.154
Valid N (listwise)	14									

Random top management sample: Middle management strategic roles items

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
V1ASI	16	3	5	3.81	.66	.429	.197	.564	-.373	1.091
V2ACA	16	2	5	3.38	.72	.517	.500	.564	.579	1.091
V3ACA	16	2	5	3.87	.89	.783	-1.051	.564	1.181	1.091
V4ACA	16	2	5	3.88	.81	.650	-.627	.564	.754	1.091
V5ASI	16	2	5	3.31	1.20	1.429	.108	.564	-1.598	1.091
V6AIDS	16	1	4	3.44	.89	.796	-1.718	.564	2.697	1.091
V7AFA	16	1	4	2.31	.79	.629	.254	.564	.126	1.091
V8AIDS	16	1	5	3.94	1.00	.996	-1.702	.564	4.439	1.091
V9ACA	16	2	5	3.69	.87	.762	-.662	.564	.217	1.091
V10AFA	16	1	4	2.75	.93	.867	-.567	.564	-.119	1.091
V11ASI	16	2	5	3.00	1.03	1.067	.830	.564	-.206	1.091
V12AFA	16	1	5	3.94	1.00	.996	-1.702	.564	4.439	1.091
V13AIDS	16	2	5	4.19	.91	.829	-1.019	.564	.629	1.091
V14AFA	16	1	4	2.50	.89	.800	.000	.564	-.440	1.091
V15AIDS	16	3	5	4.13	.81	.650	-.245	.564	-1.368	1.091
V16AFA	16	1	5	2.63	1.02	1.050	.465	.564	.831	1.091
Valid N (listwise)	16									

Nexen Inc. Middle managers' sample: Middle management strategic roles items

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
V1ASI	26	2	5	3.50	.76	.580	.000	.456	-.127	.887
V2ACA	26	2	5	3.23	.76	.585	.151	.456	-.150	.887
V3ACA	26	3	5	4.04	.60	.358	-.007	.456	.137	.887
V4ACA	26	2	5	3.58	.81	.654	-.515	.456	-.068	.887
V5ASI	26	2	5	3.50	.91	.820	.175	.456	-.626	.887
V6AIDS	26	3	5	3.85	.61	.375	.080	.456	-.178	.887
V7AFA	26	1	4	2.54	.76	.578	.451	.456	-.236	.887
V8AIDS	26	3	5	4.27	.60	.365	-.171	.456	-.398	.887
V9ACA	26	2	5	3.65	.80	.635	-.293	.456	-.062	.887
V10AFA	26	1	4	2.88	.82	.666	-.255	.456	-.394	.887
V11ASI	26	2	5	3.15	.92	.855	.331	.456	-.669	.887
V12AFA	26	3	5	4.31	.55	.302	.074	.456	-.524	.887
V13AIDS	26	3	5	4.23	.51	.265	.350	.456	.088	.887
V14AFA	26	1	4	2.58	.81	.654	-.515	.456	-.068	.887
V15AIDS	26	2	5	4.23	.71	.505	-1.094	.456	2.647	.887
V16AFA	26	1	5	2.46	.99	.978	.518	.456	.439	.887
Valid N (listwise)	26									

Enbridge Inc. Middle managers' sample: Middle management strategic roles items

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
V1ASI	7	3	4	3.86	.38	.143	-2.646	.794	7.000	1.587
V2ACA	7	3	4	3.71	.49	.238	-1.230	.794	-.840	1.587
V3ACA	7	3	4	3.86	.38	.143	-2.646	.794	7.000	1.587
V4ACA	7	2	4	3.57	.79	.619	-1.760	.794	2.361	1.587
V5ASI	7	2	4	3.29	.76	.571	-.595	.794	-.350	1.587
V6AIDS	7	3	5	3.57	.79	.619	1.115	.794	.273	1.587
V7AFA	7	2	4	2.86	.69	.476	.174	.794	.336	1.587
V8AIDS	7	4	5	4.29	.49	.238	1.230	.794	-.840	1.587
V9ACA	7	3	5	3.86	.69	.476	.174	.794	.336	1.587
V10AFA	7	3	4	3.43	.53	.286	.374	.794	-2.800	1.587
V11ASI	7	3	4	3.71	.49	.238	-1.230	.794	-.840	1.587
V12AFA	7	2	4	3.29	.76	.571	-.595	.794	-.350	1.587
V13AIDS	7	2	4	3.57	.79	.619	-1.760	.794	2.361	1.587
V14AFA	7	2	3	2.43	.53	.286	.374	.794	-2.800	1.587
V15AIDS	7	3	5	3.86	.69	.476	.174	.794	.336	1.587
V16AFA	7	2	3	2.57	.53	.286	-.374	.794	-2.800	1.587
Valid N (listwise)	7									

Enbridge Inc. Top managers' sample: Middle management strategic roles items

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
V17CO	7	6	7	6.14	.38
V18RA	7	6	7	6.71	.49
V19TR	7	5	6	5.71	.49
V20GE	7	2	6	3.86	1.21
V21GE	7	3	5	3.57	.79
V22SY	7	5	6	5.43	.53
V23RA	7	6	7	6.86	.38
V24GE	7	5	7	5.57	.79
V25TR	7	4	6	5.29	.76
V26CO	7	4	6	5.14	.69
V27SY	7	5	7	6.00	.82
V28SY	7	5	7	6.29	.76
V29TR	7	3	7	4.57	1.27
V30TR	7	4	6	5.43	.79
V31RA	7	4	7	6.00	1.00
V32CO	7	5	7	6.00	1.00
V33RA	7	5	7	5.43	.79
Valid N (listwise)	7				

Enbridge Inc. Top managers' sample: Strategy making modes items

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
V17CO	27	1	7	5.78	1.40
V18RA	27	4	7	6.33	.88
V19TR	27	2	7	4.78	1.40
V20GE	27	1	5	3.44	1.01
V21GE	27	2	6	4.07	1.21
V22SY	27	4	7	5.33	.96
V23RA	27	3	7	6.22	1.12
V24GE	27	3	6	4.52	.94
V25TR	27	2	7	4.74	1.20
V26CO	27	2	7	5.52	1.19
V27SY	27	4	7	5.78	.93
V28SY	27	1	7	5.11	1.50
V29TR	27	2	6	4.37	1.18
V30TR	27	3	7	5.37	1.01
V31RA	27	2	7	5.48	1.37
V32CO	27	2	7	4.48	1.37
V33RA	27	4	7	5.44	.89
Valid N (listwise)	27				

Enbridge Inc. Middle managers' sample: Strategy making modes items

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
V17CO	16	2	6	4.62	1.20
V18RA	16	3	7	5.75	1.13
V19TR	16	2	6	4.69	1.25
V20GE	16	1	6	4.38	1.41
V21GE	16	1	6	4.37	1.59
V22SY	16	2	6	4.31	1.25
V23RA	16	4	7	6.06	.93
V24GE	16	1	7	4.69	1.49
V25TR	16	1	6	4.44	1.50
V26CO	16	2	7	4.62	1.36
V27SY	16	2	7	4.69	1.62
V28SY	16	1	7	5.00	1.59
V29TR	16	2	6	3.81	1.33
V30TR	16	3	7	4.75	1.18
V31RA	16	1	7	5.56	1.71
V32CO	16	2	7	4.25	1.61
V33RA	16	1	7	4.19	1.47
Valid N (listwise)	16				

Nexen Inc. Middle managers' sample: Strategy making modes items

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
V17CO	14	2	7	5.00	1.41
V18RA	14	2	7	5.57	1.74
V19TR	14	3	7	5.79	1.19
V20GE	14	2	7	4.64	1.50
V21GE	14	2	7	4.57	1.45
V22SY	14	3	7	4.64	1.01
V23RA	14	2	7	5.36	1.65
V24GE	14	2	7	4.86	1.51
V25TR	14	4	7	5.57	1.09
V26CO	14	1	7	4.79	1.76
V27SY	14	4	7	5.86	1.10
V28SY	14	4	7	5.64	1.01
V29TR	14	3	7	5.29	1.14
V30TR	14	2	7	5.07	1.44
V31RA	14	1	7	5.64	1.74
V32CO	14	1	7	5.07	1.77
V33RA	13	2	7	4.54	1.45
Valid N (listwise)	13				

Random top management sample: Strategy making modes items

Appendix E

A summary review of three qualitative cases.

1. *Enbridge Inc.*
2. *Nexen Inc.*
3. *Suncor Energy Inc.*

ENBRIDGE INC.

Corporate Profile.

With 6000 employees, Enbridge is one of the largest energy transportation, distribution and services companies in North America. Its pipeline business is based in Western Canada with major intercontinental pipelines stretching into the industrial heart of the USA. It controls the largest gas distribution company in Ontario, Canada and has recently acquired Mid-Coast Energy based in Houston, Texas, USA.

Performance

On November 8th, 2001 current President and CEO, Pat Daniel noted that Enbridge was "in the enviable position of having significant opportunities for profitable growth within our core business". Coupled with acquisitions this has allowed Enbridge to pursue and reach a goal of "annual double digit earnings per share growth." (Statements contained in third quarter 2001 update.)

The 2001 Annual Report, reinforces this record of success. It reports that e.p.s. increased from C$1.58 in 1997 to C$2.91 in 2001 for an average annual growth of 16.5%. In 2001 earnings were C$ 458 MM on operating revenues of C$ 3.7 billion, up from C$ 288 million in 1999. Return on equity in 2001 was 18.6%.

Corporate Culture

Under the guidance of its previous President and CEO, now Chairman, Brian McNeil, Enbridge has developed an enviable corporate and community image. Internally and externally, it is perceived as a great place to work, dynamic yet collegial, with a strong social conscience. Members of the leadership team (CEO plus seven direct reports) are seen as accessible and reasonable. In the community context they are usually front and centre, acting as cheerleaders and participants. Enbridge has a powerful presence in charitable, educational and artistic endeavours across Canada.

While business decisions have resulted in staff losses in some business areas, overall employees believe that there are ample career and personal development opportunities.

Symbolic of this positive corporate culture is the manner and scale of the response to this researcher's request for participation in the research questionnaire. While it was obvious that some members of the leadership team supported my efforts, the invitation to participate was not coercive. Yet, all bar one of those invited to participate did for a phenomenal response rate of over 95%. This suggests that Enbridge, certainly in its management structure, is very much "together" and seen to share common ends.

Strategic Management Process

The strategic process at Enbridge might appear to be a counterpoint to the culture. Conforming more to the classical / formal approach to strategy development and implementation, and definitely being top down driven, the process might be construed as non-collaborative. Yet, while the formal policy guidelines for the process detail a nine month flow from Board to leadership team to major operating groups followed by consolidation at the corporate level, it appears that the rest of the management team are not excluded from influencing strategy formulation and implementation. An "idea data base" is open to all employees, leadership in developing and implementing strategy is required at all levels, high level strategies are communicated vigorously to all employees, and "local autonomy" is a feature of all operations.

Both in interviews with members of the leadership team and employees at large, this researcher was struck by a number of factors. The right of the top team to set the direction was not questioned. Employees did not feel excluded from the strategic process. Those in management positions at all levels felt that they had both autonomy and authority over their operating domains. Most significantly, all felt that they could influence new strategic direction.

The dispersed nature of the Enbridge's activities demands that local teams act independently within the context of corporate goals. It seems likely that as much strategic change is being initiated at the local level and filtered upwards, as generated at the top. Although not a definitive conclusion, it appeared that the third

level of management reporting to the leadership team was acting as champions. (Burgelman, 1991)

Quantitative Sample

A total of 34 Enbridge employees responded to the survey questionnaire. Seven members of the leadership team and 27 managers below the top two levels were included. Review of the "Descriptives" included in this Appendix show that the leadership team, as expected, had a stronger bias towards those strategy making modes featuring top down control (Command, Symbolic, and Rational per Hart, 1991). Intriguingly, the mean middle level responses suggest that they do not perceive these modes to be as strong as their top-level leaders. However, the broader deviations reflect a breadth of experience and thinking in the mid-level.

In respect to strategic roles performed by middle managers, there is remarkable agreement between top and middle managers at Enbridge, and with the overall sample. There is a very slight bias towards the implementing deliberate strategy role, by top managers, but the results are within the sample range.

Sources

Information and support for this work was provided by:

Ms. Bonnie Dupont, Group Vice President, Corporate Resources

Stephen Wuori, Group Vice President, Planning and Development

Brian McNeil, Chairman of the Board, and past President and CEO

NEXEN INC.

Corporate Profile

Nexen is a Canadian based global energy and chemicals company. Approximately 2000 employees are dispersed across Canada, the USA, Yemen and other smaller international locations. Conventional oil and gas is the prime product, but synthetic crude oil production, oil and gas marketing and chemical production are significant revenue contributors.

Performance

In both 2000 and 2001, Nexen's revenues were in the region of C$ 2.6 billion. Earnings for these years were C$ 522 MM and C$ 365 MM respectively. Both these levels reflect significant increases over the previous three years. (Extracted from Nexen's 2001 Annual Report / SEC 10K).

It should be noted that Nexen was in the process of evolving from a controlled subsidiary of Occidental Oil and Gas, US, into a totally independent Canadian company, during this period.

Although Nexen is perceived to be a pragmatic, somewhat conservative company their international program has been characterized as ambitious, challenging and risky. In particular, their Yemen operations are viewed as courageous and highly successful. By combining international sensibility with proven capability, they have been accepted by the host country and its people. It has also proven to be very productive, both operationally and financially. Nexen is now held up as an example of how a North American oil company should behave in foreign markets.

Corporate Culture

Input from five CanOxy / Nexen employees, primarily MBA students of this researcher, reveals an enigmatic cultural situation. The combination of the former US parent and the transitional CEO, Victor Zaleschuk, created an almost autocratic perception of top management. However, employee orientation to the company and its leaders was best described as "pioneering". A chemical operation that had established itself from a fragmented set of units into a North American leader for sodium chlorate; international activities in Yemen, Nigeria and Colombia, regions of the world not usually associated with stable economic activity, and maneuvering

to be an independent Canadian company. These combine to create a high intensity outward looking organization, where the employees seem drawn together by sharing the challenge.

Under its new CEO, Charlie Fischer, the separation of the top and other levels is being overcome. Charlie brings a gregarious approach to the business and the community, openly reflecting the top teams direction to the internal and external audiences.

Strategic Management Process

This may be very much a "work in progress". When this researcher first made contact with Nexen, then CanOxy, Victor Zaleschuck was still CEO.

The company was just emerging from a soft energy market. He had been expected to return and maintain financial stability by bringing about operational and business efficiencies. The overall tone of the 1998 Annual Report reflected a tough top driven approach to strategy. But there was also an inkling of the future orientation as targets for employee development, community involvement and corporate citizenship were established.

An eleven person executive team representing all functional and operational areas made most of the key planning decisions. Although Nexen had added a dedicated Vice President for Corporate Planning and Business Development, a sophisticated, formal process was still in the early adoption stage. While unit planning was quite advanced, at the corporate level, CEO or "dominant coalition" decisions were predominant.(per Hambrick and Mason, 1984) Control of strategic direction was perceived to be a top team prerogative.

It appears that because employees can easily embrace the directions set at the top and because they do have significant freedom to act and determine local strategy, they do not feel left out of the process. A Yemen based operating manager characterized it well when he said, " If I have a crisis or an immediate opportunity in the Red Sea, I am not about to return to Calgary to consult or worry if this is a decision that Charlie (Fischer) would have made. I am paid to decide and act. Corporate strategy is clear. Responsibly maximize returns from the Yemen oil fields."

At the time of writing, it is clear that the new CEO is stimulating much greater and broader involvement. This should help overcome any gaps that still exist between the top and other levels.

Quantitative Sample

Sixteen members of the Nexen "middle management" group responded to the survey. The "Descripitives" suggest that this group is well within the range of the overall sample. In respect to middle management strategic roles there may be a very slight leaning towards the implementing deliberate strategy role. For strategy making modes the more formal approaches, rational and symbolic, demonstrate a slight bias. Given the top down management style, the very slight response suggests that other management levels do not feel left out of the strategic process or overly directed from above.

Sources

Information and support was provided by:

David Wartman, formerly Senior Vice President Human Resources and Corporate Services.

Graeme Phipps, formerly Vice President, Corporate Planning and Business Development

Charlie Fischer, current President and CEO

SUNCOR ENERGY INC.

Corporate Profile

Suncor Energy Inc. is a Canada based, integrated energy company. It operates one of the world's largest oil sands mining, extraction and refining complexes, has an extensive retail marketing division, Sunoco, in Eastern Canada and has substantial natural gas reserves, primarily in Western Canada.

The company has over 3000 employees, the majority located in Western Canada. In 2000, production from the oil sands operations averaged 114,000 barrels per day. Natural gas production reached 270 mmcf equivalent per day. Sunoco sustained 17% of the Ontario market and returned C$ 81MM in earnings from a low margin product. In sum, this made Suncor one of the top five integrated energy companies in Canada.

Performance

Revenue of C$3.4 billion in 2000, increased from just over C$ 2 billion in 1998, yielded net earnings of C$377 more than doubling 1998 earnings of C$178. Rick George, President and CEO of Suncor noted that in the preceding year production at the oil sands had increased by 8%, the marketing arm tripled its ROCI to almost 26% and the natural gas operations removed C$15 MM from its cost structure.

Suncor has embarked on an aggressive expansion program, the Millenium Project, a C$3 billion investment that is targeted on increasing production from the oil sands to 400-450,000 barrels per day in 2008. (In 2002, production exceeded 200,000 barrels per day). The company is committed to developing and pioneering environmentally sensitive technology.

Corporate Culture

"Progressive pioneering" would be an apt way to characterize Suncor's internal climate and external orientation. Commenting on the remarkable turnaround of the company, to a University of Alberta audience in March, 2000, the CEO noted "this was not a one man job, it took the efforts of all Suncor employees to turn our company around."

Rick George set this tone very early when both the public and employee Annual Reports in 1999 identified clearly and emphatically four strategic priorities

for the future. A separate report, focusing on Social Responsibility and the Environment, positioned the company and its employees in a "different space" than many of its competitors. All employees were made eligible for performance and earnings based incentives. Despite some moderate employee re-alignment, all employees, across many levels, that this researcher talked to have a deep commitment to the company and its strategy.

The CEO consistently repeats this message to both employees and external publics, "Leadership is about transparency, communicating openly and honestly with your employees, your customers, your shareholders, and your communities.' In respect to employees there is ongoing direct communication, with consistent, straightforward messages.

Strategic Management Process

Of the three "mini-cases" undertaken, Suncor was the only one with steps in their strategic planning process that explicitly asked for initial inputs from the operating level and unit levels of the organization. Interim and cycle end strategic reviews appear to occur across the organization. While the process of confirming or revising corporate strategy is finalized by the corporate leadership team (primarily the top two levels of the organization), Divisional Vice Presidents are expected to provide a coherent argument based on broad input from their teams.

The notion that every employee has a stake in the business, is a guiding principle in Suncor's strategic process. Plans are presented to the employees before they are unveiled to the investors, the market or the media. In cooperation with other team members, unit leaders are expected to translate the macro corporate strategies into appropriate strategies and implementation activities. Although middle managers that provided input to this researcher suggested that this places a discrete performance tension on them, they also acknowledged that it cemented them into the "greater corporate whole' as a shared participant.

Quantitative Input

No group survey was obtained. However, four Suncor employees from different areas and levels were part of the random sample. There was nothing in the individual responses to suggest that any distortion exists either in strategic roles or

strategy making modes. It would seem that Suncor employees are as complete participants in a collaborative strategic process.

Sources

Eric Axford, formerly Director Corporate Planning

David Byler, Executive Vice President, Natural Gas

Rick George, President and C.E.O.